Water and Waste
Eaux et déchets

Environment and Climate Change
Environmental Stewardship Division
Environmental Compliance and Enforcement Branch
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March 31, 2026
Client File No.: 3205.10
Our File Nos.: S-734, EMS
020-17-08-11-00
020-17-08-11-0N

Attention: Yvonne Hawryliuk, MSc, Acting Director

RE: ENVIRONMENT ACT LICENSE NO. 3042: 2025 CSO ANNUAL REPORT

The City of Winnipeg is pleased to submit the enclosed 2025 CSO Annual Report in response to the requirements within the Environment Act Licence No. 3042 submitted to the City of Winnipeg September 4, 2013.

This submission complies with the requirements related to Annual Reporting per Environment Act Licence No. 3042.

Should you have any questions on this submission, please contact Mr. Jon Goodbrandson, P. Eng., at 204-952-7258 or by email at jgoodbrandson@winnipeg.ca.

Sincerely,

C Wiebe

Cynthia Wiebe, P.Eng., CAMP
Manager of Engineering Services

Attachment

MKS/jkm

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City of Winnipeg
2025 CSO Annual Report

Environment Act Licence No. 3042

Clause 13

Prepared for

Manitoba Environment and Climate Change

March 2026

City of Winnipeg 2025 CSO Annual Report

Client File No: 3205.00
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Document History and Status

Revision	Prepared by	Reviewed by	Date	Approved by	Date
01	S. Leung M. Solis P. Coote	J. Goodbrandson	March 6, 2026	Cynthia Wiebe	March 19, 2026

Executive Summary

In November 2019, Manitoba Environment and Climate Change (the Province) approved the City of Winnipeg's (the City's) Combined Sewer Overflow (CSO) Master Plan as required by the City's Combined Sewer Environment Act Licence No. 3042. The licence requires the City to submit an annual report that details progress on the *CSO Master Plan* for the preceding year.

CSO Master Plan Progress

Sewer separation work continued in 2025, with construction contracts awarded for work in the Ferry Road and Jefferson East combined sewer districts. Consultant assignments were also awarded for the Armstrong Detailed Design project and the Mission and Roland Preliminary Design project.

Budget

The *CSO Master Plan*'s estimated capital cost to achieve 85 percent CSO volume capture is $1.15 billion in 2019 dollars. As a part of the 2025 capital budget process, $41.5 million was added to the CSO Program. This provided total available program funds of over $136.5 million. Approximately $54 million was committed in 2025.

The total capital budget for 2026 is $46.5 million. Due to the Rutland Trunk project being awarded at a much lower cost ($36.5 million) than the pre-tender estimate ($65.7 million), the CSO program was carrying a significant unspent budget of $129 million. To better align the program budget with spending, $20 million of prior approved funds were cancelled and re-budgeted as part of the 2026 capital budget process. This brings a total of $109 million available budget at the beginning of 2026. Approximately $38.9 million is forecasted to be committed in 2026. See Section 3.2 for more details.

The City's current funding strategy is based on a typical annual investment of $30 million. From 2029 onwards, this will be escalated by three percent annually. In 2021, City Council approved a $60 million increase to the *CSO Master Plan* budget over 4 years from 2024 to 2027 ($15 million per year). In 2022 and 2023, City Council directed the Public Service to work towards the Provincial deadline of 2045 and to prepare a City-only funding plan to meet this. Various funding scenarios were provided in the 2024 to 2027 Water and Sewer Rates Administrative Report. The City is working to commit existing budget dollars by advancing studies and designs to create more 'shovel-ready' contracts. The Public Service will continue to review required funds to work towards the

2045 deadline, proposing rate adjustments as required. To limit the impact of this work on rate payers, the City will also continue to work towards securing Provincial and Federal funding.

Current Year Results

Compared to the 2013 baseline, there was a 563 ML reduction in CSO volume in the 2025 sewer network[1] for the 1992 Representative Year. This represents 24 percent of the target volume reduction of 2,300 ML required to achieve 85 percent capture in a representative year. This resulted in a CSO volume percent capture of 77 percent (see Section 3.1). These improvements are the result of completed combined sewer separation works in the Jefferson East and Cockburn combined sewer district projects, and other CSO hydraulic model asset representation improvements, based primarily on enhanced monitoring instrumentation data.

Two new overflow points, the interconnection points between the combined sewer and land drainage systems, were identified. To ensure we report on the discharge performances for these points, they were added to the model representation as a part of the annual model updates. These interconnection points are at the intersection of St. David Road and Hull Avenue and the intersection of Westbrook Street and Portage Avenue East.

Annual CSO results are primarily impacted by precipitation and river levels.

1. Precipitation

   In 2025, there was approximately 21 percent less precipitation for the entire year and three percent less precipitation during the recreation season (May – September), when compared to the 1992 Representative Year (see Section 4.2). Since CSO reporting commenced in 2013, the average total precipitation in the last 13 years is equal to the 1992 Representative year.

