

Minutes – Standing Policy Committee on Finance – February 15, 2018

REPORTS

Item No. 7 South End Sewage Treatment Plant (SEWPCC) Upgrading and Expansion

STANDING COMMITTEE DECISION:

The Standing Policy Committee on Finance concurred in the recommendation of the Winnipeg Public Service that the financial status of the South End Sewage Treatment Plant (SEWPCC) Upgrading and Expansion, be received as information.

Minutes – Standing Policy Committee on Finance – February 15, 2018

DECISION MAKING HISTORY:

Moved by Councillor Allard,

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

Carried

ADMINISTRATIVE REPORT

Title: South End Sewage Treatment Plant (SEWPCC) Upgrading and Expansion,
Project ID: 20320002EL, 2032000207 and 203210002B,
Quarterly Project Status Report No. 16
For the Period Ended October 31, 2017

Critical Path: Standing Policy Committee on Finance

AUTHORIZATION

Author	Department Head	CFO	CAO
G.K. Patton, P. Eng., Manager of Engineering Services	M. L. Geer, CPA, CA, Director, Water and Waste Department	M. Ruta	D. McNeil

EXECUTIVE SUMMARY

Project On Schedule: Yes No

Project On Adopted Budget: Yes No

Percent of Schedule Complete:

Percent of Adopted Budget Spent:

An award for Bid Opportunity 976-2016 (Contract 4) the last major construction contract has been approved and made to the lowest responsive bidder, NAC Constructors Ltd. in the amount of \$179,997,000 (MRST Included, GST Extra).

Contractor's performance under Bid Opportunity 899-2015 (Contract 3) is behind schedule. The contractor has requested a schedule extension of over four months until the second quarter of 2018. The contractor (NAC Constructors Ltd.) was recently awarded the last C4 contract and potentially is in a position to mitigate a schedule impact to the project. The request is under review with advice on required considerations being obtained from Materials Management and Legal Services.

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

RECOMMENDATIONS

That the financial status of the South End Sewage Treatment Plant (SEWPCC) Upgrading and Expansion, as contained in this report, be received as information.

REASON FOR THE REPORT

The Asset Management Administrative Standard FM-004 requires all projects with a total estimated cost of \$21 million (2017) or more report quarterly to the Standing Policy Committee on Finance. This threshold is adjusted annually for construction inflation as part of the annual Capital Budget approval. The Standing Policy Committee on Finance may also request reporting on any capital project.

IMPLICATIONS OF THE RECOMMENDATIONS

No implications.

HISTORY/DISCUSSION

See Appendix C – Key Project Events (History)

Construction (Update from last report)

RFP 682-2012 (Professional Consulting Services)

- The Consultant continues to provide Contract Administration services and provide site Construction Manager services under the Optional Contract Administration Services of the assignment.
- On October 10, 2017 the Consultant presented their preliminary costing assessment for the longer term site Construction Management/Contract Administration services. The costing presented was higher than expected and allotted in the project budget. The Program Team requested and the Consultant agreed to provide details of the costing assessment. The requested information remains outstanding as of November 17, 2017.

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

- The Contractor has provided further response to Contemplated Change Order (CCN) #3 to modify the delivery schedule to align with the construction schedule.
- The response provided is under review by the Program Team.

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

- The Contractor has provided further response to Contemplated Change Order (CCN) #8 to modify the delivery schedule to align with the construction schedule.
- The response provided is under review by the Program Team.

Reference 1089-2015 (Single Source Negotiation for Manitoba Hydro Works Associated with the South End Sewage Treatment Plant (SEWPCC) Nutrient Removal/Expansion Project)

- A construction services agreement with Manitoba Hydro for the 66 kV power supply has been developed.
- Manitoba Hydro is preparing the agreement documents for issuance to the City.
- A report to the CFO is being prepared to authorize execution of the agreement.

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

- The CFO's office held the claims appeal meeting on October 25, 2017.
- The CFO's determination is pending.

Bid Opportunity 601-2015 (Contract C2 – High Rate Clarifier and Grit Removal Concrete and Miscellaneous Works)

- The Contractor has appealed the assessment of liquidated damages.
- The Department is preparing an appeal report for the CFO.

