Minutes – Standing Policy Committee on Finance – October 14, 2020

REPORTS

Item No. 2 South End Sewage Treatment Plant (SEWPCC) Upgrading and Expansion, Project ID: 20320002EL, 2032000207 and 203210002B, Quarterly Project Status Report No. 25 For the Period Ended April 30, 2020

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 – October 14, 2020

DECISION MAKING HISTORY:

Moved by Councillor Orlikow,

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. 25 For the Period Ended April 30, 2020

Critical Path: Standing Policy Committee on Finance

AUTHORIZATION

| Author | Department Head | CFO | CAO |
|--|---|----------------------------|-------------------------|
| Geoff Patton, P. Eng., Manager of Engineering Services | M. L. Geer, CPA, CA, Director, Water and Waste Department | P. Olafson, Interim CFO | M. Ruta, Interim CAO |

EXECUTIVE SUMMARY

| Project On Schedule: Yes ☑ | No □ | Project On Adopted Budget: Yes ☑ | No □ |
|-------------------------------|------|----------------------------------|------|
| Percent of Schedule Complete: | 81% | Percent of Adopted Budget Spent: | 73% |

Construction is continuing in most areas of the plant. A principal focus of the C4 Contractor has been on the upgraded headworks facilities which were scheduled for completion during the 2019-2020 winter low flow period. Due to COVID-19 travel restrictions, the fourth screen install could not take place during the 2019-2020 winter low flow period. The Contractor is working with the Contract Administrator to reschedule this work.

For the reporting period the C4 Contractor's schedule continues to reflect that they will meet the key contractual schedule milestone related to the commissioning of the interim BNR configuration in Q3 of 2020.

For the reporting period the project is still on schedule and budget.

COVID-19 related impacts are affecting the project; workforces are being limited to necessitate social distancing. The extent of impact is not known at this time but it is likely that there will be schedule and cost implications.

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 (2020) 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 remains to be delivered to site scheduled for later in 2020.

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

Commissioning services scheduled in 2020 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)

- On January 21, 2020 the Contractor responded to the CFO's letter of April 28, 2018 requesting that an appeal meeting be scheduled.
- The Department is updating the associated appeal report for issuance to the CFO.

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 Contractor has been on the upgraded headworks facilities for completion during the 2019-2020 winter low flow period.
- Contractor installed 3 out of the 4 new screens in the headworks facility during the 20019-2020 winter low flow period. The 4th screen install did not occur due to COVID-19 vendor travel restrictions.
- Commissioning of certain equipment in the upgraded headworks facility has occurred. The Contractor is working on correcting various deficiencies discovered during the testing process.
- Contractor's construction, instrument and control programming and testing continue to be behind schedule for a number of contract interim milestones.
- The Contractor's schedule continues to reflect that they will meet the key
 contractual schedule milestone related to the commissioning of the interim BNR
 configuration in Q3 of 2020. In consideration of the amount of work remaining
 and the Contractor's level of performance to date the Department is concerned
 with this being achieved. The Contractor's schedule and performance continues
 to be monitored by the Contract Administrator.
- As of April 30, 2020 the contractor has appealed a total of 314 determinations made by the Contract Administrator. A majority of the appeals are challenging the determined valuation of individual progress certificate line items.
- External legal counsel continues to address C4 contractual issues.

Table 1 – Contracts

| | Contracts Table | | | | | | | | | | |
|----------------------|--|--|--|--------------------------|-------|---|---------------------|--------------------|----------------------------|--|--|
| Bid Opportunity # | Company Name | Description | Origi Contract Vali (GST & MR as appli | Award ue RST extra | Expen | pproved Over- ditures (Over- diture amount only) | Date of Award | Date of Completion | Estimated % Complete | | |
| 682-2012 | CH2M Hill Canada Ltd. | Professional Consulting Services for SEWPCC Upgrading and | \$ 2 | 5,350,419 | \$ | 13,233,179 | 4/29/2013 | | 8- | | |
| 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 | | 38 | | |
| 873-2013 | Veolia Water Technologies Canada Ltd. | Procurement of High Rate Clarification Equipment | \$ | 2,052,500 | \$ | 107,300 | 7/10/2014 | | 69 | | |
| 333-2014 | PCL Constructors Canada Ltd. | Contract 1 - Site Preparation Works | \$ 2 | 2,646,510 | \$ | - | 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, Blow er Building and Secondary Clarifiers Structural Concrete & Miscellaneous Work | \$ 3 | 9,756,000 | \$ | - | 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 - Sitew ide Mechanical, Electrical, Concrete and site Works | | 9,997,000 | | | 10/4/2017 | | 64 | | |
| 1089-2015 | Manitoba Hydro | Manitoba Hydro Works Associated with the South End Sewage Treatment Plant (SEWPCC) Nutrient Removal/Expansion Project | \$ | 1,827,280 | 64 | 7,499 | 1/15/2018 | 2/5/2020 | 100 | | |
| 1056-2019 | Duboff Edw ards Haight & Schachter Law Corporation | External legal services related to the SEWPCC Project | \$ | 750,000 | \$ | - | 11/7/2019 | | 10 | | |
| | | Total | \$ 29 | 90,225,876 | \$ | 13,347,978 | | | | | |