2. River Level

   The 2025 river level was lower overall than the 1-in-5-year average. In comparison to the 1992 Representative Year river levels, 2025 levels were significantly lower until the beginning of May, after which the levels were slightly higher than 1992

[1] 2025 sewer network refers to the hydraulic model that contains the best representation of the existing sewer system at the time it was developed.

levels. The low river levels in spring 2025 were attributed to low snow cover at the end of winter and low amounts of precipitation (see Section 4.3).

In 2025, there were 1,015 CSO events with an estimated sewage discharge of 8,820 ML. This represents a reduction from 2024 in both the number of CSO events and in overall CSO volume (see Section 4.1).

Next Steps

As directed in the *CSO Master Plan*, the City will continue to work on sewer district separation projects that are currently underway (see Section 3.5). The anticipated 2026 capital projects include planning, design, and/or construction in the Mission/Roland, Armstrong, Ferry Road/Riverbend, Cockburn/Calrossie, and Jefferson East districts.

The City will continue to work towards delivery of the *Percent Capture Assessment for Control Option No. 2* in 2026.

The City will also continue to explore opportunities for sewer system optimization, green infrastructure (GI), and additional storage options to improve CSO performance monitoring and volume reduction. Furthermore, the City will continue regular communication with regulatory bodies and stakeholders throughout the delivery of the *CSO Master Plan*.

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Acronyms and Abbreviations

AACE	American Association of Cost Engineers International
AAF	average annual flow
City	City of Winnipeg
CS	combined sewer
CSO	combined sewer overflow
CSDs	combined sewer districts
DEP	district engineering plan
DWF	dry weather flow
EA	Environment Act Licence
GI	green infrastructure
LDS	land drainage sewer
MECC	Manitoba Environment and Climate Change
ML	megalitre
NEWPCC	North End Sewage Treatment Plant
NPRI	National Pollutant Release Inventory
POC	pollutants of concern
RTC	real-time control
SEWPCC	South End Sewage Treatment Plant
SFD	single-family dwelling
SRS	storm relief sewer
WEWPCC	West End Sewage Treatment Plant
WSER	Wastewater Systems Effluent Regulations
WWF	wet weather flow

1 Purpose

The City of Winnipeg (City)'s combined sewer system is governed by Environment Act Licence (EA) No. 3042. The Licence requires the City to submit an Annual Report that details progress on the Combined Sewer Overflow (CSO) Master Plan implementation for the preceding year.

The CSO Annual Report provides an overview of the cost, schedule, and performance results of the current combined sewer (CS) system. This includes information on capital improvements for the previous year and work planned for the coming year. The report also provides an overview of the process used to evaluate CSO discharges, as required by Clause 14 of the Licence.

As part of Clause 14, the City must submit an annual CSO Results Report for the preceding year by February 15. The CSO Results Report estimates the sewage volume that was discharged to receiving streams from CSO events that year. It complies with the National Pollutant Release Inventory (NPRI) and Wastewater Systems Effluent Regulations (WSER) annual reporting requirements.

2 Recent Changes & Updates

This section reflects changes and updates to the *CSO Master Plan* implementation in 2025. Implementation of the *CSO Master Plan* began in November 2019. The City is required to achieve 85 percent CSO volume capture for the Representative Year by 2045.

2.1. Sewer Network Changes

There were no major sewer network changes in 2025 that affected the overall CSO program performance. Please refer to Appendix A for the list of ongoing and completed projects that the City undertook in 2025.

In 2025, hydraulic model maintenance was performed. The total CSO volume in representative year simulations decreased, though not enough to increase the percent capture, which remains at 77 percent as reported for 2024. The reduction in total CSO volume is primarily attributed to capital improvements represented in the model for the Jefferson East and Cockburn completed contracts.

Other notable updates include adding model representation of two newly identified interconnection points between the combined sewer and land drainage sewer (LDS) systems to enable reporting on any predicted CSO at these locations. The two newly identified CS-LDS interconnection points are at the intersection of St. David Road and Hull Avenue as well as the intersection of Westbrook Street and Portage Avenue East. Refer to Section 3.1 and Section 4.6.1 for further information.

2.2. Regulation Update & Changes

On September 22, 2025 the 2024 *River, Stream, and Combined Sewer Overflow Discharge Water Quality Monitoring Report* was re-submitted to the Province. This revision included additional information requested by the Province in their July 23, 2025 letter. See Section 5 for further updates.

In 2024, the City began discussions with the Province regarding the scope of work and deadline for the *Percent Capture Assessment for Control Option No. 2*. On May 2, 2025, the Province issued a letter to clarify the requirements and extended the deadline to April 30, 2026. See Section 6 for details.

2.3. Funding Changes

In 2025, the City's Combined Sewer Overflow and Basement Flood Management Strategy budget (CSO budget) was $41.5 million.

