

Minutes – Standing Policy Committee on Finance – July 6, 2015

REPORTS

**Item No. 7 South End Sewage Treatment Plant (SEWPCC) Upgrading and
Expansion Financial Status Report No. 6 for the Period from
February 1, 2015 to April 30, 2015**

STANDING COMMITTEE DECISION:

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

Minutes – Standing Policy Committee on Finance – July 6, 2015

DECISION MAKING HISTORY:

Moved by Councillor Gillingham,

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

Carried

ADMINISTRATIVE REPORT

Title: SOUTH END SEWAGE TREATMENT PLANT (SEWPCC) UPGRADING AND EXPANSION FINANCIAL STATUS REPORT NO. 6 FOR THE PERIOD FROM FEBRUARY 1, 2015 TO APRIL 30, 2015

Critical Path: The Standing Policy Committee on Finance

AUTHORIZATION

Author	Department Head	CFO	CAO/COO
G. K. Patton, P. Eng. Manager of Engineering Services	Chris Carroll, P. Eng. Acting Director of Water and Waste	M. Ruta	M. Jack COO

RECOMMENDATIONS

That this report be received as information.

REASON FOR THE REPORT

Administrative Standard No. FM-004 requires quarterly reporting to the Standing Policy Committee on Finance.

EXECUTIVE SUMMARY

This report identifies the financial status and significant events for the SEWPCC Upgrading and Expansion for the period February 1, 2015 to April 30, 2015.

IMPLICATIONS OF THE RECOMMENDATIONS

The Project schedule has been revised.

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:

Doug McNeil, 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 – second 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

RFP 682-2012 (Professional Consulting Services)

- CH2M Hill submitted their 60% design for the High Rate Clarification area. The Program Team along with Wastewater Services personnel reviewed the documents and provided review comments to the Consultant. CH2M Hill is proceeding with the 90% detailed design for the High Rate Clarification area.
- CH2M Hill submitted their 60% design for the new Grit Removal area. The documents are currently under review.

- The Program Team approved the Consultant's request to proceed with the detailed design of the new chemical building, new electrical and generator building, and the required modifications to the Administration Building.
- The Project Implementation Plan contract packaging (Bid Opportunities to be tendered) is currently under review with the Consultant.
- An over expenditure in the amount of \$29,440.00 was approved for Consultant Services Change Order 10. This covered additional well drilling and aquifer testing required for assessing options and refining the design for the groundwater depressurization system.
- A program team report recommending the implementation of designated value engineering proposals is in process.
- An over expenditure report has been issued for the approval of the Chief Financial Officer for additional Professional Consulting Services required for:
 - design and construction of the electrical substation
 - design modifications to implement the recommended value engineering proposals
 - a three year groundwater depressurization program

RFP 353-2014 (Third Party Cost Consultant Services)

- Review comments have been made on the draft project construction cost analysis issued by the Cost Consultant.

RFP 871-2013 (Supply and Delivery of Free-Moving Media)

- Associated design work is progressing.
- A cost saving design consideration proposed by the media supplier and validated by the design consultant is being recommended for implementation by the program team as part of the value engineering initiatives.

RFP 873-2013 (Supply and Delivery of High Rate Clarification Equipment)

- Contractor design work is nearing substantial completion.
- Equipment delivery window is under review with the Contractor.

RFP 1067-2014 (Manitoba Hydro Load Interconnection Study)

- Manitoba Hydro continues to undertake the Load Interconnection Facilities Study. The resulting report is anticipated in June 2015.

Bid Opportunity 333-2014 (Contract C1 – Site Preparation Works)

- Project Team initiatives to reduce the contract shoring and associated costs, have been implemented. This initiative also benefits future costs due to reduction in shoring removals.
- Construction works continue to progress.
- The Consultant has recommending the existing Liquid Oxygen Tank be relocated to facilitate installation of shoring suitable for constructability requirements. Methodology and implications are under review.
- Apparent leakage is being observed in the excavation near the existing UV Building. This issue is being investigated.

Bid Opportunity 572-2014 (Provision of Trailers for Site Office)

- The site office trailers, purchased under the Bid Opportunity have been installed at the site.
- Total Performance of the contract has been achieved.

