

Minutes – Standing Policy Committee on Finance – January 8, 2015

REPORTS

**Item No. 4 South End Water Pollution Control Centre (Sewpcc) Upgrading and
Expansion Financial Status Report No. 4 for the Period from August
1, 2014 to October 31, 2014**

STANDING COMMITTEE DECISION:

The Standing Policy Committee on Finance concurred in the recommendation of the Winnipeg Public Service and received the report as information.

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DECISION MAKING HISTORY:

Moved by Councillor Pagtakhan,

That the recommendation of the Winnipeg Public Service be concurred in.

Carried

David Sanders submitted a communication dated January 8, 2015, with respect to the South End Water Pollution Control Centre (Sewpcc) Upgrading and Expansion Financial Status Report No. 4 for the Period from August 1, 2014 to October 31, 2014.

ADMINISTRATIVE REPORT

Title: **SOUTH END WATER POLLUTION CONTROL CENTRE (SEWPCC)
UPGRADING AND EXPANSION FINANCIAL STATUS REPORT NO. 4
FOR THE PERIOD FROM AUGUST 1, 2014 TO OCTOBER 31, 2014**

Critical Path: **THE STANDING POLICY COMMITTEE ON FINANCE**

AUTHORIZATION

Author	Department Head	CFO	CAO
G. K. Patton, P. Eng. Manager of Engineering Services	D. Sacher	M. Ruta	D. Joshi A/CAO

RECOMMENDATIONS

That this report be received as information.

REASON FOR THE REPORT

At its meeting held on December 16, 1999, City Council adopted a policy whereby all capital projects with a total estimated cost of \$10 million or more be submitted by the associated Civic Department to the Standing Committee on Fiscal Issues (now the Standing Policy Committee on Finance) for review and recommendation prior to any bid solicitation being issued.

Administrative Directive No. FM-004 requires quarterly reporting to the Standing Committee on Fiscal Issues (now the Standing Policy Committee on Finance).

IMPLICATIONS OF THE RECOMMENDATIONS

The project cost estimate of \$272.75 Million, included in the 2014 - 2019 budget submission, was based on different regulatory requirements than those of the current licence. A new Class 3 cost estimate has been provided.

The Project schedule is under review.

HISTORY

DISCUSSION:

1. **MAJOR CAPITAL PROJECT STEERING COMMITTEE**

Administrative policy for projects with capital cost exceeding \$10 million requires formation of Major Capital Project Steering Committee. The Committee has been formed and its members are:

Deepak Joshi, Acting Chief Administrative Officer
Michael Ruta, Chief Financial Officer
Diane Sacher, Director of Water and Waste
Moira Geer, Manager of Finance and Administration, Water and Waste
Jackie Veilleux, Project Director Winnipeg Sewage Treatment Program, Water and Waste

The Committee has reviewed this report and recommended that the report be sent to the Standing Policy Committee on Finance.

2. **RISKS AND RISK MITIGATION STRATEGIES**

An ongoing risk management strategy has been implemented for the project encompassing a proactive process of identifying and assessing project risk, defining appropriate risk handling strategies and plans, and monitoring those actions to completion.

Formal risk and opportunity analyses of the project are scheduled to be performed by the Winnipeg Sewage Treatment Program, the design consultant and key City stakeholders at the following project milestones:

- End of Project Definition design stage – this analysis has been completed
- End of Preliminary Design phase – this analysis has been completed
- At 60% and 90% completion of Detailed Design – analysis has been completed for Contract 1
- Prior to the start of construction and quarterly during construction – first construction analysis has been completed
- Prior to the start of and at the end of commissioning

A project risk register is being kept throughout the project and will be updated by the formal analyses.

3. **CHANGES FROM LAST REPORT**

- The program team continues to issue comments and review responses from CH2M Hill on the project Preliminary Design Report. Of significance, further preliminary design analysis has been requested from CH2M Hill with respect to; a) fermenter efficiency, b) upgraded plant hydraulic profiles.
- A value engineering workshop on the Preliminary Design was held August 11 to 15, 2014. During this workshop a panel of independent technical consultants (including treatment process experts from the University of Manitoba and other engineering consultants) and select program team members reviewed the CH2M Hill Preliminary Design and proposed changes to the design that were felt to be lower cost methods to attain similar functionality and project objectives. The resultant Value Engineering (VE) Report, containing over 150 proposals and design recommendations, was issued by the workshop facilitator on September 15, 2014. The

program team short listed 37 VE proposals with their anticipated cost savings for issuance to CH2M Hill for their formal assessment.