In 2021, Council approved a $60 million increase to the CSO budget over 4 years from 2024 to 2027 ($15 million per year). This has been incorporated into the CSO capital budget forecast since 2022.

In 2022 and 2023, City Council directed the Public Service to work towards the Provincial deadline of 2045 and to prepare a City-only funding plan to meet the 85% capture. Various funding scenarios were provided in the *2024 to 2027 Water and Sewer Rates Administrative Report* to illustrate the potential rate impact over the range of a Class 5 cost estimate (-50 percent to +100 percent). The current level of funding is approximately equivalent to the 2019 cost estimate of $1.15 billion.

The City is working to commit existing budget dollars by advancing district designs to create more 'shovel-ready' contracts. Many of the designs remain conceptual at this stage, so estimating an overall program cost is difficult. As designs progress, the accuracy of the cost estimate to construct the CSO mitigation options will improve. The Public Service will continue to review required funds and work towards the 2045 deadline, proposing rate adjustments as required through the annual City budget process. To date, there have been no federal or provincial funding programs applicable to the City for support on the CSO program. The City will continue to seek external funding sources to limit the impact of this critical work on rate payers.

2.4. Communications Update

The City held a meeting with the Province on May 6, 2025 to provide an overview of the *2024 CSO Annual Report*. The meeting minutes are provided in Appendix B.

On May 2, 2025, the Province provided a letter of clarification on the Percent Capture Assessment for Control Option No.2 granting an extension to submit the assessment report by April 30, 2026. The City met with the Province on June 17, 2025 to discuss the scope of work for this report.

The City also met with the Province on July 7, 2025 to provide an overview of the submitted *2024 River, Stream, and CSO Water Quality Monitoring Report*. The Province provided feedback on the report on July 23, 2025 and a meeting was held on August 18, 2025 to discuss the comments on the report.

On December 24, 2025, the Province issued a response letter to the *2024 CSO Annual Report*, as shown in Appendix C. The letter requested clarification on funding sources, as well as progress updates for green infrastructure, floatable management, and real-time control (RTC). The City responded to the questions on February 6, 2026.

The City maintains regular communication with the public during the execution of the *CSO Master Plan* and this will continue as the program progresses. An update on the 2024 performance and financial status of the *CSO Master Plan* was presented to Council on June 27, 2025.

The City website serves as a public education tool to provide Winnipeg residents with information on the Master Plan and its benefits. Plans are in place to update the *CSO Master Plan* webpages to align with the City's latest brand and plain language standards and the *CSO Master Plan* Public Education Plan requirements. The City will continue to maintain an open and transparent engagement program with the public, including regular updates to the City's website.

2.5. Pollution Prevention Plan Update

The City has a Pollution Prevention Program to protect the sewage collection and treatment systems, our rivers and lakes, and the environment. In 2025, there were 583 active businesses that were part of the Pollution Prevention Program.

For more information, see winnipeg.ca/pollutionprevention.

2.6. CSO Program Background Information

Please refer to the *CSO Background* document found on the *Documents* tab of the *CSO Master Plan* website https://winnipeg.ca/waterandwaste/sewage/csoMasterPlan.stm) for a summary of the *CSO Master Plan*, including other key components that did not have changes or updates in 2025. The City's website also contains CSO information with links to relevant historical documents.

3 CSO Master Plan Performance

The 2013 Regional Model Baseline Network with the 1992 Representative Year forms the baseline performance level. The *CSO Master Plan* adopted the year 1992 as the Representative Year for annual rainfall intensities and river levels. Using a Representative Year is crucial as it serves as the benchmark for planning and evaluating both current and future CSO performance. By using data from 1992 as a reference point, we can ensure consistency and accuracy in our assessments, aiding in the effective management and mitigation of CSOs. The performance of the current year's model network, which is the most recent representation of the sewer network condition, is tracked and reported against the baseline.

3.1. CSO Volume Performance Tracking

The 2013 regional baseline hydraulic model represents the model conditions for the 2013 sewer network. The 2025 regional hydraulic model provides the best representation of the current sewer network condition. Updates to the model will be made as construction work is completed and modeling resources allow.

The total CSO volume discharged under the 1992 Representative Year conditions for the 2025 model network is 4,697 megalitres (ML), 563 ML less than the 2013 baseline CSO volume. This represents 24 percent of the target volume reduction of 2,300 ML required to achieve 85 percent capture in a representative year. The reduction in CSO volume shows that the combined sewer relief projects undertaken in recent years have improved the collection system's overall CSO performance. Table 1 shows the CSO performance of the baseline, current year, and the control target (85 percent capture) for the 1992 Representative Year design event. The total wet weather flow (WWF) volume captured for the current (2025) year performance was calculated with the baseline (2013) dry weather flows (DWF) and WWF in conjunction with the CSO volume from the current year's performance.

