

**Minutes – Standing Policy Committee on Finance and Economic Development –
September 16, 2024**

REPORTS

**Item No. 7 South End Sewage Treatment Plant (SEWPCC) Upgrading and
Expansion,
Project ID: 20320002EL, 2032000207, and 203210002B,
Quarterly Project Status Report No. 39
For the Period Ended May 31, 2024**

STANDING COMMITTEE DECISION:

The Standing Policy Committee on Finance and Economic Development 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 this report, as information

**Minutes – Standing Policy Committee on Finance and Economic Development –
September 16, 2024**

DECISION MAKING HISTORY:

Moved by Councillor Schreyer,

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

Carried

Councillor Browaty was absent from the vote on the above motion.

ADMINISTRATIVE REPORT

Title: South End Sewage Treatment Plant (SEWPCC) Upgrading and Expansion, Project ID: 20320002EL, 2032000207, and 203210002B, Quarterly Project Status Report No. 39 For the Period Ended May 31, 2024

Critical Path: Standing Policy Committee on Finance and Economic Development

AUTHORIZATION

| Author | Department Head | CFO | CAO |
|---|---|-----------|-------------------------------|
| C. D. Wiebe, P. Eng., CAMP, Manager of Engineering Services | T. W. Shanks, M. Eng., P. Eng. Director, Water and Waste | T. Graham | S. Armbruster, Interim CAO |

EXECUTIVE SUMMARY

Project On Schedule: Yes No

Project On Adopted Budget: Yes No

Percent of Schedule Complete:

Percent of Adopted Budget Spent:

The Amended Capital Budget for the South End Sewage Treatment Plant (SEWPCC) Upgrading and Expansion is \$375.6 million, with expenditures to date totaling \$345.3 million. A total of \$6.2 million was spent during this reporting period.

During this reporting period, the C4 Contractor focused on the following:

- Addressing outstanding deficiencies with the high rate clarifier (HRC).
- Successfully repairing the leak in the ultra-violet light (UV) Weir Gate. The final effluent is now in compliance with licence limits for E. coli.
- Completing upgrades to the control system for the UV system and preparing for commissioning.
- Continuing automation works for various areas.
- Continuing construction works for the fermenters and odour control process areas.
- Completing the repairs for the delamination of chemical resistant coatings.
- Commissioning of the electrical and mechanical process equipment is on-going.

The C4 Contractor remains behind schedule based on missing key contractual schedule milestones, including the Total Performance date of January 20, 2022. The waste-activated sludge rotary drum thickeners (WAS RDTs) were discovered to be undersized. This will further delay of the completion of the contract.

As of May 31, 2024, there are a total of 17 open appeals with the C4 Contractor. During this reporting period, six appeals were resolved and no new appeals were submitted.

The City and Contractor continue to work towards collaborative resolution of appeals. Although effluent quality targets are being met, performance guarantees with respect to chemical use and sand loss for the HRC are not being achieved. Efforts by the HRC vendor are ongoing to resolve these issues.

An over-expenditure for external legal services was approved by the Chief Financial Officer for continued support for ongoing legal issues.

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

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 \$25 million (2023) or more report quarterly to the Standing Policy Committee on Finance and Economic Development. This threshold is reviewed at the beginning of each multi-year budget cycle. The Standing Policy Committee on Finance and Economic Development 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 develop operational documents.
- Delay by the C4 Contractor extends the requirement for the Consultant to be on site to provide technical oversight and direction.

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

- Construction activities continue for the fermenters and odour control process areas. Delamination of chemical resistant coatings that occurred in these areas has been repaired.
- The leak in the UV Weir Gate was successfully repaired and the final effluent is in compliance with licence limits for E. coli. Upgrades to the control system for the UV system have been completed and preparation for commissioning is ongoing.
- Outstanding deficiencies with the HRC are being addressed.
- During this reporting period, it was discovered that the WAS RDTs have less capacity than specified. This is being addressed by the Contractor in conjunction with their supplier.
- The project team continues to work with the Contractor to resolve outstanding appeals. As of May 31, 2024, there are a total of 17 open appeals with the Contractor. During this reporting period six appeals were resolved and no new appeals were submitted.

