

RE: 1983 REFUSE COLLECTION AND DISPOSAL

MUNICIPAL MANAGER'S RECOMMENDATION:

1. THAT the recommendation of the Director Engineering be adopted.

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TO: MUNICIPAL MANAGER 84 03 22

FROM: DIRECTOR ENGINEERING

SUBJECT: 1983 REFUSE COLLECTION AND DISPOSAL

RECOMMENDATION:

1. THAT this report be received for information purposes.

REPORT:

Separation of Costs

Due to the considerable increase in disposal charges for the Municipalities who are now using the transfer station at the old Coquitlam landfill site there is a large difference between disposal costs for Burnaby and Municipalities such as Surrey and Delta. If cost comparisons are to be made among Burnaby, Surrey and Delta then collection and disposal costs must be separated.

In Burnaby, for economic reasons, special vehicles are not assigned to pick up commercial and industrial refuse separately. Commercial customers who use ordinary garbage cans are served by rear and side loading vehicles integrally on the same routes as residential customers. Similarly, commercial customers who use containers are served by front-end loading vehicles on the same routes as are residential customers who use containers. Because of this mix of commercial and industrial refuse, it is difficult to arrive at collection and disposal costs for residential customers on a per living unit basis. We have, however, devised a formula and a rationale which we feel gives a meaningful and realistic cost analysis. We have separated the rear and side loading operation from the front-end loading container operation and have made allowance for container commercial service by calculating a value for an equivalent living unit. By combining these costs, an overall cost per living unit can be calculated.

Calculations

Rear Loaders Pickup - Various Classifications

Single Family	
Strata Title Group Housing	32,163 units
Other Group Housing	942 units
Low-rise Apartments	76 units
Commercial (Small Business) (equivalent)	2,228 units
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	576 units
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TOTAL	35,985 units
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	110

Total Cost - Residential/Commercial  
(Rear Loaders) \$2,299,039.89

Deduct:

Disposal \$513,385.67  
Street Cleaning \$291,130.50  
Stride Avenue \$35,521.59  
Revenue \$117,803.44

\$ 957,841.20

Net Collection Cost

\$1,341,198.69

Net Collection Cost per  
Living Unit

\$1,341,198.69  
35,985

=

\$37.27

Disposal Cost per Living Unit

513,385.67  
35,985

=

\$14.27

Container Service (Front End Loaders)

Strata Title and Co-op Units:

6,857 units generate 2,071 cu. yds. weekly  
3.31 units generate 1 cu. yd. weekly  
Weekly collection commercial/  
industrial 1,035 cu. yds.

This is equivalent to 1,035 X 3.31 = 3,426 units weekly

Total actual and equivalent units:

6,857 + 3,426 = 10,283 units weekly

Total cost/container service

\$334,064.04

Deduct:

Disposal Cost \$106,178.09  
Revenue \$271,093.95

\$377,272.04

Net Collection Cost, Container Service  
(Front End Loaders)

- 43,208.00

Net Collection Cost per Unit -  $\frac{43,208}{10,283}$  = - \$4.20

Disposal Cost per Unit  $\frac{106,178.09}{10,283}$  = \$10.32

(cont'd)

Overall Refuse Service

Collection - Net Cost:

Residential/Commercial (rear loaders)	\$1,341,198.68
Containers (front end loaders)	- 43,208.00
TOTAL	<u>\$1,297,990.68</u>

Total equivalent units:

35,985 + 10,283 = 46,268

Overall net collection cost per living unit:

1,297,990.68  
46,268 = \$28.05

Disposal

Disposal cost rear loaders	\$513,385.67
Disposal cost containers	\$106,178.09
TOTAL	<u>\$619,563.76</u>

Disposal cost per unit 619,563.76 = \$13.39  
46,268

Total Net Cost of Overall Refuse Service

Collection \$28.05  
Disposal \$13.39  
\$41.44

Summary - Comparison with 1982

Residential/Commercial	1982	1983
Net Collection Cost Residential/Commercial (Rear Loaders)	\$	\$
	\$1,589,657	\$1,341,199

Net Collection Cost per Living Unit 44.57 37.27

Residential/Commercial (Rear Loaders)

Disposal Cost Per Living Unit 7.10 14.27

Collection & Disposal Residential/Commercial

51.67 51.54

Container Service Front End Loaders

Net Collection Cost/Unit 7.42 (-4.20)  
Disposal - Cost/Unit 6.30 10.32  
13.72 6.12

Overall Refuse Service

Net Collection Cost per Living Unit 37.82 28.05  
Disposal Cost/Unit 6.95 13.39  
44.77 41.44

Notes

1. In 1982, \$254,474 was contributed towards the transfer account for the replacement of vehicles. In 1983, only \$75,000 was made available. A saving of \$3.88 per unit was realized.

(cont'd)

2. In 1983, although 6,857 strata and co-op units were given free pick up, the front end loader collection operation showed a profit of \$43,208 or \$4.20 per unit.

Cost Comparisons - 1983

	<u>TYPE OF SERVICE</u>	<u>COLLECTION</u>	<u>DISPOSAL</u>	<u>TOTAL</u>
Burnaby	Municipal	37.27	14.27	51.54
	Rear Loaders			
	Front End Loaders	(4.20)	10.32	6.12
Surrey	"Blended Service"	28.05	13.39	41.44
	Private	43.24	6.26	49.50
	Private	45.00	No Charge	45.00
Coquitlam	Private & Municipal	41.50	5.80	47.30

NOTE: The "Blended Service" cost for Burnaby is the overall net cost per living unit under a combination of rear loader and front end loader service.

General Conclusion

During 1983 the refuse service was carefully monitored by the supervisors and together with a Committee formed by the crews they streamlined routes and minimized problems.

The following excerpt from the Finance Department's year end statement on Revenue and Expenditure illustrates that their efforts were effective.

Refuse Collection System  
Statement of Revenue and Expenditure  
for the year ended 1983 December 31

	<u>1983</u>	<u>1982</u>
Revenue:		
Service Fees	\$ 388,896	\$ 375,277
Municipal Contribution	2,244,207	2,261,531
	<u>\$2,633,104</u>	<u>\$2,636,808</u>
Expenditure:		
Collection Costs	\$1,611,888	\$1,769,180
Disposal Costs	619,564	303,139
Street Cleaning	291,130	310,015
Stride Avenue Reclamation	35,522	-
Transfer to Reserve for Replacement of Vehicles	75,000	254,474
	<u>\$2,633,104</u>	<u>\$2,636,808</u>

EEO:WMR:sp

  
DIRECTOR ENGINEERING