Agenda - Executive Policy Committee - July 11, 2007

Report - Standing Policy Committee on Infrastructure Renewal and Public Works - July 3, 2007

Item No. 1 Change of project name and scope of work for North End Water Pollution Control Centre - Primary Clarifier Covers File WS-7.1

STANDING COMMITTEE RECOMMENDATION:

On July 3, 2007, the Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the administrative recommendation and submits the following to Council:

1. That the scope of work for this project be amended to include only the replacement of the sweep mechanisms and their associated mechanical and electrical equipment and that the cover portion of the project be delayed indefinitely.

2. That the project name be changed from NEWPCC- Primary Clarifier Covers to NEWPCC – Primary Clarifier Refurbishment.

3. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

Agenda - Executive Policy Committee - July 11, 2007

Report - Standing Policy Committee on Infrastructure Renewal and Public Works - July 3, 2007

DECISION MAKING HISTORY:

STANDING COMMITTEE RECOMMENDATION:

On July 3, 2007, the Standing Policy Committee on Infrastructure Renewal and Public Works concurred in the administrative recommendation and submitted the matter to the Executive Policy Committee and Council.

RE: CHANGE OF PROJECT NAME AND SCOPE OF WORK FOR NORTH END WATER POLLUTION CONTROL CENTRE – PRIMARY CLARIFIER COVERS

FOR SUBMISSION TO: THE STANDING POLICY COMMITTEE ON INFRASTRUCTURE RENEWAL AND PUBLIC WORKS

ORIGINAL REPORT SIGNED BY: The Director of the Water and Waste Department

REPORT DATE: June 15, 2007

RECOMMENDATION(S):

1. That the scope of work for this project be amended to include only the replacement of the sweep mechanisms and their associated mechanical and electrical equipment and that the cover portion of the project be delayed indefinitely.

2. That the project name be changed from NEWPCC – Primary Clarifier Covers to NEWPCC – Primary Clarifier Refurbishment.

Report Summary

KEY ISSUES: City Council approval is required to amend the substantial purpose or conditions applicable to any Capital Program.

IMPLICATIONS OF THE RECOMMENDATION(S):

General Implications

X	None
	For the organization overall and/or for other departments
	For the community and/or organizations external to the City of Winnipeg
	Involves a multi-year contract
	Comment:

Policy Implications

X	No
	Yes - Comment(s)

Regulatory Implications

X	None
	Eliminates or reduces regulatory impact
	Proposes regulatory impact
	Comment(s):

Environmental Implications

	No
X	Yes - Comment(s):

Odour control is one of the reasons that the clarifier covers were proposed originally. However, with improvements currently underway on more significant odour sources, the Department will have an opportunity to re-evaluate the benefit of the covers from an odour perspective.

Human Resources Implications

X	No
	Yes - Comment(s):

Financial Implications

	Within approved current and/or capital budget
X	Current and/or capital budget adjustment required

Comment: Additional funds required to complete the amended project are in the proposed 2008 Capital Budget program.

REPORT

REASON:

A program change that is redefining an existing capital project requires Council approval.

HISTORY:

2003 Council approved $300,000 for preliminary engineering to install covers for the uncovered primary clarifiers at the NEWPCC site. In addition to their use for controlling odour from the clarifiers, the covers would facilitate operational flexibility and maintenance.

2004 Council approved an additional $7,900,000, with an expanded scope to include replacement of the mechanical and electrical equipment associated with the sweep mechanisms. The sweep mechanisms must be replaced prior to installation of the covers.

2007 Council approved the 2007 Capital Budget which includes an additional $8,800,000 in year 2008 of the five year forecast to cover the anticipated shortfall in required for the Primary Clarifier Covers Project.

DISCUSSION:

Clarifiers # 1 & 2 were constructed in 1937. Clarifier No. 3 was added during the 1953-1956 NEWPCC expansion. These three uncovered primary clarifiers at the NEWPCC had been identified as one of the remaining untreated odour sources at the site. Two other more significant odour sources, the Grit Building and Dewatering Building are both currently under design for odour mitigation implementation.

The Primary Clarifier Cover project was set up to implement a cover/ventilation system which would facilitate year round maintenance and operational flexibility and provide odour control capability. The project scope of work and the budget were expanded to include replacement of the clarifier sweep mechanisms which have reached the end of their expected design/service life. The sweep mechanisms collect solids which settle in the clarifiers, and direct them to a sump, from where they are removed for further treatment and processing. The sweep mechanisms are integral to the proper operation of the clarifier.

