

REPORTS

Item No. 1 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 and received the financial status of the South End Sewage Treatment Plant (SEWPCC) Upgrading and Expansion, as contained in the report, as information.

Minutes – Standing Policy Committee on Finance – November 12, 2021

DECISION MAKING HISTORY:

Moved by Councillor Rollins,

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. 29 For the Period Ended June 30, 2021

Critical Path: Standing Policy Committee on Finance

AUTHORIZATION

Author	Department Head	CFO	CAO
C. D. Wiebe, P. Eng., CAMP, Manager of Engineering Services	M. L. Geer, CPA, CA, Director, Water and Waste Department	C. Kloepfer	M. Jack

EXECUTIVE SUMMARY

Project On Schedule: Yes No

Project On Adopted Budget: Yes No

Percent of Schedule Complete:

Percent of Adopted Budget Spent:

Construction is continuing in most areas of the plant.

For the reporting period the C4 Contractor's schedule is reflecting that they are behind schedule and key contractual schedule milestones have been revised. The Department is concerned with the C4 Contractor's performance to date, and are working together with the Contract Administrator to get a revised schedule from the C4 Contractor. The Contractor's schedule and performance continues to be monitored by the Contract Administrator.

The Department has concerns with the Contractor's lack of quality assurance and quality control on the project works. The Contract Administrator and Department have discussed this concern with the Contractor, but there has been no significant effort by the Contractor to improve or correct this issue to date. Due to the contractor's lack of quality assurance and quality control (QA/QC) on the project works, the engineer of record has now been filling this gap, and identifying additional deficiencies and non-conformance work during their inspections. Normally such deficiencies or non-conformances would be corrected by the Contractor prior to the inspections, with a few being noted by the engineer of record. This has caused the Contractor to do additional re-work, which would have been caught earlier on had they implemented a proper QA/QC program for a project of this size.

The Department has and continues to apply contract provisions to recover schedule and associated costs of any delays.

COVID-19 has resulted in social distancing requirements and out of town travel restrictions for this project. However, prior to the COVID-19 restrictions the Contractor had missed key

contract milestones dates; as a result, it is undetermined to what extent, if any, the COVID-19 pandemic had on the Contractor's performance and schedule slippage.

In December 2020 a Notice of Alteration for the interim phosphorous control process at the South End Plant was submitted to the Province. The Province did not approve the request, requiring additional reporting and revised schedule to full completion.

As a result of the schedule delays and contractor performance, a project budget revision report went forward and was approved by Council on May 27, 2021 for a budget increase of \$16,500,000.00. This increase is to cover additional contract administration, construction management, construction contingency and increased transportation costs associated with COVID-19 impacts. The department expects compliance with the Environment Act Licence by December 31, 2021 which is later than specified in the licence. An updated Notice of Alteration will be submitted to the Province in September 2021.

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 \$24 million (2021) 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 required Contract Administration services and develop operational documents.

- The Consultant is continuing to be monitored for performance issues.

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

- IFAS media delivery is being affected by COVID-19 impacts on the global shipping market. The Department is also in discussion with the Contractor for this supply contract on shipping of the media. The Contractor has started the process of shipping media from Korea, but is having difficulty securing shipping containers and spots on vessels. As a result, the Contractor cannot provide a firm shipping schedule as the current global shipping market is very volatile.
- The Contract Administrator is continuously following up with the supply Contractor to ensure secured dates are communicated to all parties and to get a status on delivery dates.

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

- Commissioning services scheduled in 2021 remain to be performed.

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

- Legal Services has engaged external legal counsel to defend the City against the Contractor’s claim.

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

- An appeal meeting was held with the Department and the Contractor on December 14, 2020. A decision from the CFO was finalized on January 15, 2021.