Bid Opportunity 873-2013 (Procurement of High Rate Clarification Equipment)

- The HRC system vendor returned to site in late April to conduct functional performance testing on the installed equipment. Although effluent quality targets are being met, performance guarantees with respect to chemical use and sand loss are not being achieved. Efforts are ongoing to resolve this issue.

Request for Proposal 1056-2019 (External Legal Services)

- On April 10, 2024, the Chief Financial Officer approved a contract over-expenditure in the amount of up to \$184,579.44, GST and MRST extra, for external legal services for the SEWPCC Project.

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 | \$ 25,350,419.00 | \$ 32,933,179.00 | 4/29/2013 | | 97% |
| 871-2013 | Veolia Water Technologies Canada Ltd. | Procurement of Free-Floating Media and Associated Appurtenances | \$ 7,750,588.00 | \$ 3,112,144.00 | 12/11/2014 | | 84% |
| 873-2013 | Veolia Water Technologies Canada Ltd. | Procurement of High Rate Clarification Equipment | \$ 2,052,500.00 | \$ 107,300.00 | 7/10/2014 | | 80% |
| 333-2014 | PCL Constructors Canada Ltd. | Contract 1 - Site Preparation Works | \$ 9,549,100.00 | - | 10/20/2015 | | 98% |
| 601-2015 | Graham Construction and Engineering LP | Contract 2 - High Rate Clarifier and Grit Removal Concrete and Miscellaneous Works | \$ 9,549,100.00 | | 10/20/2015 | | 98% |
| 976-2016 | NAC Constructors Ltd. | Contract 4 - Site wide Mechanical Electrical Concrete site works | \$ 179,997,000.00 | \$ 7,500,000.00 | 10/4/2017 | | 91% |
| 1056-2019 | Duboff Edwards Haight & Schachter | External legal services related to the SEWPCC Project | \$ 750,000.00 | \$ 184,579.44 | 11/7/2019 | | 78% |
| | Completed contracts | N/A | \$ 42,129,759.00 | \$ 7,499.00 | N/A | N/A | 100% |
| Total | | | \$ 277,128,466.00 | \$ 43,652,623 | | | |
| Upcoming Procurements: | | | | | | | |
| Description | | | | | Anticipated Award Date | | |
| | | | | | | | |

Schedule (Update from last report)

Repairs have been completed for the delamination in the fermenters and odour control tanks.

The original intent was to commission the fermenters and odour control process areas after the delamination repairs were completed. However, as the WAS RDTs were found to be undersized, a by-pass needed to be constructed prior to commissioning. This has caused an overall delay in the project schedule. Substantial completion has been delayed to Q4 2024.

Table 2 – Milestones

| Milestones | | | | | |
|-------------|--|-----------------------------------|----------------------------------|------------------------|----------------------|
| Deliverable | | Original Targeted Completion Date | Revised Targeted Completion Date | Actual Completion Date | Estimated % Complete |
| 1 | Project Definition Report | 2013Q4 | 2014Q2 | 2014Q2 | 100% |
| 2 | Preliminary Design Report | 2014Q2 | 2014Q4 | 2014Q4 | 100% |
| 3 | Detailed Design | 2014Q4 | 2017Q3 | 2017Q3 | 100% |
| 4 | Construction of Site Preparation and Piling (Contract 1) | 2014Q2 | 2016Q1 | 2016Q1 | 100% |
| 5 | Construction of High Rate Clarifier and Grit Removal Structural and Misc. Works (Contract 2) | 2016Q3 | 2017Q1 | 2017Q1 | 100% |
| 6 | Construction of Major Concrete Works (Contract 3) | 2017Q4 | 2018Q3 | 2018Q3 | 100% |
| 7 | Construction of Remaining Works (Contract 4) | 2021Q4 | 2024Q2 2024Q3 | | 95% |
| 8 | Commissioning of interim BNR configuration (Contract 4) | 2016Q4 | 2022Q4 | 2022Q4 | 100% |
| 9 | Commissioning of all project components (Contract 4) ¹ | 2021Q3 | 2024Q2 2024Q4 | | 85% |

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)

New risks:

- During this reporting period, it was discovered that the WAS RDTs have less capacity than specified. The vendor of the WAS RDT is supplying replacements RDTs that will be installed at a later date. To enable full plant commissioning to continue, the current undersized WAS RDTs will be used in the interim as they provide adequate capacity, just no redundancy. To compensate for the lack of redundancy, a bypass assembly will be constructed which will allow an alternate RDT to be utilized in case of equipment failure.
- Legal disputes related to Contract C1 are ongoing. The City is working with external legal towards resolution.

