

ITEM	1
MANAGER'S REPORT NO.	55
COUNCIL MEETING	93/09/20

1993 SEPTEMBER 16

TO: CITY MANAGER

FROM: DIRECTOR RECREATION AND CULTURAL SERVICES

SUBJECT: EXPLORATORY WATER WELL PROGRAM TO PROVIDE INDEPENDENT WATER SOURCE TO RIVERWAY GOLF COURSE IN CONJUNCTION WITH GLENLYON BUSINESS PARK

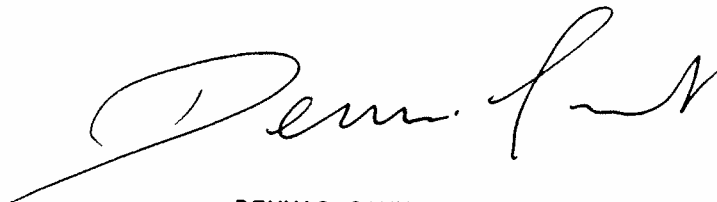
PURPOSE: To obtain Council's approval of a proposal to spend \$30,000 for exploratory well drilling for Riverway Golf Course.

RECOMMENDATIONS:

1. THAT the proposal to enter into an agreement with the CN Real Estate to undertake a joint exploration program on City lands to locate a well to supply an independent water source for use both in the Riverway Golf Course and the proposed Glenlyon Business Park be approved.
2. THAT approval be given for the expenditure of \$30,000 to fund Burnaby's share of the exploratory well drilling.

REPORT

At its meeting of 1993 September 15, the Parks and Recreation Commission received the attached staff report on the above subject and adopted the recommendation contained therein.



DENNIS GAUNT
Director Recreation &
Cultural Services

DG:hh
Attachment
A/1320

cc: Director Engineering
Director Planning & Building
Director Finance
City Solicitor

SUBJECT: EXPLORATORY WATER WELL PROGRAM TO PROVIDE INDEPENDENT WATER SOURCE TO RIVERWAY GOLF COURSE IN CONJUNCTION WITH GLENLYON BUSINESS PARK

RECOMMENDATIONS:

1. THAT the Parks and Recreation Commission authorize staff to pursue entering into an agreement with CN Real Estate to undertake a joint exploration program on City lands to locate a well to supply an independent water source for use both in the Riverway Golf Course and the proposed Glenlyon Business Park, as more particularly described in this report.
2. THAT Council concur with the proposal and approve the expenditure of \$30,000 to fund Burnaby's share of the exploratory well drilling.

REPORT

BACKGROUND

The Parks and Recreation Commission will recall that at its 1993 June 16 meeting, it received a report regarding the proposed development of the Glenlyon Business Park relative to the Burnaby Fraser Foreshore Parklands. At that time the Commission endorsed the open space framework outlined therein as it pertains to the parklands.

The Glenlyon Concept Plan proposed a positive relationship between the surrounding parkland and the proposed business park. It included the provision of a number of wetland ponds in various locations to emphasize the natural wetland character prevailing in the area. It was noted that CN Real Estate was investigating the potential to supply these ponds with clean natural water utilizing a pump connection from a well located in the vicinity of the Fraser River. The provision of this water source was seen as having potential benefits to the development of the Riverway Golf Course, as it was noted that it was probable that water could also be supplied to ponds within the course itself.

EXISTING SITUATION

Under the direction of CN Real Estate's Consultants, Macleod Geotechnical Ltd., a test well program was drilled near the Fraser River to a depth of 230 metres. Unfortunately, all of the water that was encountered either contained unacceptable levels of dissolved metals or was too salty for use in irrigation systems or the wetland ponds.

The presence of poorer water quality with high concentrations of dissolved minerals to a depth of some 100 metres confirmed the recent experience at the Riverway Golf Course. The high salinity levels at a depth of some 200 metres was not expected.

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Previous experience has indicated that several successful productive wells with good quality water have been developed over the years along the south slope of the Burrard Upland in Vancouver and New Westminster.

Macleod Geotechnical has stated that, based on their recent experience, the occurrence of marine sands instead of water-borne sand and gravel at the comparable 200 metre depth now leads them to conclude that the Burrard Upland deposits have been terminated somewhere to the north. It is their view that the area laterally along Marine Drive is the most promising target area for groundwater exploration. The presence of a till layer appears to control and maintain water quality in the underlying sand/gravel zone.

A test well program in this general area has been recommended to explore to depths of at least 120 metres. Drilling may be terminated when promising water-bearing zones are encountered.

POTENTIAL BENEFITS TO RIVERWAY GOLF COURSE

The potential benefits of establishing a clean fresh water source to the Riverway Golf Course cannot be overstated. In particular, Fisheries requirements for the relocation and improvement of Sussex and Nelson Creeks would be significantly enhanced if such a water source was introduced.

If, however, sufficient water for only one user is encountered, the City would retain the rights.

POTENTIAL COST SHARING AGREEMENT

CN Real Estate has a vested interest in securing a water source to supply the proposed wet ponds both within the Glenlyon development itself and the adjacent parklands. Water would also be provided to the irrigation system for the landscape elements both within the business park and on public road rights-of-way.

CN Real Estate has, therefore, proposed the following:

1. CN Real Estate and Burnaby agree to equally fund a test well on Burnaby Property near Marine Drive at an approximate cost of \$60,000. CN will be responsible for completing the work with Burnaby contributing 50% of the costs.
2. If acceptable quality and quantity of water is found, a pump and piping system will be designed to deliver sufficient quantities of water to satisfy the needs of the golf course and Glenlyon Business Park. Costs for such a system would be shared based on percentage of use. Depending on the length, size, etc., CN's consultants have advised that such a system would cost approximately \$70,000 to \$100,000. It should be recognized that this is only a projected figure and actual costs would need to be determined based on a full design and tendered contract costs.

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3. Responsibility for maintenance of the system would remain with Burnaby with contributions from CN Real Estate based on percentage of use.

It is proposed that the test well be located at the northeasterly corner of the Riverway Sports Complex. When the availability of water is confirmed, a formal agreement will be required.

POTENTIAL FUTURE COSTS

If there is only sufficient water for Burnaby, the City would pay 100% of the drilling, pumping, piping and ongoing maintenance costs. If insufficient water is found, the well will be capped and no further costs will be incurred.

It is also conceivable that, if sufficient flows were developed in the initial test well, additional wells could be drilled and tapped into a distribution system to potentially augment irrigation requirements for the golf course.

These costs and recommendations will be based on the outcome of the test well.

CONCLUSIONS

It is staff's view that the benefits to both the City and CN Real Estate in establishing a clean water source for shared use are such that a joint exploration program should be funded as outlined herein.

SOURCE OF FUNDS

Sufficient Parks Capital General Revenue funds are available to fund this project. This project was not included in the 1993 Capital Budget, however, due to reductions in other major Parks projects, there will be no increase in the overall Parks Capital Budget.

PB:DWJ:jp:di
A/1827

cc: Director Engineering
Director Planning & Building Inspection
Director Finance
City Solicitor