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

- Construction is continuing in most areas of the plant. A principal focus of the C4 Contractor has been on the new secondary clarifiers and addressing and correcting deficiencies found during pre-testing and start up of the commissioning phase for the new secondary clarifiers using process fluid. The contractor also continued working on completion of the upgraded headworks facilities.
- The Contractor has installed the fourth screen and is working on performance issues which were identified during testing.
- Commissioning of certain equipment in the upgraded headworks facility has occurred. The Contractor is working on correcting various deficiencies discovered during the testing process and preparing for overall testing activities of the headworks facility.
- Contractor’s construction, instrument and control programming and testing continue to be behind schedule for a number of contract interim milestones.
- The Contractor’s quality assurance and quality control (QA/QC) onsite is of concern to the Department and Contract Administrator. The Contract Administrator and Department have raised this concern with the Contractor, but there has been no significant effort by the Contractor to improve or correct this issue to date. Due to the contractor’s lack of quality assurance and quality control (QA/QC) on the project works, the engineer of record has now been filling this gap, and identifying additional deficiencies and non-conformance work during their inspections. Normally such

deficiencies or non-conformances would be corrected by the Contractor prior to the inspections, with a few being noted by the engineer of record. This has caused the Contractor to do additional re-work, which would have been caught earlier on had they implemented a proper QA/QC program for a project of this size.

- The Contractor was not able to achieve the contractual schedule milestone related to the commissioning of the interim BNR configuration in Q3 of 2020. The Contractor's schedule and performance continues to be monitored by the Contract Administrator. The Contract Administrator is working with the Contractor to develop a plan to achieve commissioning of the interim BNR configuration in 2021.
- IFAS media delivery required for the BNR commissioning is being affected by COVID-19 impacts on the global shipping market. The media supply Contractor has started the process of shipping media overseas, but is having difficulty securing shipping containers and spots on the vessel, and as a result is not able to provide a firm shipping schedule, as the current global shipping market is very volatile.
- COVID 19 impacts and steps taken to mitigate:
 - Social Distancing: maintaining social distancing with work groups on site. Limiting onsite staff to essential workers
 - Isolation of Contractor from City Wastewater Operation Staff to protect staff
 - Wastewater staff training through video conferencing
 - Reduce contract administrator and consultant staff onsite field trailers, with the addition of trailers to maintain social distancing
 - Suppliers from the restricted areas (USA /Eastern Canada) unable to attend site to inspect installation for equipment start-up, use of video conferencing to witness tests
 - Some consultant staff from western Canada are limited in coming to Winnipeg, mitigated through use of local consulting staff
- As of June 30, 2021, the contractor has appealed a total of 687 determinations made by the Contract Administrator. A majority of the appeals are challenging the determined valuation of individual progress certificate line items.
- The Department was not able to come to an agreed alternate dispute resolution process with the C4 Contractor. Further initiation of alternative dispute resolution will not be pursued.
- External legal counsel continues to address C4 contractual issues.

Table 1 – Contracts

Contracts Table							
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 Completion	Estimated % Complete
682-2012	CH2M Hill Canada Ltd.	Professional Consulting Services for SEWPCC Upgrading and	\$ 25,350,419	\$ 14,733,179	4/29/2013		98
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		43
873-2013	Veolia Water Technologies Canada Ltd.	Procurement of High Rate Clarification Equipment	\$ 2,052,500	\$ 107,300	7/10/2014		80
333-2014	PCL Constructors Canada Ltd.	Contract 1 - Site Preparation Works	\$ 22,646,510	\$ -	9/4/2014		98
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	Contract 2 - High Rate Clarifier and	\$ 9,549,100	\$ -	10/20/2015		98
899-2015	NAC Constructors Ltd..	Contract 3 - Bioreactors, Blower Building and Secondary Clarifiers Structural Concrete & Miscellaneous Work	\$ 39,756,000	\$ -	5/3/2016	7/31/2019	100
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 - Site wide Mechanical, Electrical, Concrete and site Works	\$ 179,997,000		10/4/2017		70
1089-2015	Manitoba Hydro	Manitoba Hydro Works Associated with the South End Sewage Treatment Plant (SEWPCC) Nutrient Removal/Expansion Project	\$ 1,827,280	\$ 7,499	1/15/2018	2/5/2020	100
1056-2019	Duboff Edwards Haight & Schachter Law Corporation	External legal services related to the SEWPCC Project	\$ 750,000	\$ -	11/7/2019		20
Total			\$ 290,225,876	\$ 14,847,978			

Upcoming Procurements:

Description	Anticipated Award Date

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	2013 Q4	2014 Q2	2014 Q2	100%
2	Preliminary Design Report	2014 Q2	2014 Q4	2014 Q4	100%
3	Detailed Design	2014 Q4	2017 Q3	2017 Q3	100%
4	Construction of Site Preparation and Piling (Contract 1)	2014 Q2	2016 Q1	2016 Q1	100%
5	Construction of High Rate Clarifier and Grit Removal Structural and Misc. Works (Contract 2)	2016 Q3	2017 Q1	2017 Q1	100%
6	Construction of Major Concrete Works (Contract 3)	2017 Q4	2018 Q3	2018 Q3	100%
7	Construction of Remaining Works (Contract 4)	2021 Q4			66%
8	Commissioning of interim BNR configuration	2016 Q4	2021 Q4		70%
9	Commissioning of all project components ¹	2021 Q3			0%
10					

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.