4. **ISSUES/RISKS REQUIRING FURTHER ATTENTION**

Cost Risk

The total project cost is currently estimated to be \$335.60 Million. The estimate is based on the preliminary design level documents and is an AACE Class 3 estimate with an expected accuracy range of -20% to +30%.

It is AACE International accepted practice that cost estimates are adjusted as design progresses.

Schedule

Scheduled Tasks as per the originally submitted SEWPCC Concept Design Report	Original Conceptual Design task duration (Months)		Original Conceptual Design Project Schedule	Actual or Currently Forecasted Project Schedule
	Start	Finish		
Department submitted concept design to the Regulator showing 54 month schedule from receipt of Regulator's approval				Sept 6, 2011
Regulator issued revised SEWPCC Licence with completion by December 31, 2015 ¹				April 18, 2012
Department issued a letter to the Regulator noting concerns with the more stringent effluent requirements and that the forecasted completion date was October 31, 2016				May 1, 2012
Preliminary design	1	6	October 2012 ²	November 2014 ³
Detailed engineering	6	14	June 2013	April 2016 ⁴
Tender	15	16	August 2013	July 2016
Contract award	17	19	November 2013	August 2016
Submittals	20	21	January 2014	July 2017
Procurement	22	34	February 2015	May 2017
On site delivery of major equipment	28	48	April 2016	July 2017
Civil works	20	44	December 2015	May 2017
Installation	28	50	June 2016	February 2018
Commissioning (based on City's requested 54 months)	51	54	October 31, 2016 ¹	July 2018 ⁵

Notations:

¹ The revised SEWPCC licence had more stringent treatment limits than those in the submitted Conceptual Design and the December 31, 2015 completion date didn't

coincide with the 54 months as requested. October 31, 2016 is the completion date based on 54 months requested.

² Preliminary Design was anticipated to commence immediately upon approval of Conceptual Design.

³ The Preliminary Design start was delayed by the decision to develop and post a competitive bid to obtain competitive consultant services pricing.

⁴ The Detailed Design duration was extended to include a Value Engineering phase to provide cost savings for the project, and to include for the design of an electrical substation as a result of recent changes in MB Hydro's Corporate Policy.

⁵ The July 2018 commissioning date will meet the intent of the Licence by meeting the new effluent licence limits. However, additional construction past this date is necessary to modify some existing plant facilities for reuse for new plant processes. Although this delays the final construction completion, it is a capital cost saving as compared to the original concept of building new.

Sewage Treatment Program Funding

The Province of Manitoba and the Government of Canada have committed \$287.8 million towards the sewage treatment plant upgrades:

The Province has committed;

- \$25 million from the Canada Strategic Infrastructure Fund program
- \$11 million from the Green Infrastructure Fund program
- \$3.8 million from the 2004 Urban Capital Projects Allocation
- \$195 million in its 2007 Throne Speech.

The Government of Canada has committed;

- \$42 million from the Canada Strategic Infrastructure Fund program
- \$11 million from the Green Infrastructure Fund program

Of the total \$287.8 million committed to sewage treatment plant upgrades, the City projects federal and provincial funding of \$59.41 million towards the south end sewage treatment plant upgrade.

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 SEWPCC 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)	Total Approved Over-Expenditures
682-2012	Professional Consulting Services for SEWPCC Upgrading/Expansion Project	Awarded	\$25,350,419.00	\$489,537.13
871-2013	Procurement of Free-Floating Media and Associated Appurtenances	Awarded	\$7,750,588.00	
873-2013	Procurement of High Rate Clarification Equipment	Awarded	\$2,052,500.00	
333-2014	Contract 1- Site Preparation Works	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	
1067-2014	Manitoba Hydro Load Interconnection Study	Awarded	\$60,000.00	

Future major Bid Opportunities anticipated are:

- Contract 2 – High Rate Clarifier and Vortex Concrete Works
- Contract 3 - Major Concrete Works (Bioreactors and Secondary Clarifiers)
- Contract 4 – For the remaining works including mechanical, electrical and automation

Project funding

The approved capital and current projected budget are as follows:

YEAR	CAPITAL PROGRAM	ACTUAL + PROJECTED CASH FLOWS	CUMULATIVE CAPITAL BUDGET REMAINING
Up to 2015	335,600,000 ¹	57,736,068	277,863,932
2016		67,867,244	209,996,688
2017		98,455,706	111,540,982
2018		96,413,292	15,127,690
2019		15,127,690	0
Total	335,600,000	335,600,000	

¹ Capital budget approved by Council

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 of these sources are internally funded by rates as forecast in the Council approved rate report.