Table 1 - CSO Master Plan Performance Tracking

Condition	Total CSO Volume (ML)	Total DWF Volume (ML)	Total WWF Volume Captured (ML)	Target Reduction in CSO Volume (ML)	*Percent Capture (%)
Baseline Performance - 2013 Baseline with 1992 Rep. Year	5,260	7,749	7,317	-	74
Current (2025) Year's Performance - 2025 Network with 1992 Rep. Year	4,697	7,749	7,880	-	77
Target Performance - CSO Preliminary Proposal 85 Percent Capture with 1992 Rep. Year	2,980	7,749	8,920	2,300	85

$$*Percent\ Capture = \frac{(Total\ DWF\ \ Volume + Total\ WWF\ Volume\ Captured)}{(\text{Total CSO Volume+Total DWF Volume+Total WWF Volume Captured})}$$

Compared to the 2013 baseline, there was a 563 ML reduction in CSO volume in 2025 for the 1992 Representative Year. This value is 24 percent of the target volume reduction of 2,300 ML to achieve 85 percent capture in a representative year. This resulted in a CSO volume percent capture of 77 percent. The improved performance is primarily attributed to model updates reflecting contracts in Jefferson East and Cockburn Combined Sewer Districts (CSDs), which decreased CSO volume by 33 ML. Other model improvements were also made based on collected data and installed monitoring instrumentation. For more information on the model maintenance completed in 2025, see Section 4.6.1.

3.2. Financial Tracking

The *CSO Master Plan* developed an overall capital cost in 2019 dollars for each of the combined sewer districts. The total design and construction capital cost to implement the *CSO Master Plan*, including an additional 10 percent for GI costs, has a Class 5 cost estimate of $1.15 billion (2019 dollars). The capital cost summary is shown in the *2025 CSO Background* document.

The City's current funding strategy is based on a typical annual investment of $30 million. From 2029 onwards it will be escalated by three percent annually. Along with an additional $60 million in funding between 2024 and 2027, this is estimated to accumulate nearly sufficient funds to match the class 5 estimate of $1.15 billion (2019 dollars) by 2045. Funding is adjusted annually as part of the

capital budget process and is based on anticipated contracts for the coming years. Funds will continue to be adjusted to meet the provincial deadline.

The following section provides the financial status of the program. The financial budget is based on the current year's actual spending with a three-year forecast window. As preliminary designs are completed for the CSDs, updated Class 3 cost estimates will be prepared and utilized in the financial tracking process.

3.2.1 Capital Cost Estimation Tracking

No new city-wide capital cost estimates have been created since the August 2019 submission of the *CSO Master Plan*. Revised district-specific cost estimates are developed as preliminary designs progress; these are used for budget planning purposes. As district plans are completed, individual contract cost estimates are further refined prior to tendering the work.

3.2.2 Budget Tracking

In 2025, Council approved $41.5 million, funded from the Environmental Projects Reserve, for the CSO and Basement Flood Management Strategy program as a part of the City's capital budget process. With funds held over from previous years, the total available program funds at the start of 2025 was $136.5 million. A total of $54 million was committed in 2025.

The total capital budget for 2026 is $46.5 million. Due to the Rutland Trunk project being awarded at a much lower cost ($36.5 million) than the pre-tender estimate ($65.7 million), the CSO program was carrying a significant unspent budget of $129 million. To better align the program budget with spending, $20 million of prior approved funds were cancelled and re-budgeted as part of the 2026 capital budget process. This brings a total of $109 million available budget at the beginning of 2026. Approximately $38.9 million is forecasted to be committed in 2026. A four-year window of the *CSO Master Plan* and the 2025 annual budget and forecast is presented in Table 2 below.

Table 2 - CSO Master Plan and Revised 2025 Annual Budget Difference

	Budget Year	Forecast Years			Average
	2025	2026	2027	2028	
CSO Master Plan Estimate (2019 Dollar Values)	$35,826,596	$36,901,394	$37,904,117	$38,992,988	$37,406,274
Budget Forecast (from 2025 Capital Budget)	$41,500,000	$46,500,000	$47,000,000	$30,000,000	$41,250,000

Figure 1 shows the *CSO Master Plan* Estimate and 2025 Capital Budget forecast. It shows that the City plans to allocate more funds than the forecasted annual CSO funding of $30 million with three percent inflation.