NOTE: Above dates represent Substantial Completion

Risk (Update from last report)

The C4 contractor continues tracking behind schedule. Substandard testing and documentation continues to be a risk. The Contract Administrator has implemented Daily Commissioning meetings with the C4 contractor to assist in ensuring activities required to move forward in commissioning and testing are being carried out by the C4 Contractor; any issues being faced in progressing the required activities forward are discussed during these meetings. The schedule continues to be monitored with impacts to licence conditions and project oversight costs, which will have budget implications.

IFAS media delivery is being affected by COVID-19 impacts on the global shipping market. The Department is also in discussion with the Contractor for this supply contract on shipping of the media. The Contractor has started the process of shipping media from overseas, but is having difficulty securing shipping spots on the vessels, and is not able to provide a firm shipping schedule, as the current global shipping market is very volatile. Due to the global pandemic caused by COVID-19, the shipping market has seen unpredictable market fluctuations during the pandemic, which has caused global overseas shipping prices to increase by more than 310% impacting project budget. The IFAS media is needed to successfully startup and commission the BNR process of the plant.

Table 3 – Significant Risks and Mitigations Strategies

Significant Risks and Mitigation Strategies	
Risk Statement and Explanation	Risk Mitigation Management Plan
New:	
IFAS media delivery is being affected by COVID-19 impacts on the global shipping market. The Contractor has started the process to ship media overseas, but is running into difficulty securing shipping spots on vessels, and hence not being able to provide a firm shipping schedule. Due to the global pandemic, the shipping market has seen unpredictable market fluctuations, causing shipping prices to increase by more than 310%. Media is required for BNR seeding and start up.	The Department and Contract Administrator are currently in discussions with the supply Contractor on shipping of the media, as well both the Contractor and Contract Administrator are providing updates on shipping rate increases.
Ongoing:	
C4 contractor progress tracking behind schedule	The WSTP is reviewing each monthly schedule submission, providing commentary and meeting with the Contractor to rectify baseline issues. A review of previous schedule submissions, including four week look ahead and baseline, is being undertaken to assess the validity and continuity of the schedule.
C4 contractor testing and commissioning planning documentation typically substandard and/or incomplete	Daily testing/commissioning planning meetings are being held with the contractor
Actual Contract 4 construction performance takes longer than planned.	Key construction milestone dates with linked liquidated damages incorporated into Contract 4.
Process issues at the SEWPCC have delayed some scheduled construction activities.	Ongoing communication with Wastewater Services to facilitate construction activities when opportunity is available. Reschedule construction activities when possible.
COVID-19 Impact on construction schedule	Contract Administrator and Contractor are working to manage the impact.
1.0 mg/L Phosphorus Licence compliance date of December 31, 2020	Review with the Provincial Regulator
Mitigated:	
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.

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

Funding Forecast and Receivable			
Funding Source	Adopted Budget (in millions)	Amended Budget ¹ (in millions)	Committed (in millions)
Class of Estimate	Class 3		
City of Winnipeg Total	298.18	292.68	292.68
Retained Earnings	75.82	75.82	75.82
External Debt	222.36	200.36	200.36
Environmental Projects Reserve ¹		16.50	16.50
Province of Manitoba	6.08	17.08	17.08
Federal Government of Canada	31.34	42.34	42.34
Total	\$ 335.60	\$ 352.10	\$ 352.10

1 On May 27, 2021 Council approved a budget increase of \$16.5 million.

Property Acquisition (Update from last report)

N/A

Stakeholder Engagements/Communications (Update from last report)

N/A

Subsequent Events after Report Period End Date

Global shipping impacts as a result of COVID-19 continue to result in delays in shipping of IFAS media from Korea. These delays may cause impacts to the commissioning of the BNR.

During the month of July 2021, both new secondary clarifiers were started up using process fluid and are currently in the commissioning phase. The commissioning team is watching the clarifiers performance to ensure stable operation is achieved.