The following are updates for ongoing risks for this reporting period.

- Delamination of chemical resistant coatings that occurred in the fermenters and odour control process areas has been repaired. An additional inspection was performed to ensure the repairs held after water testing. An insurance claim has been initiated for this issue.
- The City's Wrap-Up Liability insurance was extended to December 31, 2024.

Table 3 – Significant Risks and Mitigations Strategies

| Significant Risks and Mitigation Strategies | |
|---|---|
| Risk Statement and Explanation | Risk Mitigation Management Plan |
| New: | |
| The WAS RDTs have less capacity than specified and therefore have no redundancy. This issue affects operation of the facility and will extend the project schedule. | A by-pass system will be constructed to allow the use of an alternate RDT to allow for commissioning to occur. Replacement with adequately sized WAS RDTs will occur later in the year. |
| Legal disputes related to Contract C1 are ongoing and have the potential to increase project costs. | The City is working with external legal towards resolution. Additional budget was added to the external legal support contract. |
| Ongoing: | |
| Supplied HRC equipment is not meeting performance guarantees outlined in the contract. | The Project Team is continuing to work with Veolia Water Technologies in an effort to remediate the performance issues encountered with the supplied equipment. |
| Delamination in certain areas with the fermenters and odour control tanks has been observed. | Delamination of chemical resistant coatings that occurred in the fermenters and odour control process areas has been repaired. An additional inspection was performed to ensure the repairs held after water testing. An insurance claim has been initiated for this issue. |
| The City's Builders Risk Policy for the SEWPPC upgrade expires December 31, 2023. Due to previous extensions, changes in the insurance market, more stringent underwriting criteria, reduction in capacity limits and the duration of this project, the current insurance carriers will no longer extend the policy. City Insurance Branch, along with their insurance broker, have reached out to multiple other carriers who have declined to provide a stand alone policy. | The City will self-insure the remainder of the C4 Contract. The City's Wrap-Up liability insurance was renewed until December 31, 2024. Insurers have noted that no further extensions will be granted. |
| There is potential that the IFAS media release insurance settlement will be much less than the claim by the Contractor. If this is the case, the Contractor may file a claim for the remainder of the costs with the City. | The City's Risk branch went to the insurance adjuster for clarification on the pending formal decision on this matter. The project has preserved rights to legal action. |
| 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. | Commissioning planning meetings are being held with the contractor. Engineer of Record continues to develop Integrated Wet Testing and Demonstration test plans for Contractor to follow. |
| Actual C4 Contract construction performance takes longer than planned. | Key construction milestone dates with linked liquidated damages incorporated into Contract 4. |
| COVID-19 Impact on construction schedule. | Contract Administrator and Contractor are working to manage the impact. Claim has been received by the project team, Revay Constructions Claims Consulting Firm conducted a third party review of the claim. |
| 1.0 mg/L Biological Phosphorus Licence compliance date of December 31, 2020. | The project continues to meet Phosphorus licence requirements with the use of ferric chloride (Chemical Removal). |
| Mitigated: | |
| 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 was performed in February 2018. |
| Low flow work is not completed and the seasonal low flow work window is closing for 2023, putting the project at risk of increased costs and schedule extensions. | All 2023 low flow work has been completed. |

Financial (Update from last report)

For further information, refer to Appendix B – Financial Forecast

Funding (Update from last report)

N/A

Table 4 – Project Funding Forecast

| Funding Forecast | | | |
|--|---|---|------------------------------------|
| Funding Source | Adopted Budget (in millions) | Amended Budget (in millions) | Committed (in millions) |
| Class of Estimate | Class 3 | Class 3 | Class 3 |
| City of Winnipeg Total | 298.18 | 316.18 | 316.18 |
| Retained Earnings | 75.82 | 75.82 | 75.82 |
| External Debt | 222.36 | 200.36 | 200.36 |
| Environmental Projects Reserve ^{1, 2} | | 40.00 | 40.00 |
| Province of Manitoba | 6.08 | 17.08 | 17.08 |
| Federal Government of Canada | 31.34 | 42.34 | 42.34 |
| Total | \$ 335.60 | \$ 375.60 | \$ 375.60 |

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

2 On July 21, 2022 Council approved a budget increase of \$23.5 million.

Property Acquisition (Update from last report)

N/A

Stakeholder Engagements/Communications (Update from last report)

The City continue to work with Manitoba Government as a license stakeholder.