- CH2M Hill issued a Project Change Notice in the amount of \$222,678 to review the 37 VE proposals and provide an initial report on their achievability, technical implications, implementation/schedule effects and magnitude of cost saving expected for each. An associated consultant assignment over-expenditure has been approved and CH2M Hill's report is expected in November 2014. It is anticipated that future additional consultant work with additional cost will be required to further develop or incorporate select value engineering proposals into the project design based on a benefit/cost analysis.
- Manitoba Hydro will undertake a mandatory Load Interconnection Facilities Study at the City's cost. This engineering study, estimated to cost \$60,000, will assess the capability of Manitoba Hydro's system to provide the increased power demand of the upgraded SEWPCC facility and identify needed system modifications and associated costs.
- The project consultant is performing detailed design work related to the High Rate Clarification area of the plant. This design work is required to enable the contract work of RFP 873-2013, Supply and Delivery of High Rate Clarification Equipment to proceed.
- Bid Opportunity 333-2014 for Contract 1 - Site Preparation Works was awarded to PCL Constructors Canada Inc. in the amount of \$22,646,510.00, MRST included, GST extra. Three tenders for the Bid Opportunity were received. The awarded cost was 7% lower than the pre-tender estimate.
- RFP 353-2014 For Construction Cost Consulting Services for SEWPCC Upgrading/Expansion Project was awarded to the highest evaluated proponent, Hanscomb Ltd., at the estimated cost of \$50,700.00, MRST and GST extra. The deliverable from this independent third party costing assignment will be used to form part of the Capital Project Target Cost required by the Program Agreement. Two proposals for the RFP were received.
- Bid Opportunity 572-2014 Provision for the Purchase or Lease of a Trailer for Office Space was awarded to B+B Rentals Inc. in the amount of \$184,000.00, taxes extra. Two tenders were received. The awarded cost for the Bid Opportunity was 30% lower than the pre-tender estimate.

4. ISSUES/RISKS REQUIRING FURTHER ATTENTION

Cost Risk

Derived from the current preliminary design (30% design completion), CH2M Hill has provided a Class 3 probable cost of construction estimate for the SEWPCC Upgrading/Expansion Project. The estimate has an identified accuracy range of -20% to +30% following AACE International recommended practice. Incorporating this latest construction estimate, the total project cost is currently estimated to be \$335.60 Million.

The reason for the cost increase over that previously budgeted (\$272.75 Million) is attributed as follows;

- \$36.85 Million for plant requirements, including associated electrical power upgrades, to meet the more stringent regulatory licence received in 2012.
- \$26.0 Million due to improved costing accuracy moving from the previously available Class 5 estimate to the current Class 3.

Changes in the overall project budget, in consideration of the submitted construction cost estimate, have been referred to the 2015 Budget process.

As per the Program Agreement between the City and Veolia, the preliminary design documents will be submitted to Hanscomb Ltd. (under RFP 353-2014) for an independent third party costing of the project construction. Their cost estimate will form part of the Capital Project Target Cost identified in the Program Agreement and will be used for gainshare/painshare allocation between the Program partners. It is anticipated that the Capital Project Target Cost will be developed by March of 2015.

Schedule

The SEWPCC Environment Act Licence No. 2716 RR received on April 18, 2012 requires the plant to meet more stringent discharge effluent requirements on and after December 31, 2015. On May 2, 2012, in a letter to the Regulator, the Department advised that as per the plan it submitted to the Regulator, the December 31, 2015 date was not achievable and requested that the construction completion date of October 31, 2016 be reflected in the licence, consistent with the submitted and approved plan. The project schedule is under discussion with the Regulator. Project updates are provided every six (6) months to the Regulator as per the Environment Act Licence.

As part of the submitted draft Preliminary Design Report, the project consultant, CH2M Hill, has developed the Project Implementation Plan and associated schedule. The key target of the plan is noted to accomplish license compliance as soon as feasible with an interim BNR configuration (i.e. without sludge thickening, biological phosphorus removal and odor control). The interim configuration is applicable as the project design incorporates repurposing the existing SEWPCC high purity oxygen reactors and pressure-swing absorption facility. These existing assets cannot be taken out of service and modified until the interim configuration is operable. Preliminary indications are that the October 31, 2016 timeframe is not achievable but will be reviewed further as the project progresses.