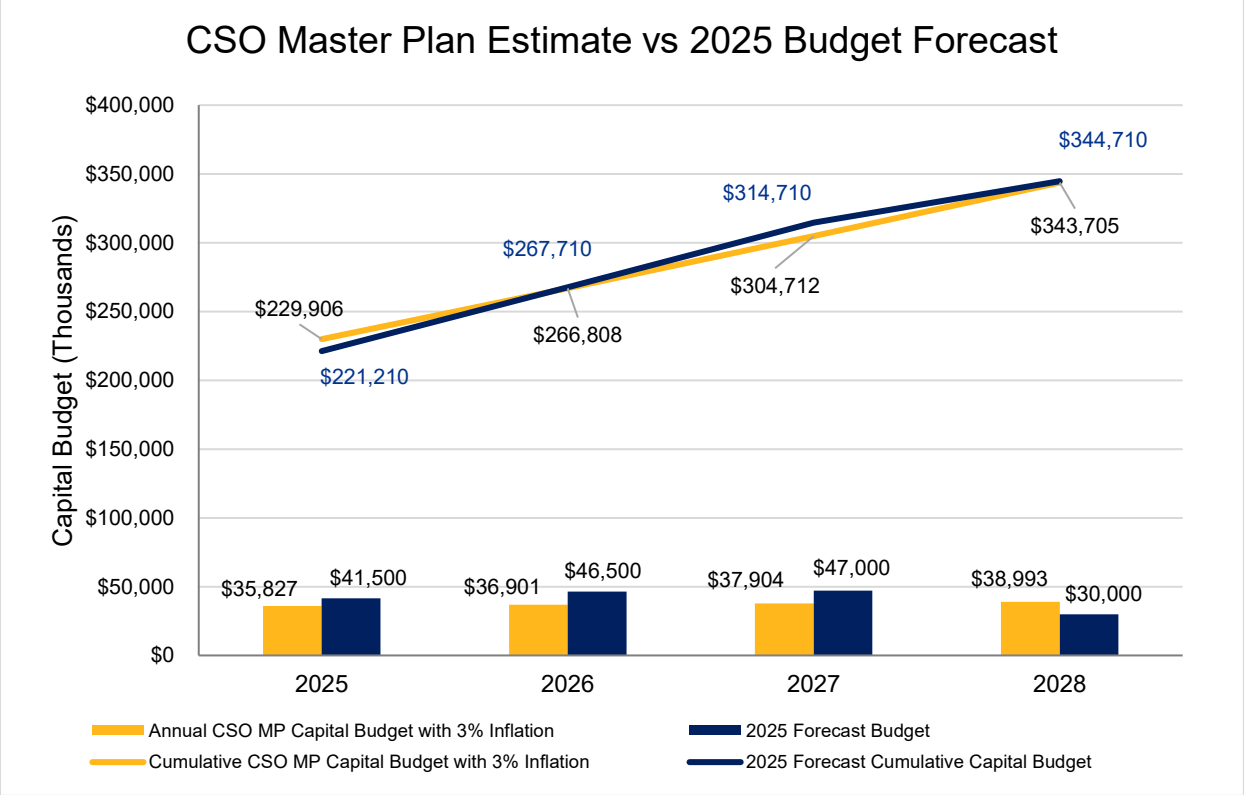

Figure 1 - CSO MP Estimate and 2025 Actual and Forecast Capital Budget

Since 2019, the cumulative committed amount to the CSO program is $177 million. Generally, where projects are completed under budget, unspent

committed funds are returned to the CSO Program funds to support upcoming major capital projects.

3.3. Schedule Tracking

The *CSO Master Plan* schedule is based on strategically prioritizing districts that will provide a high CSO volume or nutrient reduction, as well as to optimize program funds with other City projects.

To reflect the actual *CSO Master Plan* progress, an updated program schedule estimate is included in Appendix D. The revised schedule reflects completed projects in 2025 and current estimates for upcoming work. In 2025, the Ferry Road completion date was changed from 2030 to 2034 to reflect scheduling changes resulting from the Rutland Trunk project.

There are sufficient funds budgeted in the 2025 capital budget to undertake all planned investments over the next three years. Additional funding from the federal and/or provincial governments would be expected to have an impact on overall schedule.

3.4. Districts Design Status

The design status for each of the combined sewer districts is illustrated in Appendix E. Coloured cells represent the design stage for specific districts as of December 31, 2025.

3.5. Capital Projects Tracking

The list of completed and ongoing projects from 2025, with the associated scope, targeted costs, actual costs, and CSO volume reduction are provided in Appendix A. Completed contracts are removed from the table one year after completion and can be found in previous submissions of the *CSO Annual Report*.

The list of forecasted work for 2026 and the corresponding capital project's estimated CSO volume reduction, based on preliminary design estimates, are provided in Appendix F.

Information regarding the ongoing construction projects is updated on an annual basis on the City's webpage: https://legacy.winnipeg.ca/waterandwaste/publicengagement/cso/default.stm

3.6. Milestones

The 2025 awarded and 2026 planned project milestones are summarized in Table 3 and Table 4, respectively.