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 (Contra | 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 | | | 62% |
| 8 | Commissioning of interim BNR configuration | 2016 Q4 | 2020 Q3 | | 0% |
| | Commissioning of all project components ¹ | 2021 Q3 | | | 0% |
| 10 1 Ma | nitoba Sustainable Development Notice of Alteration dated September 1 | 2, 2017 - City of Winnipeg S | outh End Water Pollution Co | ntrol Centre (SEWPCC |) - Environment Act Licence No |

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. Daily Commissioning meetings with the C4 contractor are continuing. If this risk materializes there may be budget implications.

Table 3 – Significant Risks and Mitigations Strategies

| Significant Risks and Mitigation Strategies | | | | | | |
|--|---|--|--|--|--|--|
| Risk Statement and Explanation | Risk Mitigation Management Plan | | | | | |
| New: | | | | | | |
| COVID-19 Impact on construction schedule | Contract Administrator and Contractor are working to manage the impact. | | | | | |
| 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. | | | | | |
| 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. | | | | | |
| 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. | | | | | |

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

| Fund | Funding Forecast | | | | | | | | | |
|--|------------------------------------|---|----------------------------|--|--|--|--|--|--|--|
| Funding Source | Adopted Budget (in millions) | Amended Budget ¹ (in millions) | Committed (in millions) | | | | | | | |
| Class of Estimate | Class 3 | | | | | | | | | |
| City of Winnipeg Total Retained Earnings External Debt | 298.18 75.82 222.36 | 276.18 75.82 200.36 | 276.18 75.82 200.36 | | | | | | | |
| Province of Manitoba | 6.08 | 17.08 | 17.08 | | | | | | | |
| Government of Canada | 31.34 | 42.34 | 42.34 | | | | | | | |
| Total | \$ 335.60 | \$ 335.60 | \$ 335.60 | | | | | | | |

^{1.} NOTE: Only approved funding to date.

Property Acquisition (Update from last report)

N/A

<u>Stakeholder Engagements/Communications</u> (Update from last report)

N/A

Subsequent Events after Report Period End Date

The Winnipeg Sewage Treatment Program – Project Director has retired and an Acting Project Director has been appointed. Recruitment is ongoing to fill the position on a permanent basis.

FINANCIAL IMPACT

Financial Impact Statement Date: September 29, 2020

Project Name:

South End Sewage Treatment Plant (SEWPCC) Upgrading and Expansion, Project ID: 20320002EL, 2032000207 and 203210002B, Quarterly Project Status Report No. 25 For the Period Ended April 30, 2020

COMMENTS:

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

"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.

WINNIPEG CLIMATE ACTION PLAN ALIGNMENT

N/A

SUBMITTED BY

Department: Water and Waste

Division: Engineering Services

Prepared by: Reetu Dewitt, P. Eng.

Date: September 30, 2020

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 | Director of Water and Waste | | | | |
| Department Responsible for Project Delivery | Water and Waste | | | | |
| Consultant Engineer (Company Name) | CH2M Hill Canada Ltd. | | | | |
| 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 | \$335,600,000 | | | | |
| Class of Estimate (Amended) | 3 | | | | |
| Range of Estimate (Amended) | -20% to +30% \$268,500,000 to \$436,300,000. | | | | |

Project Scope

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.