In September, following a meeting with the Province, the City requested an extension to the Notice of Alteration date from September 30, 2021 to November 30, 2021. This was approved by the Province.

Financial Impact Statement

Date: **October 14, 2021**

Project Name:

**South End Sewage Treatment Plant (SEWPCC) Upgrading and Expansion,
Project ID: 20320002EL, 2032000207 and 203210002B,
Quarterly Project Status Report No. 29
For the Period Ended June 30, 2021**

COMMENTS:

Financial forecast for the SEWPCC Upgrade and Expansion project can be found in Appendix B.



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.

WINNIPEG CLIMATE ACTION PLAN ALIGNMENT

N/A

SUBMITTED BY

Department: Water and Waste
Division: Engineering Services
Prepared by: Reetu Dewitt, P. Eng.
Date: October 18, 2021
File No. 020-17-08-25-01, S-926

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	\$352,100,000
Class of Estimate (Amended)	3
Range of Estimate (Amended)	-20% to +30% \$281,700,000 to \$457,700,000.
<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>Michael Jack, Chief Administrative Officer Maira Geer, Director of Water and Waste Geoff Patton, Director of Assets and Project Management Lucy Szkwarek, Manager of Finance and Administration, Water and Waste Catherine Kloepfer, Chief Financial Officer Colin Javra, Project Director Winnipeg Sewage Treatment Program</p>	

Appendix B – Financial Forecast

Appendix B - Project SEWPCC Upgrading and Expansion Financial Forecast As at June 30, 2021

Project Component Deliverables	Budget (in 000's)			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*	Actual Costs To June. 30, 2021 ²	Projected Costs							
					2021	2022	2023	2024 and Beyond				
Engineering, Design and Other	\$ 45,351	\$ -	\$ 45,351	\$ 54,389	\$ 5,289	\$ 4,780	\$ -	\$ -	\$ 64,458	\$ (19,107)	\$ (12,106)	\$ (7,001)
Construction	\$ 257,242	\$ -	\$ 257,242	\$ 214,513	\$ 35,481	\$ 28,307	\$ -	\$ -	\$ 278,301	\$ (21,059)	\$ (19,997)	\$ (1,062)
Land Acquisition	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Internal Financing/Overhead Costs	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contingency	\$ 33,007	\$ 16,500	\$ 49,507	\$ -	\$ 5,341	\$ 4,000	\$ -	\$ -	\$ 9,341	\$ 40,166	\$ 32,103	\$ 8,063
Total Project Budget	\$ 335,600	\$ 16,500	\$ 352,100	\$ 268,902	\$ 46,111	\$ 37,087	\$ -	\$ -	\$ 352,100	\$ -	\$ -	\$ -

% of Project Budget Spent (Actual Costs to Date / Adopted & Amended Budget)	80%	76%
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¹ Total budget of \$352.10 Million for the SEWPCC Upgrading and Expansion Project and Distribution of costs for Components was done by the Water and Waste Department. On May 27, 2021 Council approved a budget increase of \$16.5 Million, thereby revising the previous total budget of \$335.60 Million to the current \$352.10 Million. These are estimates and will be revised as the project progresses.

² Adopted and Amended budget, and actual costs to date have been agreed to the City's general ledger and Monthly Capital Expenditures Report, actual cost variance equals spending from closed budget years of \$10.918M. See below.

Project ID	Project Year	Adopted Budget	Costs to Date
20320002EL ¹	2002	\$222,752	\$222,752
2032000207 ¹	2007	\$10,695,000	\$10,695,000
203210002B	2012-2021	\$341,182,248	\$257,984,675
Total Project Budget		\$352,100,000	\$268,902,427

¹ Does not appear in the Capital Expenditures Monthly Report as the funds have been expended and it is designated as a closed Project ID.

Appendix C – Key Project Events (History)

HISTORY

1. THE PROJECT

The goal of this 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.

As a result of the 2003 Clean Environment Commission Hearings on the City's wastewater collection and treatment systems, Manitoba Conservation and Water Stewardship (the Regulator) notified the City that it intended to issue a licence for the South End Water Pollution Control Centre (SEWPCC) that would require control of nutrients discharged to the Red River.

Between 2001 to 2010, Council has approved \$203,250,000.00 for the Nutrient Removal Upgrade/Expansion at the SEWPCC.