Bid Opportunity 899-2015 (Contract C3 – Bioreactors, Blower Building and Secondary Clarifiers Structural Concrete & Miscellaneous Work)

- The contract work is progressing but continues to fall behind schedule. In response to ongoing schedule concerns noted by the Contract Administrator the Contractor provided shifting schedule updates and conflicting written assurances on schedule completion.
- On October 31, 2017 the Contractor issued a letter to the Contract Administrator containing a request for a schedule extension for C3 completion and amalgamation with the start of the C4 Bid Opportunity 976-2017 work. The letter also addressed other claim items and appeals.
- The Program Team is reviewing the letter and has engaged with Materials Management and Legal Services for advice on the appropriate considerations to be made. The schedule performance on C3 has potential impact to the C4 contract below.
- Contractor has appealed a number of determinations made by the Contract Administrator. The Department is preparing an appeal report for the CFO.

Bid Opportunity 976-2016 (Contract C4 – Sitewide Mechanical, Electrical, Concrete and Site Works)

- On October 2, 2017 SPC on Water and Waste, Riverbank Management and the Environment concurred with the recommendation to award NAC Constructors Ltd. the contract for Bid Opportunity 976-2016 in the amount of \$179,997,000.00 MRST included, GST extra.
- A letter of intent dated October 4, 2017 to contract for Bid Opportunity 976-2016 was issued to NAC Constructors Ltd. Legal Services is preparing the contract documents.
- The Contract Administrator has advised the Contractor of the necessary documentation to be provided prior to site mobilization.
- Authorization of site mobilization is currently pending receipt of an acceptable contract baseline schedule.

Table 1 – Contracts

Contracts							
Bid Opportunity #	Company Name	Description	Original Contract Award Value (GST & MRST extra as applicable)	Total Approved Over-Expenditures (Over-Expenditure amount only)	Date of Award	Date of Total Completion	Estimated % Complete
682-2012	CH2M Hill Canada Ltd.	Professional Consulting Services for SEWPCC Upgrading and Expansion	\$ 25,350,419	\$ 6,233,179	4/29/2013		75
57-2016	Associated Engineering (Sask) Ltd.	Professional Consulting Services for an independent review and alternative schedule analysis	\$ 92,360	\$ -	1/28/2016	2/28/2017	100
871-2013	Veolia Water Technologies Canada Ltd.	Procurement of Free-Floating Media and Associated Appurtenances	\$ 7,750,588	\$ -	12/11/2014		5
873-2013	Veolia Water Technologies Canada Ltd.	Procurement of High Rate Clarification Equipment	\$ 2,052,500	\$ -	7/10/2014		10
333-2014	PCL Constructors Canada Ltd.	Contract 1 - Site Preparation Works	\$ 22,646,510	\$ -	9/4/2014		96
353-2014	Hanscomb Ltd.	Construction Cost Consulting Services for SEWPCC Upgrading and Expansion	\$ 50,700	\$ -	9/4/2014	8/6/2015	100
572-2014	B&B Rentals Inc.	Provision for the Purchase or Lease of a Trailer for Office Space	\$ 184,000	\$ -	9/4/2014	3/18/2015	100
1067-2014	Manitoba Hydro	Manitoba Hydro Load Interconnection Study	\$ 60,000	\$ -	11/14/2014	10/31/2015	100
343-2015	Praxair Canada	Relocation of Lox Tank	\$ 62,715	\$ -	6/3/2015	8/28/2015	100
498-2015	Western Waste Management	Asbestos Abatement	\$ 24,950	\$ -	8/13/2015	11/9/2015	100
601-2015	Graham Construction and Engineering LP	Contract 2 - High Rate Clarifier and Grit Removal Concrete and Miscellaneous Works	\$ 9,549,100	\$ -	10/20/2015		96
899-2015	NAC Constructors Ltd..	Contract 3 - Bioreactors, Blower Building and Secondary Clarifiers Structural Concrete & Miscellaneous Work	\$ 39,756,000	\$ -	5/3/2016		85
797-2016	Manitoba Hydro	Relocation of existing primary electrical service cables	\$ 71,754	\$ -	9/7/2016	1/16/2017	100
976-2016	NAC Constructors Ltd.	Contract 4 - Sitewide Mechanical, Electrical, Concrete and site Works	\$ 179,970,000		10/4/2017		
Total			\$ 287,621,596	\$ 6,233,179			

Upcoming Procurements:

Description	Anticipated Award Date
1089-2015 Manitoba Hydro Works Associated with the South End Sewage Treatment Plant (SEWPCC) Nutrient Removal/Expansion Project	Dec-17