Table 3 - 2025 Project Milestones

2025 Committed Projects	Targeted Award Date	Actual Award Date	Comment
CSO Sewer Relief Projects			
NEWPCC			
Jefferson East Construction Contract 10	2025	July 2025	Construction of LDS
Ferry Road / Riverbend Construction Contract 6	2025	April 2025	Construction of Rutland Trunk
Armstrong Consultant Assignment 2	2025	January 2025	Detailed Design
Mission & Roland Consultant Assignment 1	2025	January 2025	Preliminary Design
CSO Monitoring Program			
Annual Rainfall Monitoring Program	2025	March 2025	Annual Provision, Installation, Data Hosting and Maintenance for a Rainfall Network Service

Table 4 - 2026 Planned Project Milestones

2026 Planned Projects	Targeted Award Date	Comment
CSO Sewer Relief Projects		
NEWPCC		
Jefferson East Construction Contract 7B	April 2026	Construction of LDS
Armstrong Construction Contract 1	July 2026	Construction of a wastewater trunk sewer, lateral wastewater sewers and LDS
SEWPCC		
Cockburn East Consultant Assignment 2	November 2026	Detailed Design
Overall System		
Rainfall Monitoring Program	February 2026	Annual Provision, Installation, Data Hosting and Maintenance for a Rainfall Network Service
Laboratory Upgrades at NEWPCC	2026	Study to Evaluate Expansion to Support CSO Program
CSO Percent Capture Assessment for Control Option No. 2	N/A	To be completed by internal City staff
Note: The above status is subject to change pending available budget and resources		

The planned 2025 project milestones that were not achieved have the following status:

- Construction of Laboratory Upgrades at the North End Sewage Treatment Plant (NEWPCC) – consultant assignment to conduct the study was awarded in 2025. Construction will follow in 2026.
- *CSO Percent Capture Assessment for Control Option No. 2* – a deadline extension of April 30, 2026 was granted for the submission of this assessment. This assessment is being completed by City staff, to ensure the assessment can be completed as quickly as possible. This also reduces the time required to procure a suitable consultant for this work.

Milestones related to key federal and provincial submissions are outlined in Section 6.

3.7. City Investments on CSO Mitigation to Date

Since 2013, the City has spent approximately $232 million on CSO-related works. The budget for the next six years (2026-2031) is forecasted to be $219.5 million.

Additional work has also been completed outside of the CSO Program budget that benefitted the long-term goals of the *CSO Master Plan*. This includes $14.7 million invested on flap gate and dewatering pumps at storm relief sewer outfalls, which reduced CSO discharge volumes and frequency. The North East Interceptor River Crossing was also upgraded to include a redundant crossing for a total cost of $11 million. In addition, relief sewers were installed in the separate sewer districts at the Transcona neighbourhood, which eliminated 20 cross connections between the WWS and the LDS system.

4 Current Year 2025

The City reports annually on CSO events and volume estimates. The amount of rainfall and the river levels during the rainfall events have the most impact on CSO events and sewer network performance.

The annual precipitation in 2025 was less than the 1992 Representative Year and the previous year, 2024. Rainfall in 2025 was approximately 21 percent less than the 1992 Representative Year, and 14 percent less than 2024.

Overall, the river levels in 2025 were lower than the 1-in-5 year average until the beginning of August. It then remained at a steady level that was consistent with the 1-in-5 year average. Compared to the 1992 Representative Year, the 2025 river levels were lower until the middle of May and remained at similar levels from June to October. The City did not experience a spring flood in 2025.

4.1 CSO Results

Based on the approach outlined in Section 4.6, the 2025 results are provided in Table 5. The location and event volumes are submitted federally and provincially every year by February 15 for the preceding reporting year. The results are also made public on the City webpage by July 31 for the preceding reporting year.

Table 5 - 2025 Overview of CSO Results

Source of Data	Number of Combined Sewer Outfalls	Number of events	Volume of events (ML)
CSO Instrumentation & Detailed Hydraulic Model	46	770	7,744
Detailed Hydraulic Model	32	245	1,076
Flood Pumped Data	N/A	0	0
Total	78	1,015	8,820

The total number of CSO events for 2025 was 1,015, which is an average of 13 events per outfall (based on 78 outfalls). The estimated annual CSO sewage discharged was 8,820 ML. These values are based on the hydraulic model with validation against 46 instrumented locations.

There are currently 41 flood pump locations. This number includes temporary flood pumps installed in specific locations as required based on river levels. There were 24 percent fewer CSO events in 2025 than in 2024 (1,332) and 28 percent less volume (12,186 ML). This reduction in events and volume is explained by the lower rainfall and different river levels as discussed in the sections below.

In 2025, 88 percent of the CSO results were validated against instrumentation data.

4.2 Rainfall

The 1992 Representative Year and 2025 current year's rainfall events are analyzed to understand the impact a current years' rainfall events have on CSOs. Table 6 compares the amount of precipitation and the number of rainfall events in both 1992 and 2025 based on the single rain gauge at The Forks.

The total amount of precipitation in 2025 was approximately 21 percent less than the 1992 Representative Year. The 2025 recreation season was 3 percent drier than in 1992. The 2025 shoulder season (January through April and October through December) accounted for 28 percent of the annual rainfall and was nearly two and a half times greater than the rainfall of the shoulder season in 1992. Eight rainfall events greater than 5 mm were recorded outside of the recreation period.