Current key schedule milestones are:

Milestone Description	Timeline	
	Previous Report	This Report
Complete Project Definition Report	May 2014	May 2014 ⁽¹⁾
Complete Preliminary Design Report	August 2014	November 2014
Start Detailed Design	March 2014	March 2014
Start Construction of Site Preparation and Piling	October 2014	October 2014
Start Construction of BNR Bioreactor	May 2015	November 2015
Complete Commissioning interim BNR configuration	October 2016	under review
Complete Commissioning of all project components		under review

⁽¹⁾ Substantial completion

Sewage Treatment Program Funding

The sewage treatment plant upgrades, including the SEWPCC, received and will receive funding from the provincial and federal governments. Funds flow from an existing agreement under the Canadian Strategic Infrastructure Fund (CSIF), as well as an agreement to be developed under the Green Infrastructure Fund (GIF). The Province has also made a funding commitment in the 2007 Throne Speech.

Canadian Strategic Infrastructure Funding (CSIF)

This Agreement stipulates that Canada and Manitoba agree to pay a contribution to the City of Winnipeg towards the total Eligible Costs of the defined Project at the three wastewater treatment facilities. The Project components consist of the NEWPCC Centrate treatment facility, the WEWPCC biological nutrient reduction facility, and the SEWPCC biological nutrient reduction facility. Costs incurred prior to November 28th, 2005, which was the date of federal ministerial approval, are ineligible for cost sharing. The maximum contributions under the agreement are \$42 million from Canada and \$25 million from Manitoba.

The NEWPCC Centrate treatment facility and WEWPCC biological nutrient reduction facility projects are now complete. As a result Manitoba has fulfilled its total commitment of \$25 million and Canada has fulfilled \$10 million of the \$42 million committed for these projects.

SEWPCC biological nutrient reduction facility is the only component remaining eligible for funding and is eligible for the remaining Canada commitment of \$31.34 million.

Green Infrastructure Fund (GIF)

The federal and provincial governments have confirmed their funding commitments of \$11 million each towards the Wet Weather Flow components of the SEWPCC project. The City of Winnipeg will work with each level of government to finalize the contribution agreements in a timely manner.

Provincial Funding Commitment from the 2007 Throne Speech

In 2007 the Province of Manitoba committed funds to the sewage treatment program in the amount of \$206 million, beyond the \$25 million under the CSIF program and \$3.8 million under the 2004 UCPA program, bringing the total commitment to \$234.8 million.

Funding for the SEWPCC and the WSTP is outlined in Appendix 1.

5. WINNPEG SEWAGE TREATMENT PROGRAM (WSTP)

Under the WSTP Veolia is to provide advice to the City of Winnipeg in the design and construction of the SEWPCC project. As indicated in the latest WSTP Annual Report (tabled at City Council on June 25, 2014), Veolia is delivering value to the City of Winnipeg. In this project, the City of Winnipeg is benefitting from:

- Savings from reduced rates in consulting services
- Provision of expert advice on BNR upgrade and expansion
- Share in the risks of the capital project delivery.

6. FINANCIAL ANALYSIS

The status of current Requests For Proposal and Bid Opportunities are as follows:

Request for Proposal or Bid Opportunity	Description	Current Status	Contract Value (GST and MRST extra as applicable)
871-2013	Procurement of Free-Floating Media and Associated Appurtenances	Under evaluation	
873-2013	Procurement of High Rate Clarification Equipment	Awarded	\$2,052,500.00
333-2014	Contract 1- Site preparation works – SEWPCC Upgrading/Expansion Project	Awarded	\$22,646,510.00
353-2014	For Construction Cost Consulting Services for SEWPCC Upgrading/Expansion Project	Awarded	\$50,700.00
572-2014	Provision for the Purchase or Lease of a Trailer for Office Space	Awarded	\$184,000.00

Future major Bid Opportunities are:

- Contract 2 - Major Concrete Works
- Contract 3 – For the remaining works including mechanical, electrical and automation

Project funding

The approved capital and 2014 projected budget are as follows:

YEAR	CAPITAL PROGRAM	ACTUAL + PROJECTED CASH FLOWS	CUMULATIVE CAPITAL BUDGET REMAINING
Up to 2014	247,250,000 ¹	25,989,615	221,260,385
2015	13,000,000 ²	38,779,127	195,481,257
2016	12,500,000 ²	80,684,225	127,297,032
2017		82,931,528	44,365,505
2018		44,365,504	0
Total	272,750,000 ³	272,750,000	

¹Capital Budget approved by Council

²Capital Program requirements included in the 2014 - 2019 Capital Budget Estimates

³Does not include for the 2015 budget submission

A summary of the budget to forecast comparison is contained in Appendix 2.