An engineering consultant has completed the Preliminary/Conceptual design and prepared cost estimates for the Primary Clarifier Cover project as follows:

Sweep Mechanisms: $ 9,700,000 (2007 dollars)
Scope of work consists of:
(a) Sweep Mechanism Procurement
(b) Sweep Mechanism Installation
(c) Replace Motor Control Centres and associated electrical works
(d) Rehabilitate Clarifier Concrete surface
(e) Remove & Rehabilitate existing access bridge

Circular Primary Clarifier Cover System: $14,100,000 (2008 dollars)
Scope of work consists of:
(a) Cover System Procurement
(b) Cover System Installation
(c) Heating Ventilation and Air Conditioning, (HVAC) and electrical
(d) Select Demolition at cover/existing infrastructure interface
(e) Structural upgrades to accommodate Cover System

Therefore the total project cost is currently estimated at $23,800,000 compared to the $17,000,000 identified in the capital forecast.

Cost increases to this project budget can be attributed to a number of factors, including:

- Higher Construction Estimates are the result of the very active construction industry in Manitoba at this time. The large number of concurrent major projects has resulted in labour shortages and increased labour costs. These factors coupled with increasing material and fuel costs have resulted in significantly higher construction costs.
- The scope of work has been increased beyond what was envisioned in the original budget estimates. Further investigation has determined that there is additional infrastructure at the end of its design life that requires replacement such as electrical and ventilation systems that are associated with the existing clarifiers.
- Changes to the design criteria and building codes have resulted in additional costs, specifically, the classification of the area requiring higher ventilation capacity and higher electrical component costs.
- The capacity of sweeps and mechanisms has been bolstered to accommodate future wet weather treatment processes such as chemically enhanced primary treatment at an estimated increased cost of $200,000.
- Greater level of detail to cost estimate. The original budget was based on a high level conceptual estimate which had been developed several years prior.

Due to the marked increase in the capital funding requirement, the Department is recommending deferral of the clarifier covering portion of the project. Replacement of

the clarifier sweep mechanisms is still necessary due to their age and obsolescence. The long lead time for fabrication and delivery of the clarifier mechanisms will result in the project being tendered in early 2008 and construction being carried out in the summer and fall of 2008.

The 2008 Capital Forecast includes an additional $8,800,000 for this project in 2008 that had been forecasted to cover the expected shortfall in funding project. With the reduced project scope, the 2008 funding requirement will be reduced to $1,500,000. This revised budget amount will be submitted as part of the 2008 Capital Budget process.

To more accurately reflect the nature of the project, it is recommended that the project name be changed to NEWPCC-Primary Clarifier Refurbishment. The clarifier cover system will be delayed pending further site odour monitoring and evaluation of the effectiveness of the odour mitigation being installed to address the more intense odour sources at the grit and dewatering buildings. If it is determined that further odour mitigation is required, the funding for the clarifier cover portion of this project will be added to a future Capital Budget for Council's consideration.

It should be noted that residential development is now occurring immediately north of the NEWPCC and north of the future extension of the Chief Peguis Trail. Therefore, there is a risk of increased odour complaints as a result of not covering the clarifiers. However an odour assessment undertaken in 1998 identified the open clarifiers as a low intensity odour source compared to the grit and dewatering buildings.

FINANCIAL IMPACT:

The following financial impact statement for this project has been prepared in accordance with the recommendation adopted by Council on December 13, 2000.

Financial Impact Statement **Date:** June 13, 2007

Project Name:

CHANGE OF PROJECT NAME AND SCOPE OF WORK FOR NORTH END WATER POLLUTION CONTROL CENTRE – PRIMARY CLARIFIER COVERS

COMMENTS:

There is no finanacial impact to this recommendation

"Original signed by M. L. Geer, C.A."

je

Moira L. Geer C.A.
Manager of Finance & Administration

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IN PREPARING THIS REPORT THERE WAS:

Internal Consultation With and Concurrence By: N/A

External Consultation With: N/A

THIS REPORT SUBMITTED BY:

Water and Waste Department
Engineering Division
Prepared by: Karl Martens, P. Eng.
File No. S-663

KLM/DGG/km