

ITEM	1
MANAGER'S REPORT NO.	8
COUNCIL MEETING	94/02/14

TO: CITY MANAGER **DATE:** 1994 02 07

FROM: DIRECTOR ENGINEERING **FILE:** 65-01-01

SUBJECT: COSTS OF REFUSE COLLECTION, DISPOSAL, AND RECYCLING

PURPOSE: To provide Council with cost information on Burnaby's Solid Waste Management System.

RECOMMENDATION:

1. THAT Council receive this report for information.

REPORT

1.0 INTRODUCTION

At the regular meeting of 1993 December 13, Council requested staff to prepare a report on when the recycling program will result in a lessening of the refuse collection cost.

Historically, Burnaby's solid waste budget had been fully utilized to provide refuse collection and disposal services to its single family, multi-family and commercial customers. Since 1990, with the implementation of a multi-level recycling program, the solid waste budget composition has changed to include waste reduction tasks which are required by the Province to meet the waste reduction objective. In 1994, approximately 80% of Burnaby's solid waste operating budget is for refuse collection and disposal services while the remaining 20% is for recycling and waste reduction programs.

To provide a true picture of the financial impact that the recycling program has created on the overall budget, factors such as population growth, inflation costs and disposal fee rate changes must be taken into consideration. This report provides Council with cost information showing the pre-recycling waste management costs and the current 1994 budget, and comparisons of different cost scenarios. For the purpose of this analysis, costs of street cleaning, Stride Avenue and the Still Creek depot operations are extracted from the total solid waste budget.

2.0 DISCUSSION

As the recycling program was initiated in Burnaby in 1990, we have selected 1989 as the base year for the purpose of budget comparison with that of 1994. The budgets were broken down into single family and multi-family, and cost projections were made to determine the financial impact of the recycling program on collection and disposal costs with growth and labour cost escalations factored into the analysis. It is recognized that the actual budgets include a small component for commercial customers. For this analysis, the commercial base has been included as part of the multi-family services. Results of the analysis are graphically illustrated in Figure 1. A description of the four budget scenarios analyzed is given as follows:

Scenario A - 1989 Solid Waste Budget

Description: This shows the 1989 annual budget for refuse collection and disposal based on 1989 waste volumes, disposal fee and labour rates.

The total single family and multi-family units served by Burnaby's waste management system were approximately 32,600 and 8,000 respectively.

Scenario B - Projected 1994 Solid Waste Cost Based on 1989 Volume

Description: This shows a projected budget for solid waste collection and disposal using 1989 customer base and waste volumes, and 1994 labour and disposal fee rates.

This is presented to show what the solid waste budget would have been for 1994 if recycling were not implemented and zero growth in the customer base between 1989 and 1994.

Scenario C - Projected 1994 Solid Waste Cost Without Recycling

Description: This presents another projected budget using 1994 customer base, waste volumes and unit costs but without recycling. All the wastes currently diverted or reduced through the waste reduction program are included as waste disposed.

This is provided to show the impact of growth and increases in waste generation when comparison is made with the 1989 base volume. This also further demonstrates what the solid waste budget would have been for 1994 if recycling was not provided and all waste collected are delivered to the GVRD disposal facility.

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Scenario D - 1994 Provisional Solid Waste Budget

Description: This shows the 1994 Provisional Solid Waste Budget including waste collection, disposal and recycling. The total single family and multi-family units served by Burnaby in 1994 is estimated to be 32,300 and 16,000 respectively. While the number of single family units remain relatively the same between 1989 and 1994, the multi-family units that are served by Burnaby's waste management system has risen approximately 100%, to 16,000.

The total 1994 Provisional Solid Waste Budget is approximately \$8.7 million. For the purpose of comparing the equivalent 1994 program costs with those in 1989, only the cost components for refuse collection, disposal, and recycling programs are included and shown in Figure 1. It should be noted that the recycling programs cost of \$1.7 million includes some limited duration pilot projects and experimental collection services to study waste generation and yard waste collection options.

Based on the four budget scenarios described above, it can be seen that the cost of refuse collection and disposal from 1989 to 1994 would have risen from \$4.5 million to \$6.3 million due to higher disposal and collection costs without volume increases. When volume increases were added and the recycling component removed, the 1994 collection and disposal would reach a total of \$7.0 million (Scenario C). With the implementation of recycling and waste reduction initiatives, the 1994 refuse collection and disposal cost has been held to \$6.0 million.