Subsequent Events after Report Period End Date

An appeals meeting was held in June and four appeals were resolved and agreement to consolidate 10 appeals into one appeal as they all relate to liquidated damages was achieved. A total of four appeals remain outstanding.

Demonstration testing of the UV system was successfully completed in June 2024.

The WAS RDT bypass was constructed and commissioned.

Commissioning commenced for the fermenters and odour control process areas.

On July 11, 2024, the Interim Chief Administrative Officer approved an over-expenditure in the amount of up to \$1,000,000.00, GST and MRST extra, as applicable for ongoing external legal support for the SEWPCC Project.

FINANCIAL IMPACT

Financial Impact Statement

Date: July 26, 2024

Project Name:

**South End Sewage Treatment Plant (SEWPCC) Upgrading and Expansion,
Project ID: 20320002E1, 2032000207, and 203210002B,
Quarterly Project Status Report No. 39
For the Period Ended May 31, 2024**

Additional Comments:

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

Lucy Szkwarek, CPA, CGA

Lucy Szkwarek, CPA, CGA

Manager of Finance & Administration

CONSULTATION

This Report has been prepared in consultation with:

N/A

OURWINNIPEG POLICY ALIGNMENT

This report aligns OurWinnipeg 2045, Policy 2.17 Regional Water Resource Management, by addressing long-term capacity of water-related systems including wastewater management.

Objective: Protect and value ecosystems as essential components to quality of life through municipal activities and urban environment.

WINNIPEG CLIMATE ACTION PLAN ALIGNMENT

N/A

WINNIPEG POVERTY REDUCTION STRATEGY ALIGNMENT

Consideration was given as to whether this report connects to the Winnipeg Poverty Reduction Strategy (PRS) and its Goals and Objectives, and it was determined that the PRS is not applicable to this specific report.

SUBMITTED BY

Department: Water and Waste Department
Division: Engineering Services
Prepared by: Isaac D. Orah, PMP, LEED Green Assoc.
Date: July 26, 2024

Appendices

Appendix A – Key Project Facts

Appendix B – Financial Forecast

Appendix C – Key Project Events (History)

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 | \$375,600,000 |
| Class of Estimate (Amended) | 3 |
| Range of Estimate (Amended) | -20% to +30% \$300,500,000 to \$488,300,000. |
| Project Scope | |
| <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>Sherwood Armbruster, Interim Chief Administrative Officer Moira Geer, Deputy Chief Administrative Officer Tracy Graham, Chief Financial Officer Geoffrey Patton, Director of Assets and Project Management Danny Tooth, Acting Manager of Major Project Oversight Tim Shanks, Director of Water and Waste Linda McCusker, Project Director Winnipeg Sewage Treatment Program Lucy Szkwarek, Manager of Finance and Administration, Water and Waste</p> | |

Appendix B – Financial Forecast

Appendix B - Project SEWPCC Financial Forecast As at May 31, 2024

| Project Component Deliverables | Budget (in 000's) | | | Expenditure Forecast (in 000's) | | | | | Surplus (Deficit) From Amended Budget | Variance Last Report | Change in Variance |
|---|-------------------|-------------------------|-------------------|---------------------------------|------------------|-----------------|-------------|------------------------|---------------------------------------|----------------------|--------------------|
| | Adopted Budget | Council Approved Change | Amended Budget | Actual Costs To May 31st, 2024 | Projected Costs | | | Total Forecasted Costs | | | |
| | | | | | 2024 | 2025 | 2026 | | | | |
| Engineering, Design and Other | \$ 45,351 | \$ - | \$ 45,351 | \$ 73,580 | \$ 1,805 | \$ 272 | \$ - | \$ 75,657 | \$ (30,306) | \$ (30,306.00) | \$ - |
| Construction | \$ 257,242 | \$ - | \$ 257,242 | \$ 271,760 | \$ 20,692 | \$ 3,153 | \$ - | \$ 295,605 | \$ (38,363) | \$ (35,377.00) | \$ (2,986) |
| Land Acquisition | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Internal Financing/Overhead Costs | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Contingency | \$ 33,007 | \$ 40,000 | \$ 73,007 | \$ - | \$ - | \$ 4,338 | \$ - | \$ 4,338 | \$ 68,669 | \$ 65,683.00 | \$ 2,986 |
| Total Project Budget | \$ 335,600 | \$ 40,000 | \$ 375,600 | \$ 345,340 | \$ 22,497 | \$ 7,763 | \$ - | \$ 375,600 | \$ - | | |
| % of Project Budget Spent (Actual Costs to Date / Adopted & Amended Budget) | 103% | | 92% | | | | | | | | |