Table 6 - Single Rain Gauge at the Forks

	1992		2025	
	Annual	Rec Season	Annual	Rec Season
Total precipitation (mm)	478	326	461	316
Estimated rainfall (mm)	362	326	439	316
% deviation from Representative Year			21%	3%
Number of Events ≥5mm	22	20	22	14
% deviation from Representative Year			0%	30%

The comparison between the total annual precipitation and the 1992 Representative Year precipitation over the last several years is illustrated in Figure 2.

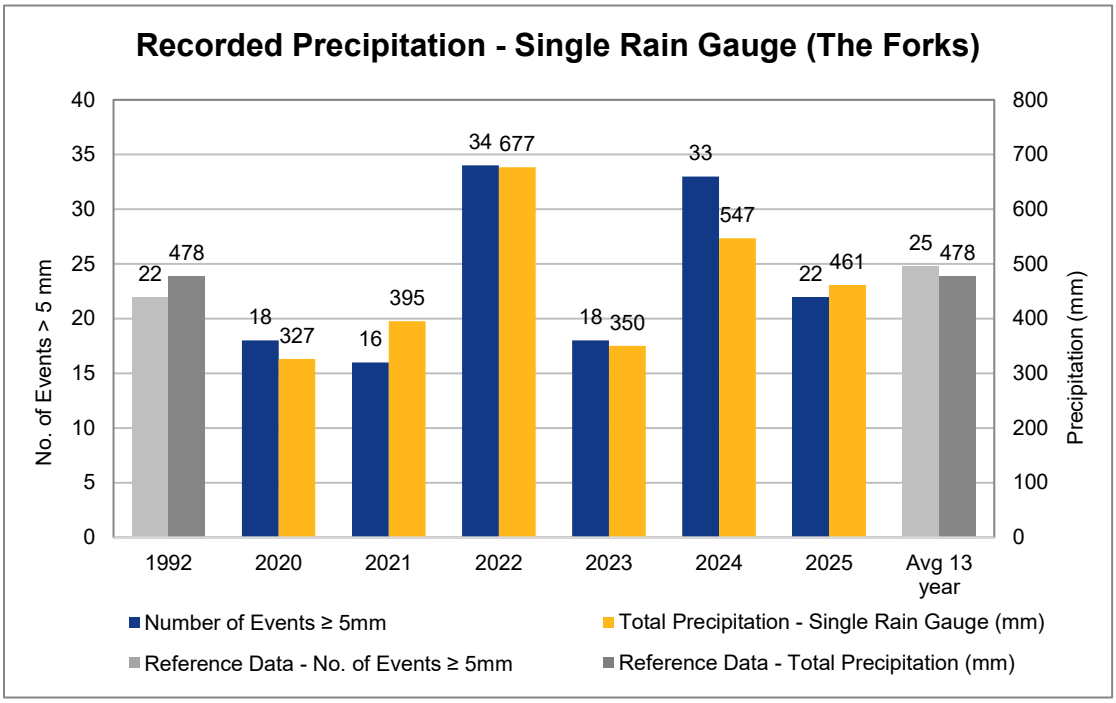

Figure 2 - Total Precipitation Yearly Trend Single Rain Gauge at the Forks

To capture the spatial variation of the rainfall and further improve CSO event, duration and volume estimation, the City uses its network of 36 rain gauges.

Instruments are typically operational from May 1st to September 30th, weather permitting. They can be activated as early as March and turned off as late as November. In 2025 the data from the 36 rain gauges was used from April 1st to November 30th. Two Environment Canada rain gauges (the Forks and Airport gauges) are within combined sewer districts and were used to supplement data for the remaining months of the year.

The average annual rainfall recorded by the City's combined sewer district rain gauges was 395 mm. The majority of the rain gauges were reliable, with minimal missing rain gauge data interspersed throughout the recreation season. Any missing data was supplemented with the average of the two closest working rain gauges. Overall, 2025 had 99 percent rain gauge coverage for the recreation season.

4.3 River Elevations

Overall, the 2025 river levels were lower than the 1-in-5-year average. In comparison to 1992 Representative Year river levels, 2025 was significantly lower until the beginning of May. There was no spring flood event. From late May until the end of September, river levels were slightly higher than the 1992 Representative Year. The river levels of 1992, 2025, and the 1-in-5-year event levels are illustrated in Figure 3.

The low river levels in spring 2025 were attributed to low snow cover at the end of winter and low amounts of precipitation. Throughout the summer the river levels were held at the normal summer water level set by the control at the St. Andrew's Lock and Dam.