Schedule (Update from last report)

n/a

Table 2 – Milestones

	Deliverable	Original Targeted Completion Date	Revised Targeted Completion Date	Actual Completion Date	Estimated % Complete
1	Project Definition Report	October 2013	May 2014	May 2014	100
2	Preliminary Design Report	April 2014	November 2014	November 2014	100
3	Detailed Design	October 2014	August 2017	August 2017	100
4	Construction of Site Preparation and Piling (Contract 1)	April 2014	July 2015		96
5	Construction of High Rate Clarifier and Grit Removal Structural and Misc. Works (Contract 2)	August 2016			96
6	Construction of Major Concrete Works (Contract 3)	December 2017			85
7	Construction of Remaining Works (Contract 4)	December 2021			
8	Commissioning of interim BNR configuration	October 2016	July 2020		
9	Commissioning of all project components ¹	September 2021			
<small>¹ Manitoba Sustainable Development Notice of Alteration dated September 12, 2017 - City of Winnipeg South End Water Pollution Control Centre (SEWPCC) - Environment Act Licence No. 2716 RR identifies that the construction and commissioning of the upgraded wastewater treatment plant shall be completed before December 31, 2021.</small>					

Risk (Update from last report)

Risk: Contract 3 construction takes longer than planned with potential impact to the overall project schedule.

Mitigation: The C3 contractor (NAC Constructors Ltd.) was recently awarded the last C4 contract. Review with the contractor their potential to mitigate an overall project schedule impact from C3 schedule delay. Engage with Materials Management and Legal Services for advice on the appropriate considerations to be made and potential contractual remedies available to the City.

Risk: Contract 4 Contractor does not provided an acceptable baseline schedule in a timely manner. Site mobilization is delayed by the Contractor's non-performance with potential impact to the project schedule.

Mitigation: Engage with Materials Management and Legal Services for advice on the appropriate considerations to be made and contractual remedies available to the City.

The next quarterly construction risk review is scheduled for December 7, 2017.

Table 3 – Significant Risks and Mitigations Strategies

Significant Risks and Mitigation Strategies	
Risk Statement and Explanation	Risk Mitigation Management Plan
New:	
Contract 3 Construction takes longer than planned with potential impact to the overall project schedule.	The C3 contractor (NAC Constructors Ltd.) was recently awarded the last C4 contract. Review with the contractor their potential to mitigate an overall project schedule impact from C3 schedule delay. Engage with Materials Management and Legal Services for advice on the appropriate considerations to be made and potential contractual remedies available to the City.
Contract 4 Contractor does not provided an acceptable baseline schedule in a timely manner. Site mobilization is delayed by the Contractor's non-performance with potential impact to the project schedule.	Engage with Materials Management and Legal Services for advice on the appropriate considerations to be made and potential contractual remedies available to the City.
Ongoing:	
Unknown existing conditions are encountered during construction causing schedule delays and additional costs. Internal condition of high purity oxygen reactors is unknown.	Shutdown and interior inspection of existing high purity oxygen reactor scheduled for fall of 2017.
Mitigated:	
Contract 4 construction work takes longer than planned.	Key construction milestone dates with linked liquidated damages incorporated into Contract 4 bid opportunity.
Rushed design to meet schedule resulting in a lower design quality and higher frequency of contract change orders.	Detailed review of the 100% design and bid opportunity document was performed using both internal and external resources.
Construction schedule was aggressive and actual construction takes significantly longer than planned.	3rd party review of project schedule was undertaken. Recommended schedule extension was implemented. Detailed monitoring of the construction contract progress implemented.
Limited countrywide contractor awareness of Contract 4 bid opportunity resulting in limited number of bidders.	Advance notice of C4 bid opportunity was posted on Materials Management website and MERX.

* Not every risk need be disclosed but those significant in nature to the project should be disclosed and monitored. Risks should be in order from higher to lower assessed risk and revised on an ongoing basis.

Financial (Update from last report)

For further information, refer to Appendix B – Financial Forecast

The current remaining project contingency allowance is less than typical for a project of this size. The ongoing SEWPCC Upgrading and Expansion project costs and contingency allowance will be reviewed as the project progresses.

Funding (Update from last report)

n/a

Table 4 – Project Funding Forecast and Receivable

Funding Forecast and Receivable			
Funding Source	Adopted Budget (in millions)	Amended Budget (in millions)	Committed (in millions)
Class of Estimate	Class 3		
City of Winnipeg	298.18	276.18	276.18
Province of Manitoba	6.08	17.08	17.08
Federal Government of Canada	31.34	42.34	42.34
Other Contributions	-	-	-
Total	\$ 335.6	\$ 335.6	\$ 335.6

- The funding forecast should match the Capital Budget Detail Sheet.

