

ITEM 16
MANAGER'S REPORT NO. 78
COUNCIL MEETING 89/11/27

RE: GREATER VANCOUVER LIQUID WASTE MANAGEMENT PLAN
DESIGN STUDY FOR REDUCTION OF COMBINED SEWER OVERFLOWS

MUNICIPAL MANAGER'S RECOMMENDATION:

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

* * * * *

TO: MUNICIPAL MANAGER 1989 NOVEMBER 23

FROM: DIRECTOR ENGINEERING

SUBJECT: GREATER VANCOUVER LIQUID WASTE MANAGEMENT PLAN - DESIGN
STUDY FOR REDUCTION OF COMBINED SEWER OVERFLOWS

PURPOSE: To seek Council's approval to participate jointly with the G.V.R.D. and the City of New Westminster on design studies to select the most effective measures for reducing contaminant discharges from combined sewer overflows to the Fraser River.

RECOMMENDATIONS:

1. THAT Council approve joint participation with the G.V.R.D. and the City of New Westminster on design studies to select the most effective measures for reducing contaminant discharges from combined sewer overflows to the Fraser River at an estimated cost of \$163,000 to the Municipality of Burnaby.
2. THAT the Municipality of Burnaby seek funding assistance from the Federal and Provincial governments for these design studies.
3. THAT a copy of this report be sent to the G.V.R.D. Administration Board.

REPORT

Staff have been advised by the G.V.R.D.'s Manager, Environmental Services, advising Council that the Regional District's Water and Waste Management Committee at its meeting of 1989 November 16 has approved the following recommendation:

1. "That, subject to approval by Burnaby Council for their portion of the costs, approval be given for the District to participate jointly with New Westminster and Burnaby on design studies to select the most effective measures for reducing contaminant discharges from combined sewer overflows to the Fraser River Main Stem over the next two years at a cost of \$240,000 to the Fraser Sewerage Area."



This recommendation will be advanced to the Administration Board of the G.V.R.D., for final approval, on 1989 November 29. As this recommendation is subject to approval by Burnaby Council for its portion of the costs, it is desirable that Council discuss this matter prior to 1989 November 29.

171

New Westminster Council has approved its share of the costs.

Burnaby Council, at its regular meeting held on 1988 December 12 adopted recommendations:

1. "THAT Council advise the Greater Vancouver Regional District of their support in principle for the Liquid Waste Management Plan.
2. THAT Council advise the Greater Vancouver Regional District of the liquid waste management issues which should be implemented immediately and those considered for intermediate/long term implementation as outlined in this report."

The design studies for the reduction of combined sewer overflows was one of the issues categorized for "intermediate/long term implementation" and needs further data and study in order to develop an environmentally sound and cost effective solution.

Combined sewer overflows are the last major source of untreated sewage to receiving waters originating within Greater Vancouver. Virtually all dry weather sanitary flow in the Fraser Sewerage Area is intercepted by G.V.S. & D.D. facilities and taken to the Annacis Island Sewage Treatment Plant. However, combined sewer overflows (CSOs) discharge to the Fraser River at New Westminster during many rainstorms. These overflows originate from combined sewers within New Westminster and Burnaby.

To address these issues, the Stage I Liquid Waste Management Plan (LWMP) recommends proceeding with design studies of facilities which would reduce combined sewer overflows to the Fraser River at New Westminster. These studies will determine existing sewer flows and sewer system operation, evaluation of the many alternatives for reducing combined sewer overflows to the Fraser River, optimization of capacity of the New Westminster Interceptor and selection of the options which should proceed to the detail design stage.

The proposed work is similar to that currently being carried out jointly by the G.V.S. & D.D. and the City of Vancouver for the Vancouver Sewerage Area and will involve the following:

1. Establishing a computer model to simulate flows in New Westminster, Burnaby and District sewer systems.
2. Monitoring sewer flow quantity. Flow monitoring will be used for validating computer model results, as well as providing up-to-date criteria for future sewer design.
3. Analyzing alternatives and recommending CSO control facilities including preliminary site selection, feasibility, costs and resulting reductions in contaminant loadings. Facilities will likely include storage of combined sewage during wet weather for later treatment.

(Cont.)

ITEM	16
MANAGER'S REPORT NO.	78
COUNCIL MEETING	89/11/27

This Stage I LWMP indicates that the cost to reduce CSO volumes to the Fraser River Main Stem by 50% and some contaminants by 75% would be about \$40 million. The actual costs for necessary control measures will depend on the level of contaminant reduction required which, in turn, will depend on the nature and extent of environmental impacts and regulatory requirements.

The proposed design studies will take approximately two years and will recommend CSO control measures with costs for various levels of contaminant reduction. The process of selecting an appropriate reduction level would involve discussions between the G.V.S. & D.D., New Westminster, Burnaby and Provincial and Federal Government regulatory agencies.

The proposed design work has been discussed amongst the G.V.S. & D.D., Burnaby and New Westminster staff and it has been determined that the total study cost will be approximately \$720,000. The G.V.S. & D.D. will use the results of the work in assessing upgrading at the Annacis Sewage Treatment Plant as well as for managing the operation of its sewers in the Fraser Sewerage area. New Westminster and Burnaby will use the results as a basis for establishing sewer construction and operation programs. It has been proposed that New Westminster and Burnaby shall together pay two-thirds of the total project costs with the remaining one-third to be charged to the Fraser Sewerage area as the G.V.R.D.'s share of the work. It is further proposed that the municipal component of the cost be shared proportional to the combined sewer areas in New Westminster and Burnaby. The total combined sewerage area is 3,246 acres broken down as follows:

1. Burnaby - 738 acres (23%)
2. New Westminster - 2,508 acres (77%)

Based on the proposed formula, the total study cost will be broken down as follows:

1. City of New Westminster	\$370,000
2. Greater Vancouver Sewerage & Drainage District	240,000
3. District of Burnaby	<u>110,000</u>
TOTAL	\$720,000
	=====

Council should note that the \$240,000 apportioned to the G.V.R.D. will be distributed to all members of the Fraser Sewerage Area including New Westminster and Burnaby. This will add an amount of \$53,000 to Burnaby's share for a total of \$163,000.

Burnaby's share of the design study costs by G.V.S. & D.D. will be funded from the Sanitary Sewer Utility operating surplus and reflected at 1990 Annual Budget time. There will be no effect on Municipal tax draw, but it will cause an increase in sewer rates in the future.


 W.C. Suter
 DIRECTOR ENGINEERING

VNW:je

cc: Director Finance

