

25. Re: Waterworks Utility

Some time ago, Council commissioned the Greater Vancouver Water Board to examine the Municipal water system and to make recommendations on whatever changes were deemed necessary to the waterworks plant.

Appearing in the report are the following works recommended by the Municipal Engineer for construction in the years 1973-1978:

Willard St. Spur Road Main		1240' of 10"
Underhill		2300' of 20"
10th Ave. & Marshland	Marine to Prairie Ave.	3400' of 18"
Marshland & Wiggins	Prairie Ave. to Thorne	4200' of 18"
Willard	10th Ave. to 14th Ave.	1200' of 12"
14th Ave.	Willard to Meadow	1300' of 12"
Meadow	14th to Byrne	400' of 10"
Byrne	Marine to Mandeville	6000' of 12"
Wiggins	Byrne to Marshland	3950' of 10"
Mandeville	Tillicum to Marshland	1650' of 10"
Marshland	Mandeville to Wiggins	2650' of 12"
Trapp & C.N.R. R/W	Fenwick to Wiggins	6000' of 10"
Fenwick	Marine to Trapp	450' of 10"
Broadway	Underhill to North Rd.	8500' of 12"
Carleton	Kincaid to Forest	400' of 6"
Carson (at Royal Oak)	connect mains across Royal Oak	100'
Curtis	Sherlock to Duthie	700' of 12"
Curtis at Sperling, PRV Station		
Dundas at Gilmore, PRV Station		
Delta at Parker, PRV Station		
Gilmore & Dundas and Parker & Rosser		4000' of 10"
Elmwood	Ingletton to Nithsdale	750' of 6"
Ewart	connect mains across Royal Oak	
Eastlake	Beaverbrook to Lougheed	500' of 16"
Fir	Smith to Carleton	1750' of 8"
Gilley	Ewart to Rumble	1600' of 10"
Grassmere	Nelson to Sussex, Bond & Ferglen	2100' of 12"
Gilley	N. of Ewart PRV Station	
Norland	Sprott to Canada Way	1600' of 10"
Nelson	N. of Portland PRV Station	
Oakland	Dufferin to Lakeview	3500' of 12"
Portland	Patterson to Sussex	1750' of 8"
Portland	Gray to Nelson	1200' of 8"
Portland	W. of McGregor	350' of 8"
Patterson	S. of Southward PRV Station	
Production Way	Broadway to South	400' of 12"
Sperling	Imperial to Bryant	1100' of 12"
Stanley	Malvern to Buckingham	1450' of 12"
Spruce	Carleton to Halley	800' of 6"
Southwood & Clinton	Joffre to Patterson	2300' of 8"

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Southwood	Joffre to Boundary	400' of 6"
Still Creek Ave.	Douglas to Gilmore	4000' of 10"
Sperling	Lougheed to Sprott	1600' of 12"
Sperling at Curtis, PRV Station		
Williams at Willingdon (complete loop)		
TOTAL - Estimated Value		<u>\$2,259,000</u>

The report also shows the following mains which should be replaced at the first opportunity. They are 4" in diameter and should be replaced by 6" or larger. Generally, they are on streets which will be subject to local improvement paving in the near future. Work on this list need not proceed all at once but individual works should be undertaken as circumstances indicate.

Gray	Portland to Carson	800' of 4"
Carson	Sussex to Gray	1360' of 4"
Portland	McGregor to Ravine E. of McPherson	2720' of 4"
McKee	McGregor to Ravine E. of McPherson	2720' of 4"
Curragh	Beresford to Kingsway	1030' of 4"
Lane	Royal Oak to Kingsway	1760' of 4"
Malvern	Stanley to Hazzard	2000' of 4"
19th	Kingsway to East of Mary	2000' of 4"
Wedgewood	Canada Way to 6th	1200' of 4"
Pender	Willingdon to Delta	2560' of 4"
Frances	Willingdon to Holdom	7840' of 4"
Union	Boundary to Holdom	10000' of 4"
Grant	Ingleton to Douglas	800' of 4"
Graveley	Ingleton to Douglas	1040' of 4"
Norfolk	Boundary to Smith	850' of 4"
Fir	Smith to McDonald	1040' of 4"
Burke	Inman to Chesham	640' of 4"
Chesham	Burke to Bond	530' of 4"
Thurston	Boundary to Smith	850' of 4"
Thurston	Smith to Inman	960' of 4"
Bond	Inman to Patterson	550' of 4"
Bond	Patterson to Halley	1090' of 4"
Chaffey	Kingsway to Burke	2030' of 4"
Cassie	Beresford to Kingsway	900' of 4"
Hazel	Sussex to Lane West	720' of 4"
Denbigh	Kingsway to Irving	900' of 4"
Elgin	Kingsway to Irving	1120' of 4"
Irmin	Sussex to Frederick	880' of 4"
Frederick	Victory to Imperial	1250' of 4"