Project funding sources are as follows:

This project will receive \$31.34 million in Canadian Strategic Infrastructure funding. The balance of the project cost will be funded using a combination of cash, Environmental Projects reserve and debt funding. Each these sources are internally funded by rates as forecast in the Council approved rate report.

FINANCIAL IMPACT

Financial Impact Statement

Date: **November 17, 2014**

Project Name:

SOUTH END WATER POLLUTION CONTROL CENTRE (SEWPCC) UPGRADING AND EXPANSION FINANCIAL STATUS REPORT NO. 4 FOR THE PERIOD FROM AUGUST 1, 2014 TO OCTOBER 31, 2014

COMMENTS:

As this report is submitted for informational purposes only, there is no financial impact associated with this recommendation.

"Original signed by M. Geer, CA"

Moira L. Geer, C. A.

Manager of Finance and Administration

CONSULTATION

In preparing this report there was consultation with:

SUBMITTED BY

Water and Waste Department
Engineering Services Division
Prepared by: N. A. Harrington, P. Eng.
Date: November 13, 2014
File No. 020-17-08-25-01, S-926

Funding: South End Water Processing Pollution Control Centre (SEWPCC) and Winnipeg Sewage Treatment Program (WSTP)

APPENDIX 1

1) Funding for the SEWPCC is as follows:

SEWPCC Nutrient Removal/Upgrade (in \$millions)	Total Cost	Funded to Date		Funding Pending		Total Funding		City Share of Costs
		Canada	Manitoba	Canada	Manitoba	Canada	Manitoba	
Environment Act Licence Driven Funding								
CSIF BNR	\$ 147.00	\$ 0.29	\$ 6.07	\$ 31.05		\$ 31.34	\$ 6.07	\$ 109.59
GIF Wet Weather Flow	60.00			11.00	11.00	11.00	11.00	38.00
Other	66.00							66.00
Estimated Program Costs	\$ 273.00¹	\$ 0.29	\$ 6.07	\$ 42.05	\$ 11.00	\$ 42.34	\$ 17.07	\$ 213.59

2) Funding for the Winnipeg Sewage Treatment Program is as follows:

WSTP All Projects (in \$millions)	Total Cost	Funded to Date		Funding Pending		Total Funding		City Share of Costs
		Canada	Manitoba	Canada	Manitoba	Canada	Manitoba	
WEWPCC Biological Nutrient Removal	\$ 33.00	\$ 5.07	\$ 8.19			\$ 5.07	\$ 8.19	\$ 19.74
NEWPCC Centrate and UV Disinfection	52.00	5.59	14.54			5.59	14.54	31.87
SEWPCC Nutrient Removal/Expansion	273.00 ¹	0.29	6.07	42.05	11.00	42.34	17.07	213.59
NEWPCC Nutrient Removal/Upgrade	547.45		20.34		174.66		195.00	352.45
Estimated Program Costs	\$ 905.45	\$ 10.95	\$ 49.14	\$ 42.05	\$ 185.66	\$ 53.00	\$ 234.80	\$ 617.65

Notes:

- WEWPCC Biological Nutrient Removal and NEWPCC Centrate and UV Disinfection have been completed.

¹ This value does not include the 2015 Budget submission. The table will be updated following the 2015 Budget process.

APPENDIX 2
As at October 20 , 2014

Components	COSTS				PROJECTED COSTS TO COMPLETE					TOTAL	VARIANCE	NOTE	
	Approved Budget To Date ¹	Costs Incurred up to last report	Costs submitted this report	Total Costs Incurred to Date (per G/L) 20-Oct-14	2014	2015	2016	2017	Total Costs Remaining to Complete	Total Project Cost	Variance from Budget (Unfavourable)		
A PROFESSIONAL SERVICES	42,786,581	11,235,805	1,441,543	12,677,348	3,648,801	9,129,594	9,844,515	4,373,611	3,112,711	0	42,786,581	0	2
B CONSTRUCTION	229,963,419	5,082,572	3,457	5,086,029	4,577,437	29,649,534	70,839,710	78,557,917	41,252,793	0	229,963,419	0	
TOTALS	272,750,000	16,318,377	1,445,000	17,763,378	8,226,238	38,779,127	80,684,225	82,931,528	44,365,504	0	272,750,000	0	

Percentage Complete

7%

1 Total budget of \$272.75 Million for the SEWPCC Upgrade/Expansion Project; Distribution of costs to Components A) and B) was done by the Water and Waste Department. The values do not include for the 2015 budget submission.

2 Professional Services include Professional Engineering Services, other expert design and cost review, CSIF Funding Audits, Municipal Corporate Utility Model review, overhead and administration charges