On January 9, 2006, the Chief Financial Officer concurred with the recommendation to authorize an assignment to Stantec Consulting Ltd. for preliminary and conceptual engineering services related to the South End Water Pollution Control Centre upgrading and expansion at an estimated cost of \$3,250,000.00.

On May 16, 2007, Council authorized the Chief Administrative Officer to finalize the terms and conditions of a contribution agreement with the Government of Canada and the Province of Manitoba for funding of Wastewater Treatment Plant upgrades under the Canada Strategic Infrastructure Fund.

In late 2007, the Winnipeg Public Service was directed to initiate an assessment of alternate project delivery methods for the SEWPCC upgrade and expansion. Consequently, the assignment to Stantec was suspended after the conclusion of the conceptual and preliminary engineering work.

On November 19, 2008, City Council authorized the Winnipeg Public Service to:

- begin the procurement of a strategic partner that could bring private sector experience to the design, construction, finance and potentially the operation of the North and South End Sewage Treatment Plants as well as potential operation of the West End Water Sewage Treatment Plant, and;
- authorize the Chief Administrative Officer to approve and issue the Request for Expressions of Interest followed by a Request for Qualifications and the Request for Proposals.

On June 19, 2009 the Regulator issued a revised Environment Act Licence No. 2716 R for the SEWPCC.

On November 25, 2009, the Chief Financial Officer approved an award to Taillieu Construction Ltd. for SEWPCC Installation of Outfall Pipe, Effluent Sampling Facility and Associated Works, Contract No. 2 at an estimated cost of \$4,884,450.00.

On May 19, 2010 Council:

- directed the Chief Administrative Officer to approve and issue a Letter of Notification to Veolia in order to immediately begin design and construction of the South and North End sewage treatment plant upgrades and expansion and biosolids handling facility; and
- delegated the authority to the Chief Administrative Officer to “approve contract awards for upcoming South and North End sewage treatment plant capital projects where the value of each contract does not exceed \$30 million and there are sufficient funds in a budget approved by Council.

On September 6, 2011, the City submitted to the Regulator, an engineering plan for the upgrading and expansion of the SEWPCC in accordance with Environment Act Licence No. 2716 R.

On April 18, 2012, the Regulator issued a revised Environment Act Licence No. 2716 RR for the SEWPCC effective May 1, 2012.

On October 5, 2012, the City submitted to the Regulator a revision to the engineering plan wherein the main treatment process was revised from Biological Aerated Filter to a Fixed-film Activated Sludge process.

On April 25, 2013, the Chief Administrative Officer approved a recommendation to award a contract to CH2M Hill Canada Ltd. to provide Professional Consulting Services for SEWPCC Upgrading/Expansion Project at an estimated cost of \$25,350,419.00.

On March 13, 2014, the Standing Policy Committee on Finance recommended that the South End Water Pollution Control Centre Financial Status reports and future reports pertaining to the North End, South End or West End Water Pollution Control Centre, include:

- the total amount of federal and provincial funding received to date as well as the balance of outstanding for Winnipeg ratepayers;
- clarification of the cost estimates as a result of the regulatory requirements that have changed and the potential impact on the final budget; and
- a summary of the entire program in terms of funding from all levels of government.

Environment Act Licence No. 2716 RR

On November 5, 2015 the City received a letter from the Province granting a Licence compliance extension to December 31, 2016, noting that consideration of further extensions will be subject to the City providing quarterly status reports and consultation with the Clean Environment Commission.

To comply with the Provincial Licence requirements the City hired Associated Engineering to conduct an Alternative Analysis Review. This report is an independent review of the SEWPCC construction schedule, evaluating ways to accelerate the schedule and/or mitigate delays. The City and Associated Engineering met with the Clean Environment Commission multiple times to review the scope and findings of the report.

The factors contributing to the revised date include:

- contract detailed design is trending later than the original schedule;
- critical low wastewater flow construction window will delay completion by 12 months;
- there was no schedule contingency in the original project critical path; and
- there was no allocation in the schedule for project risk due to winter construction and unforeseen situations.

The Alternative Analysis Review was submitted to Manitoba Sustainable Development on October 20, 2016.