FINANCIAL IMPACT

Financial Impact Statement

Date: June 2, 2015

Project Name:

SOUTH END SEWAGE REATMENT PLANT (SEWPCC) UPGRADING AND EXPANSION FINANCIAL STATUS REPORT NO. 6 FOR THE PERIOD FROM FEBRUARY 1, 2015 TO APRIL 30, 2015

COMMENTS:

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

"Original Signed by M. Geer"

Moira L. Geer, C. A.

Manager of Finance and Administration

CONSULTATION

In preparing this report there was consultation with: n/a

OURWINNIPEG POLICY ALIGNMENT

The SEWPCC Nutrient Removal/Expansion will reduce the environmental impact of our citizens on the Red River and the downstream lakes and rivers. It is in collaboration with the Regulatory Licence requirements issued by the Province of Manitoba.

Our Winnipeg Reference - Section 02-2 Environment

SUBMITTED BY

Water and Waste Department
Engineering Services Division
Prepared by: N. A. Harrington, P. Eng.
File No. 020-17-08-25-01, S-926
Date: June 29, 2015

Funding: South End Sewage Treatment Plant (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	147.0	2.11	6.08	29.23		31.34	6.08	109.58
GIF Wet Weather Flow	60.0			11.00	11.00	11.00	11.00	38.00
Other	128.6							128.60
Estimated Program Costs	335.6	2.11	6.08	40.23	11.00	42.34	17.08	276.18

2) Funding for the Winnipeg Sewage Treatment Programs 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	33.23	5.07	8.19			5.07	8.19	19.97
NEWPCC Centrate and UV Disinfection	52.08	5.59	14.54			5.59	14.54	31.95
SEWPCC Nutrient Removal/Expansion	335.60	2.11	6.08	40.23	11.00	42.34	17.08	276.18
NEWPCC Nutrient Removal/Upgrade	569.37		26.94		168.06		195.00	374.37
Estimated Program Costs	990.28	12.77	55.75	40.23	179.06	53.00	234.81	702.47

Notes: WEWPCC Biological Nutrient Removal and NEWPCC Centrate and UV Disinfection have been completed.
The City's share of the SEWPCC project costs will be funded by the Environmental Projects Reserve (\$60 million) and debt financing (\$216.18 million). The funding distribution is subject to change, depending on the actual timing of spending and prevailing borrowing rates.

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**SEWPCC UPGRADING/EXPANSION PROJECT
WATER AND WASTE DEPARTMENT - ENGINEERING DIVISION
APPENDIX 2
As at April 24, 2015**

Components	COSTS				PROJECTED COSTS TO COMPLETE				TOTAL	VARIANCE	
	Approved Budget To Date ¹	Costs Incurred up to last report	Costs submitted this report	Total Costs Incurred to Date (per G/L) 24-Apr-15	2015	2016	2017	2018	Total Costs Remaining to Complete	Total Project Cost	Variance from Budget (Unfavourable)
A PROFESSIONAL SERVICES ²	42,819,889	14,048,485	1,489,493	15,537,978	7,470,500	10,172,655	5,664,511	3,846,555	127,690	42,819,889	0
B CONSTRUCTION	292,780,111	10,328,913	3,468,137	13,797,050	20,930,540	57,694,589	92,791,195	92,566,737	15,000,000	292,780,111	0
TOTALS	335,600,000	24,377,398	4,957,630	29,335,028	28,401,040	67,867,244	98,455,706	96,413,292	15,127,690	335,600,000	0

Percentage Complete

9%

¹ Total budget of \$335.60 Million for the SEWPCC Upgrading/Expansion Project and Distribution of costs for Components A) and B) was done by the Water and Waste Department. These are estimates and will be revised as the project progresses.

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