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Jubilee	Watling to Imperial	1880' of 4"
Irmin	Gray to Nelson	1310' of 4"
Waverley	Watling to Imperial	1870' of 4"
Edison & McKee	Portland to Gray	1440' of 4"
	ESTIMATED COST	<u>\$1,175,000</u>

In addition to the Willard and Underhill projects shown on the first list, the following works appear in the Provisional Capital Improvement Program for 1973:

Claude Ave.	East of Raeside	\$ 5,000
Oakland	Brantford to Empress	3,000
Neville	Gray Ave. East - 390'	3,700
Bryant St.	Brantford to Lakeview	4,000
Burke	Smith to Chesham	5,000
Rosser	South of Buchanan	2,000
Willingdon	North of Moscrop	20,000
Rugby	Clayton Ave. East	2,000
Portland	West of Sunflower	2,000
Eton	Rosser to Willingdon	7,000
Sunset	Boundary to Smith	20,000
Banff	Canada Way to Woodsworth	6,000
Stage 2 and 3 - Local Improvement Program		
main replacements		10,000
Miscellaneous		20,420
		<u>\$ 110,120</u>

A further demand for capital funds will present itself as and when Burnaby Mountain comes under development. There will be need of additional pumping stations and reservoirs and the cost could run up to as much as \$1,000,000 during the six year period and greater after that time.

The total of these sums is \$4,544,120, or an average annual expenditure over 6 years of \$757,353.

Not all of this need take place over the period 1973-1978. However, enough of it will have to be done to require an overhaul of the Water Utility finances to cope with it.

The last debenture issue for waterworks took place in 1964. Unspent funds, amounting to \$327,297 from this and one other issue, were retained for expenditure in 1969, 1970 and 1972. In the interim, requirements for other main replacements and new mains were financed by contributions from developers in cost sharing arrangements (\$57,587 in the period 1969-1972) and from water revenues.

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In the period 1966-1972 the following sums from water revenue were so spent:

1966	\$ 132,096
1967	140,184
1968	229,135
1969	189,403
1970	230,820
1971	247,378
1972	268,735
	<u>\$ 1,437,751</u>

In 1973 only \$179,670 is expected to be available from 1973 water revenue plus \$150,000 taken from accumulated water surplus. This allocation reduces the surplus account to a working capital minimum of \$176,665.

In 1973 the final year of levy for debentures issued under By-law No. 3409 takes place. This will free \$90,000 for use elsewhere, effective 1974. In 1976 the final year of levy for debentures issued under By-law No. 3658 will take place. This will free another \$60,000, effective 1977. However, with continuing inflation the total of these three sums (\$329,670) will not continue to be available for expenditure on the replacement of water mains or their extension. In any event, the sum is insufficient to meet the demand as outlined above; nor will it be enough to support a sizeable borrowing, if that route is chosen.

Attached for Council information is a statement of revenue and expenditure for the years 1966 to 1973 (Table A). It shows the relatively slow growth of revenues after 1967 (the last time rates were increased).

It does not appear that it will be necessary to construct the whole \$4,544,120 in mains in the six year period but that a sizeable portion of this sum must be spent. Rather than cause a precipitous increase in rates at this time, a more prudent method would be to increase one family flat rates by \$5.00 or \$10.00 annually, duplex rates by \$8.00 or \$16.00 and metered rates by 17% and at the same time bring down a borrowing by-law under Section 253 of the Municipal Act. If the by-law is brought down expeditiously, it can be ready for financing by the Municipal Finance Authority this Fall. If it is not, it will be sometime next year before the financing can be completed. The suggested amount of borrowing is \$1,500,000.

The additional revenues for a full calendar year can be calculated at:

26,580 single family services @ \$5.00 (\$30.00 increased to \$35.00)	\$ 132,900
1,275 two family services @ \$8.00 (\$50.00 increased to \$58.00)	10,200
1,942 metered accounts increased by 17%	136,000
	<u>\$ 279,100</u>

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Annual carrying charges on the \$1,500,000 will approximate \$153,000. Any balance of unexpended revenue after meeting the demands of inflation can be used to cut down the size of the remaining works to be done. In a year or two it will be necessary to consider a further increase in rates and probably a further borrowing by-law.