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. On July 21, 2022 Council approved a budget increase of \$23.5 Million, thereby revising the previous total budget of \$352.1 Million to the current \$375.6 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 | 2012-2022 | \$364,682,248 | \$334,422,434 |
| Total Project Budget | | \$375,600,000 | \$345,340,186 |

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)

1. THE PROJECT

The goal of this project is to expand the capacity of the SEWPCC for expected 2031 flows and upgrade the processes 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.

In December 2020, a Notice of Alteration for the interim phosphorous control process at the SEWPCC was submitted to the Province. The Province did not approve the request and required additional reporting and the submission of a revised schedule to full completion. The City has been reporting project status to the Province on a monthly and quarterly basis.

In September 2021, 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.

In November 2021, following a meeting with the Province, the Department submitted a Notice of Alteration to the Province stating that, due to the C4 Contractor’s performance preventing the completion of various critical pre-requisite works, seeding activities for the biological nutrient removal (BNR) process would not occur in 2021 and are anticipated to start in 2022.

In late December 2021, a power imbalance caused the protection controls to turn off for some pumps, which resulted in Integrated Fixed Film Activated Sludge (IFAS) media being released from the BNR system. The Engineer of Record investigated and recommended methods of IFAS media clean-up and recovery to the C4 Contractor. The C4 Contractor has cleaned up and recovered the media which was released to plant areas that were outside the BNR system.

As reported previously, a power imbalance in December 2021 resulted in a release of the Integrated Fixed Film Activated Sludge (IFAS) media from the BNR tanks. This release delayed the commissioning of the Biological Nutrient Removal (BNR) system and led to an adjusted

seeding start of June 2022. A revised Notice of Alteration was submitted to the Province on February 25, 2022, notifying of the delay and requesting a revised compliance date.

On April 14, 2022, the Province advised that the Notice of Alternation request, submitted by the City on February 25, 2022 for a revised compliance date was denied. However, the Province acknowledged the delays and accepted the submission as a compliance plan and required the City to continue the monthly and quarterly status reports.

On May 22, 2024, the City requested a compliance plan extension to account for the delamination and waste activated sludge rotary drum thickeners (WAS RDT) issues.

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

Appendix D
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 | 168.6 | | | | | | | 168.60 |
| Estimated Program Costs | \$ 375.6 | \$ 37.04 | \$ 15.98 | \$ 5.30 | \$ 1.10 | \$ 42.34 | \$ 17.08 | \$ 316.18 |

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 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 | 375.60 | 37.04 | 15.98 | 5.30 | 1.10 | 42.34 | 17.08 | 316.18 |
| NEWPCC Power Supply and Headworks ² | 517.85 | 63.63 | 53.05 | \$ 52.48 | \$ 43.70 | 116.11 | 96.75 | 304.99 |
| NEWPCC Biosolids ³ | 1,035.00 | | | 200.87 | 167.38 | 200.87 | 167.38 | 666.75 |
| NEWPCC Nutrient Removal ⁴ | 828.06 | | | | | - | - | - |
| Estimated Program Costs | \$ 2,841.82 | \$ 111.33 | \$ 91.76 | \$ 258.65 | \$ 212.18 | \$369.98 | \$ 303.94 | \$ 1,339.84 |

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 August 16, 2022 the Federal and Provincial governments announced an additional \$368.25 million in ICIP funding for the NEWPCC Upgrade Biosolids project. \$200.87 million in Federal and \$167.38 million in Provincial funding. Committing a total of \$581.11 million in funding to the NEWPCC Upgrade.

⁴ NEWPCC Upgrade Nutrient Removal project has not been approved.