A letter dated September 12, 2017 was received from Manitoba Sustainable Development – Environmental Approval Branch providing conditional approval of the City’s Notice of Alteration - City of Winnipeg South End Water Pollution Control Centre (SEWPCC) - Environment Act Licence No. 2716 RR project completion date. The approval indicates that construction and commissioning of the upgraded wastewater treatment plant is to be completed before December 31, 2021.

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

- IFAS media remains to be delivered to site, scheduled in 2020.

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

- Delivery of HRC equipment to the site has been made.
- Commissioning services scheduled in 2020 remain to be performed.

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

- Contract achieved Total Performance February 17, 2016.
- Legal Services has filed a Statement of Defence in response to the Subcontractor’s Statement of Claim.

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

- Contract achieved Total Performance March 10, 2017.
- The Contractor has appealed the assessment of liquidated damages for failure to meet the contract dates for Substantial and Total Performance.
- The Contractor has not responded to the CFO’s letter of April 28, 2018 concerning their appeal.

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

- The Contractor achieved Total Performance as of March 6, 2019.
- The Contractor filed 21 appeals on contract 3. An agreement was reached with the Contractor for all C3 appeals and within the contract award value.

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

•This contract is complete.

RISKS AND RISK MITIGATION STRATEGIES

The project has proceeded on a fast-track basis with construction contracts proceeding completion of the design. The detailed design is now complete with the largest and last construction contract, Contract 4 tendered. The cost estimate for Contract 4 (C4), which has an identified accuracy range of -10% to + 10%, is higher than the project allocation for this work. The adopted project budget of \$335.6 million was based on a Class 3 cost estimate which had an AACE expected accuracy range of -20% to +30% or \$268.5 million to \$436.3 million. On May 27, 2021 Council approved a budget increase of \$16.5 Million, thereby approving an amended budget of \$352.1 Million.

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 WSTP, 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 – these analyses have been completed
- Prior to the start of construction and quarterly during construction – Ongoing
- Prior to the start of, and again at the end of, commissioning

A project risk register is being kept throughout the project and is updated by the above formal analysis.

Appendix D – Funding

South End Sewage Treatment Plant (SEWPCC) and Winnipeg Sewage Treatment Program (WSTP)

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	\$ 27.14	\$ 6.08	\$ 4.20	\$ -	\$ 31.34	\$ 6.08	\$ 109.58
GIF Wet Weather Flow	60.0	9.90	9.90	1.10	1.10	11.00	11.00	38.00
Other	145.1							145.10
Estimated Program Costs	\$ 352.1	\$ 37.04	\$ 15.98	\$ 5.30	\$ 1.10	\$ 42.34	\$ 17.08	\$ 292.68

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 ⁴	Canada	Manitoba	
WEWPCC Biological Nutrient Removal ¹	\$ 33.23	\$ 5.07	\$ 8.19			\$ 5.07	\$ 8.19	\$ 19.97
NEWPCC Centrate and UV Disinfection ¹	52.08	5.59	14.54			5.59	14.54	31.95
SEWPCC Nutrient Removal/Expansion	352.10	37.04	15.98	5.30	1.10	42.34	17.08	292.68
NEWPCC Power Supply and Headworks ²	473.38			116.11	96.75	116.11	96.75	260.52
NEWPCC Biosolids ³	552.71			200.87	167.38	200.87	167.38	184.46
NEWPCC Nutrient Removal ⁵	828.06					-	-	-
Estimated Program Costs	\$ 2,291.56	\$ 47.70	\$ 38.71	\$ 322.28	\$ 265.23	\$ 369.98	\$ 303.94	\$ 789.58

¹ WEWPCC Biological Nutrient Removal and NEWPCC Centrate and UV Disinfection have been completed.

² On July 23, 2021 the Federal and Provincial governments announced \$212.86 million in Investment in Canada Infrastructure Program (ICIP) funding for the NEWPCC Upgrade Power Supply and Headworks project. \$116.11 million in Federal and \$96.75 million in Provincial funding.

³ On September 26, 2019 City Council approved the NEWPCC Upgrade Biosolids project, conditional on Federal and Provincial government funding under the Investment in Canada Infrastructure Program (ICIP). The City is waiting for ICIP application approval.

⁴ The Provincial government has made funding commitments to date totaling \$85.85 million towards the Biosolids projects. Provincial funding received is held in reserve until the ICIP application is approved and project expenditures have occurred.

⁵ NEWPCC Upgrade Nutrient Removal project has not been approved.