Property Acquisition (Update from last report)

n/a

Stakeholder Engagements/Communications (Update from last report)

n/a

Subsequent Events after Report Period End Date

n/a

FINANCIAL IMPACT

Financial Impact Statement **Date:** [November 29, 2017](#)

Project Name:

South End Sewage Treatment Plant (SEWPCC)

Upgrading and Expansion,

Project ID: 20320002EL, 2032000207 and 203210002B,

Quarterly Project Status Report No. 16

For the Period Ended October 31, 2017

COMMENTS:

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

"Original signed by L. Szkwarek, CPA, CGA"

Lucy Szkwarek, CPA, CGA

Manager of Finance and Administration

CONSULTATION

This Report has been prepared in consultation with:

n/a

OURWINNIPEG POLICY ALIGNMENT

01-3 Prosperity Direction 1: Provide efficient and focused civic administration and governance. This report supports demonstration of accountability through service performance measurement and reporting.

02-2 Environment: The SEWPCC Upgrade and 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.

SUBMITTED BY

Department: Water and Waste
Division: Engineering Services
Prepared by: Neil Harrington P. Eng.
Date: December 1, 2017
File:

Appendices

Appendix A – Key Project Facts

Appendix B – Financial Forecast

Appendix C – Key Project Events (History)

Appendix D - Funding

Appendix A – Key Project Facts

Appendix A – Key Project Facts	
Project Name	South End Sewage Treatment Plant (SEWPCC) Upgrading and Expansion
Business Owner (Department)	Water and Waste
Project ID	20320002EL, 2032000207 and 203210002B
Project Sponsor	
Project Sponsor	Director of Water and Waste
Department Responsible for Project Delivery	Water and Waste
Consultant Engineer (Company Name)	CH2M Hill Canada Ltd.
Adopted Budget	
Adopted Budget	\$335,600,000
Class of Estimate (Adopted)	3
Range of Estimate (Adopted)	-20% to +30% \$268,500,000 to \$436,300,000.
Amended Budget	
Amended Budget	\$335,600,000
Class of Estimate (Amended)	3
Range of Estimate (Amended)	-20% to +30% \$268,500,000 to \$436,300,000.
<u>Project Scope</u>	
<p>The project is to expand the capacity of the SEWPCC for expected 2031 flows and upgrade the process to meet new effluent limits for nitrogen and phosphorous. The project design is based on the lowest life cycle cost (Net Present Value, or NPV). In addition, the plant must operate continuously during the work and meet current effluent limits to the greatest extent possible.</p>	
Major Capital Projects Advisory Committee Membership:	
<p>Doug McNeil, Chief Administrative Officer Georges Chartier, Chief Asset and Project Management Officer Moira Geer, Director of Water and Waste Lucy Szkwarek, Manager of Finance and Administration, Water and Waste Jackie Veilleux, Project Director Winnipeg Sewage Treatment Program</p>	

Appendix B – Financial Forecast

Appendix B - Project SEWPCC Upgrading & Expansion Financial Forecast As at October 31, 2017

Project Component Deliverables ¹	Budget (in 000's)			Actual Costs To Oct 31/17	Expenditure Forecast (in 000's)					Total Forecasted Costs	Surplus (Deficit) From Amended Budget	Variance Last Report	Change in Variance
	Adopted Budget	Council Approved Change	Amended Budget		Projected Costs								
					2017	2018	2019	2020	2021				
Engineering, Design and Other	\$ 45,351	\$ -	\$ 45,351	\$ 37,513	\$ 1,556	\$ 3,743	\$ 3,609	\$ 1,572	\$ 964	\$ 48,957	\$ (3,606)	\$ (3,606)	\$ -
Construction	\$ 257,242	\$ -	\$ 257,242	\$ 65,697	\$ 26,679	\$ 56,783	\$ 51,363	\$ 56,366	\$ 20,351	\$ 277,239	\$ (19,997)	\$ (19,997)	\$ -
Land Acquisition	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Internal Financing/Overhead Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contingency	\$ 33,007	\$ -	\$ 33,007	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,404	\$ 9,404	\$ 23,603	\$ 23,603	\$ -
Total Project Budget	\$ 335,600	\$ -	\$ 335,600	\$ 103,210	\$ 28,235	\$ 60,526	\$ 54,972	\$ 57,938	\$ 30,719	\$ 335,600	\$ -	\$ -	\$ -
% of Project Budget Spent (Actual Costs to Date / Adopted & Amended Budget)	31%		31%										

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