The rates on page 4 have been compiled by applying the same percentage increase to both metered and flat rates following directions given by previous Councils. However, while it does not seem unreasonable to increase flat rates by \$10.00 and \$16.00 or 34%, a 34% increase to metered rates at this point in time appears most unreasonable.

Table A, showing current flat rates including a 17% and 34% increase in Burnaby together with rates applicable in adjoining municipalities, is attached. The lower section of the table shows that currently there are two municipalities with single family rates at the same level as Burnaby's, two lower and four higher. With a 17% increase there will be three lower and five higher. With a 34% increase there will be two at the same level, five lower and one higher.

Table C showing metered rates applicable to adjoining municipalities is attached. Every municipality on the list uses a different range of consumption levels at which the rates decline by one notch. Therefore, the only comparison between rates that can be made is to use Burnaby's consumption blocks and a monthly billing period. There are few customers in Burnaby or elsewhere that use 2,000,000 cubic feet per month. Burnaby has a special rate of Water Board cost plus 5¢ per 100 cubic feet for consumption in excess of 2,000,000 cubic feet per month and there are only two customers in this category.

An examination of Table C shows the cost per block in the eight communities and the table at the bottom of the page shows the number of communities by category of block charging less than or more than Burnaby. It clearly shows that a 34% increase would make Burnaby's metered charges greater than all other municipalities except Coquitlam.

Under the circumstances, the recommendation of this report is that flat rates be increased by \$10.00 and \$16.00, effective 1 June 1973. If accepted by Council, this will mean an increase in rates for single family dwellings from \$30.00 to \$35.00 this year and to \$40.00 next year. The increase for two family dwellings will be from \$50.00 to \$58.00 this year and to \$66.00 next year. At the same time, the recommended increase of metered rates will be 17%, effective with the beginning of the next quarterly or monthly billing cycle for each account after the Lieutenant-Governor in Council has approved the amendment to the by-law.

Amendments to Burnaby's Waterworks Regulation By-law to permit rate increases require approval of the Lieutenant-Governor in Council. Flat rates may be increased by the full sum involved effective 1 January or be increased by 50% of the sum involved effective 1 June. However, any increase to be effective this year must be made by 30 April because billing for water rates is through

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the tax bills and 30 April is the deadline for the insertion of any change to the system. Metered accounts are billed monthly and quarterly. Changes must be made at the beginning of the next quarterly or monthly billing cycle for each account after the Lieutenant-Governor in Council has approved the by-law amendment.

RECOMMENDATIONS

THAT single family water rates be increased from \$30.00 to \$40.00 effective 1 June 1973, if approved by the Lieutenant-Governor in Council by that time; and

THAT two family water rates be increased from \$50.00 to \$66.00 effective 1 June 1973, if approved by the Lieutenant-Governor in Council by that time; and

THAT metered rates be increased by 17% effective the beginning of the next quarterly or monthly billing cycle for each account, after the Lieutenant-Governor in Council has approved the amendment; and

THAT a loan authorization by-law be brought down pursuant to Section 253 of the Municipal Act to permit the borrowing for waterworks purposes of the sum of \$1,500,000.

