

CITY OF BURNABY

ENVIRONMENT AND WASTE MANAGEMENT COMMITTEE

HIS WORSHIP, THE MAYOR
AND COUNCILLORS

RE: Burnaby Lake Pilot Dredging Project

RECOMMENDATIONS:

1. *THAT* Council receive this report for information.
2. *THAT* a copy of this report be forwarded to the Parks & Recreation Commission and the GVRD Parks Department.

REPORT

The Environment and Waste Management Committee, at its meeting held on 1999 September 14, received and adopted the attached report providing a status update on the Burnaby Lake Pilot Dredging Project. The Committee advised that the pilot project was completed on time and within budget. The Committee noted that a further report summarizing the project findings and conclusions will be provided to Council at a later date.

Respectfully submitted,

Councillor D. Johnston
Chair

Councillor C. Redman
Member

Councillor D. Lawson
Member

<p>COPY - CITY MANAGER - DIRECTOR PLANNING & BUILDING - DIRECTOR PARKS, RECREATION & CULT. SERV. - DIRECTOR ENGINEERING</p>

TO: CHAIRPERSON & MEMBERS
ENVIRONMENT & WASTE
MANAGEMENT COMMITTEE

DATE: 1999 09 13

FROM: DIRECTOR ENGINEERING

FILE: 40-09-03

SUBJECT: BURNABY LAKE PILOT DREDGING PROJECT

PURPOSE: To provide the Committee and Council with an update on the Burnaby Lake Pilot Dredging Project

RECOMMENDATION:

1. THAT the Committee forward this report to Council for information.
2. THAT a copy of this report be forwarded to the Parks & Recreation Commission and the GVRD Parks Department.

REPORT

1.0 INTRODUCTION

Council at its regular meeting of 1999 July 12 awarded a contract to Trimax Residuals Management Inc. to undertake the pilot dredging work in Burnaby Lake. Subsequent to Council's approval of the contract, the GVRD Park Committee at its meeting of 1999 July 14 also approved the allocation of \$170,000 as the District's contribution towards the project. The total budget approved for the project is \$845,000 including engineering, environmental monitoring, construction and dredge disposal costs.

The purpose of this report is to provide the Committee and Council with an update on the dredging and treatment work.

2.0 WORK PROGRESS TO DATE

The contractor began the equipment mobilization work in early August and completed the setup by mid-August. The dredging operation commenced on August 20 with the treated effluent discharged to the sanitary sewers and the solids trucked to a landfill site in Richmond for disposal.

The dredging machine selected for the job has adequate capacity to perform the task of removing lake bed sediments and surface vegetation. However, the dredging operation was slowed down when large metal objects such as metal pipes and shopping carts were encountered during the sediment removal process. The dredgeate removed from the lake was conveyed by a 1,000m long pipeline to the treatment plant facility located in the Burnaby Lake Rugby Club parking lot.

The goal of the treatment process is to obtain a treated water quality of no more than 25 mg/l of Total Suspended Solids (TSS) and 5 Nephelometric Units (NTU) of turbidity above the background (existing lake) levels. The background level for the lake measured during dry weather period is approximately 5 mg/l of TSS and 10 NTU of turbidity. The discharge water quality objectives must be met as part of the permit requirement stipulated by the Department of Fisheries and Oceans for returning the treated water back to the lake.

With the experimentation of different treatment dosages and the filtration processes, the target water quality objectives were achieved and the treated water was discharged back to the lake in the final days of the operation. During the course of the dredging and treatment process, an extensive sampling program was conducted to determine the best alternative and approach for optimum treatment operation. Having sustained a satisfactory operation and reached the pilot program objectives, the operation was terminated on Saturday, September 11. Demobilization and removal of the dredging machine and pipeline began on September 13 and will be completed by September 16.

The pilot program was completed on time and is well within the approved budget.

3.0 NEXT STEPS

With the completion of the pilot program, the next steps are to prepare a post-construction report summarizing the data and knowledge gained through the process, to develop budgetary estimates for possible future large scale dredging program and to document what would be the most optimum operation plan for future dredging work.

Once the information, data and conclusions are compiled, staff will forward a report to the Committee and Council to assist in developing a management direction for Burnaby Lake.

4.0 CONCLUSION

Having completed the pilot dredging project, it can be concluded that the program was successful and reached the objectives set out for the work. Valuable information has been gained with respect to the dredging, treatment and solids disposal operations. All of the information obtained will be documented in a project post-construction report to provide technical information for the lake management plan development process.

A further staff report summarizing the project findings and conclusions will be provided to the Committee and Council at a later date.


DIRECTOR ENGINEERING

LSC:jh

cc: City Manager
Director Planning & Building
Director Parks, Recreation & Cultural Services