3.0 CONCLUSION

As reported in our 1993 November 15 solid waste management update report, Burnaby has seen a significant increase in population and hence the demands for waste management services has also risen. Burnaby's residents have responded in exceedance to the waste reduction activities initiated in 1990. The recycling programs have held the estimated 1994 residential (single and multi-family) refuse collection and disposal cost to approximately \$6.0 million which would have cost \$7.0 million without recycling. In addition, the 3R strategy has also reduced the reliance on landfill and incineration requirement, and minimizes the impact on the environment.

In summary, Burnaby's recycling program has helped to reduce demands on the City's refuse collection and disposal services, and is making progress towards achieving the Province's goal of 50% waste reduction per capita by the year 2,000.


DIRECTOR ENGINEERING

SOLID WASTE

Collection, Disposal and Recycling Costs

■ Single family ▨ Multi-family ▩ Recycling

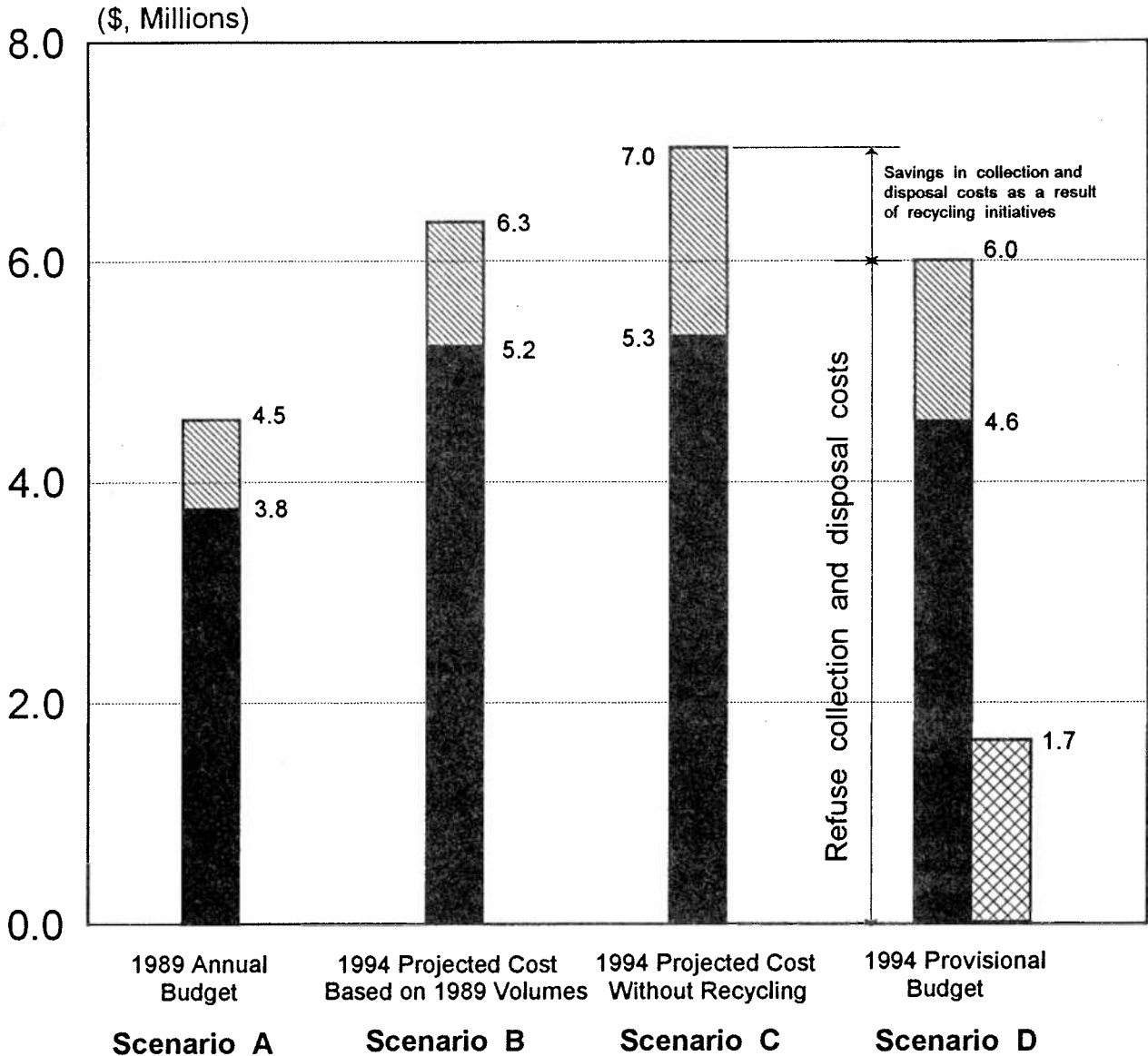


FIG. 1