THE CORPORATION OF THE DISTRICT OF BURNABY

TABLE A

WATERWORKS UTILITY

STATEMENT OF REVENUES AND EXPENDITURES FOR THE YEARS 1966 TO 1973

	REVENUE							
	1966 \$	1967 \$	1968 \$	1969 \$	1970 \$	1971 \$	1972 \$	1973 \$
SALE OF SERVICES								
Flat rates	709,571	767,837	831,210	836,684	843,561	850,078	859,865	868,000
Metered rates	492,663	547,201	571,456	649,601	704,709	750,767	774,255	800,000
Connections	61,635	91,201	100,393	100,227	84,867	135,279	120,253	150,000
	<u>1,263,869</u>	<u>1,406,239</u>	<u>1,503,059</u>	<u>1,586,512</u>	<u>1,633,137</u>	<u>1,736,124</u>	<u>1,754,373</u>	<u>1,818,000</u>
REVENUE FROM OWN SOURCES								
Fire charge to municipality	80,000	102,500	125,000	125,000	125,000	125,000	125,000	125,000
Portion of prior years' surplus	80,000				88,000			150,000
Excess provision for G.V.W.D. plant survey (1970)						7,500		
Debt levies in advance of maturity - previous year	<u>233,590</u>	<u>235,034</u>	<u>241,374</u>	<u>241,008</u>	<u>247,571</u>	<u>248,419</u>	<u>189,163</u>	<u>194,000</u>
	<u>393,590</u>	<u>337,534</u>	<u>366,374</u>	<u>366,008</u>	<u>460,571</u>	<u>380,919</u>	<u>314,163</u>	<u>469,000</u>
	<u>1,657,459</u>	<u>1,743,773</u>	<u>1,869,433</u>	<u>1,952,520</u>	<u>2,093,708</u>	<u>2,117,043</u>	<u>2,068,536</u>	<u>2,287,000</u>

ITEM 25 (SUPPLEMENTARY)  
 MANAGER'S REPORT NO. 27  
 COUNCIL MEETING Apr. 9/73



THE CORPORATION OF THE DISTRICT OF BURNABY

TABLE B

Comparison of domestic water rates payable  
 per annum in adjoining municipalities

	<u>One Family</u>	<u>Two Family</u>
Burnaby - existing	\$ 30.00	\$ 50.00
- proposed 1973	35.00	58.00
1974	40.00	66.00
Vancouver	34.00 to	54.00 depending upon area of land, not size of family unit
New Westminster	21.00 minimum on meter	-
North Vancouver District	40.00	74.00
North Vancouver City	30.00	54.00
West Vancouver	30.00 to	40.00 depending on area of land, not size of family unit
* Coquitlam	24.00 minimum on meter	-
Richmond	40.00	80.00
Surrey	42.00	42.00

\* Coquitlam Council is presently looking at converting from metered rates to flat rates

Comparison between Burnaby's single family residential flat rate  
 and rates chargeable in eight adjoining municipalities including  
 minimum meter rates for New Westminster and Coquitlam

Same	2
Lower	2
Higher	4
Total	<u>8</u>

As above, with Burnaby's rates increased to 17%

Lower	3
Higher	5
Total	<u>8</u>

As above, with Burnaby's rates increased by 34%

Same	2
Lower	5
Higher	1
Total	<u>8</u>



THE CORPORATION OF THE DISTRICT OF BURNABY  
 TABLE C  
 Comparison of metered water rates payable in adjoining municipalities per month

	10,000 c.f.	30,000 c.f.	80,000 c.f.	500,000 c.f.	2,000,000 c.f.
Burnaby - current	\$30.00	\$72.00	\$154.00	\$760.90	\$2,335.90
proposed 17% increase	35.10	84.24	180.18	890.25	2,733.03
34% increase	40.20	96.48	206.36	1,019.74	3,130.24
Vancouver	22.90	64.20	137.50	673.30	2,593.30
New Westminster	28.50	75.50	153.50	657.50	2,457.50
North Vancouver District	27.25	76.75	176.45	712.40	2,437.40
West Vancouver District					
- commercial	35.00	90.00	190.00		
industrial	35.00	90.00	184.00	775.00	2,875.00
North Vancouver City	24.00	64.00	144.00	568.50	1,918.50
Coquitlam District - domestic	31.25	76.25	176.25		
commercial	60.00	140.00	265.00	1,315.00	3,765.00
Richmond - domestic	19.65	52.65	135.15		
commercial	30.75	87.75	197.75	867.25	2,992.25
Surrey	30.25	65.25	135.25	639.25	2,439.25

Comparison between metered commercial and industrial water rates of eight adjoining municipalities relative to Burnaby's rate block system

	10,000 c.f.	30,000 c.f.	80,000 c.f.	500,000 c.f.	2,000,000 c.f.
Lower	4	3	4	4	1
Higher	4	5	4	4	7
Total	<u>8</u>	<u>8</u>	<u>8</u>	<u>8</u>	<u>8</u>

As above, with Burnaby's rates increased by 17%

Lower	6	5	6	7	5
Higher	2	3	2	1	3
Total	<u>8</u>	<u>8</u>	<u>8</u>	<u>8</u>	<u>8</u>

As above, with Burnaby's rates increased by 34%

Lower	7	7	7	7	7
Higher	1	1	1	1	1
Total	<u>8</u>	<u>8</u>	<u>8</u>	<u>8</u>	<u>8</u>