Major Capital Projects Advisory Committee Membership:

Mike Ruta, Interim Chief Administrative Officer

Dave Wardrop, Chief Transportation and Utilities Officer, Chief Administrative Office

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

Appendix B – Financial Forecast

Appendix B - Project SEWPCC Upgrading and Expansion Financial Forecast As at April 30, 2020

| | ı | Budget (in 000's | s) | | Ex | Expenditure Forecast (in 000's) | | | | | | |
|-----------------------------------|-------------------|-------------------------------|--------------------|--------------------------------------|-----------|---------------------------------|------------------|--------------------|------------------------------|---|-------------------------|-----------------------|
| Project Component Deliverables | Adopted Budget | Council Approved Change | Amended Budget* | Actual Costs To April 30, 2020 | 2020 | Projecto 2021 | ed Costs 2022 | 2023 and Beyond | Total Forecasted Costs | Surplus (Deficit) From Amended Budget | Variance Last Report | Change in Variance |
| Engineering, Design and Other | \$ 45,351 | \$ - | \$ 45,351 | \$ 47,494 | \$ 4,992 | \$ 3,471 | \$ - | \$ - | \$ 55,957 | \$ (10,606) | \$ (10,606) | \$ - |
| Construction | \$ 257,242 | \$ - | \$ 257,242 | \$ 199,137 | \$ 38,924 | \$39,178 | \$ - | \$ - | \$277,239 | \$ (19,997) | \$ (19,997) | \$ - |
| Land Acquisition | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Internal Financing/Overhead Costs | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Contingency | \$ 33,007 | \$ - | \$ 33,007 | \$ - | \$ - | \$ 2,404 | \$ - | \$ - | \$ 2,404 | \$ 30,603 | \$ 30,603 | \$ - |
| Total Project Budget | \$ 335,600 | \$ - | \$ 335,600 | \$ 246,631 | \$ 43,916 | \$45,053 | \$ - | \$ - | \$335,600 | \$ - | \$ - | \$ - |

| % of Project Budget Spent | | |
|-----------------------------------|-----|-----|
| (Actual Costs to Date / Adopted & | | |
| Amended Budget) | 73% | 73% |

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.

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 |
|-------------------------|---------------------|----------------|---------------|
| 20320002EL1 | 2002 | \$222,752 | \$222,752 |
| 2032000207 ¹ | 2007 | \$10,695,000 | \$10,695,000 |
| 203210002B | 2012-2015 | \$324,682,248 | \$235,713,483 |
| Total Proj | ect Budget | \$335,600,000 | \$246,631,235 |

¹Does 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 current 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.

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 | | Funded to Date | | Fundin | g Pending | Total Funding | | City Share of |
|--|---------------------------|------------------|-----------------|-----------------|--------------|-------------------|------------------|------------------------------|
| (in \$millions) | Total Cost | Canada | Manitoba | Canada | Manitoba | Canada | Manitoba | Costs |
| Environment Act Licence Driven Funding CSIF BNR GIF Wet Weather Flow Other | \$ 147.0 60.0 128.6 | \$ 27.14 9.90 | \$ 6.08 9.90 | \$ 4.20 1.10 | \$ - 1.10 | \$ 31.34 11.00 | \$ 6.08 11.00 | \$ 109.58 38.00 128.60 |
| Estimated Program Costs | \$ 335.6 | \$ 37.04 | \$ 15.98 | \$ 5.30 | \$ 1.10 | \$ 42.34 | \$ 17.08 | \$ 276.18 |

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

| WSTP All Projects | | Funded to Date | | Funding Pending | | Total Funding | | City Share of |
|--|-------------|----------------|----------|-----------------|------------|---------------|-----------|---------------|
| (in \$millions) | Total Cost | Canada | Manitoba | Canada | Manitoba 5 | Canada | Manitoba | Costs |
| | | | | | | | | |
| 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 | 335.60 | 37.04 | 15.98 | 5.30 | 1.10 | 42.34 | 17.08 | 276.18 |
| NEWPCC Power Supply and Headworks ² | 408.38 | | | 120.37 | 100.30 | 120.37 | 100.30 | 187.71 |
| NEWPCC Biosolids ³ | 552.71 | | | 200.87 | 167.38 | 200.87 | 167.38 | 184.46 |
| NEWPCC Nutrient Removal ⁴ | 828.06 | | | | | - | - | - |
| Estimated Program Costs | \$ 2,210.06 | \$ 47.70 | \$ 38.71 | \$ 326.55 | \$ 268.78 | \$ 374.25 | \$ 307.49 | \$ 700.27 |

- ¹ WEWPCC Biological Nutrient Removal and NEWPCC Centrate and UV Disinfection have been completed.
- ² City Council has approved the NEWPCC Upgrade Power Supply and Headworks project. On September 26, 2019 City Council approved submitting an application for Federal and Provincial funding under the Investment in Canada Infrastructure Program (ICIP). The City is waiting for ICIP application approval.
- 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 NEWPCC Upgrade Nutrient Removal project has not been approved.
- The Provincial government has made funding commitments to date totaling \$182.6 million towards the Headworks and Biosolids projects. Provincial funding received is held in reserve until the ICIP application is approved and project expenditures have occurred.