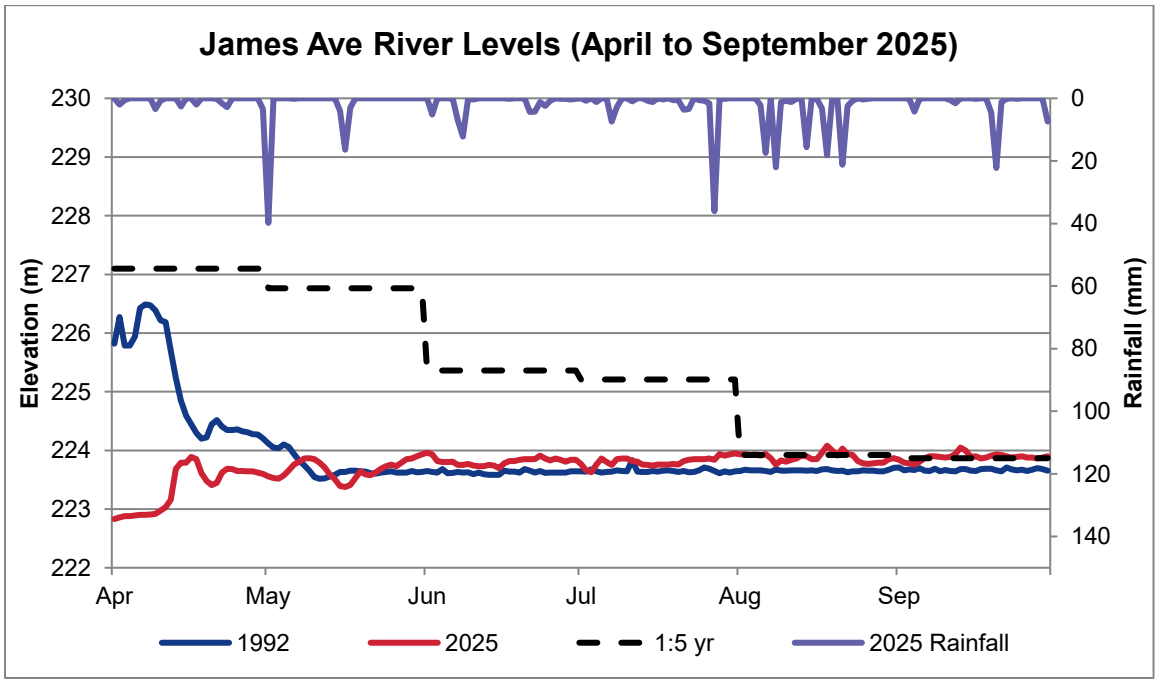

Figure 3 - James Ave River Level Comparison

4.4 Treatment Plant Flows

For 2025, the total citywide volume of treated sewage was 90,106 ML, which is approximately 15 percent less than 2024 (106,011 ML). The daily average annual flows (AAF) distributed between the wastewater treatment plants were as follows:

- North End Sewage Treatment Plant (NEWPCC) - 167 ML/day
- South End Sewage Treatment Plant (SEWPCC) - 57 ML/day
- West End Sewage Treatment Plant (WEWPCC) - 22 ML/day

The distribution of the treated sewage volume at each of the sewage treatment plants was similar to 2024 and past years.

- NEWPCC - 60,923 ML (68%)
- SEWPCC - 20,979 ML (23%)
- WEWPCC - 8,205 ML (9%)

In 2025, approximately nine percent of the total annual citywide sewage was lost due to overflows and 91 percent of the sewage flow was captured and treated. The estimated sewage lost from the NEWPCC, SEWPCC, and WEWPCC collection systems was 8,193 ML, 397 ML, and 230 ML, respectively.

4.5 Collections System Operational Observations

City crews were responsible for maintaining the outfall monitoring instruments throughout 2025. Non-functional instruments were recalibrated, replaced, or are being investigated as part of the maintenance process. The City continues to provide regular maintenance for all CSO monitoring instruments to maintain data quality for CSO Reporting. A record of the 2025 operational observations are documented in the *2025 Annual CSO Results Report* submitted to the Province on February 5, 2026.

Additional information related to untreated sewer discharge is documented on the City webpage:
https://www.winnipeg.ca/services-programs/water-wastewater/sewage/reports-untreated-sewage

4.6 Reporting Process

This year's CSO reporting is based on the City's 2025 regional model network representation. The model performance was validated using 46 instrumented CSO outfalls.

4.6.1 Hydraulic Model Maintenance

The City model network needs to be continually updated to better represent the current year's performance related to CSOs.

In 2025 model updates focused primarily on representing the sewer network changes from completed capital projects. The updates captured sewer separation and CSO work completed up to the end of 2025. These updates include adding completed contract work from the Jefferson East and Cockburn combined sewer districts. Other notable updates included adding model representation of two newly identified interconnection points between the CS and LDS systems to enable reporting on any predicted CSO discharges at these locations. These points are located at the intersection of St. David Road and Hull Avenue and the intersection of Westbrook Street and Portage Avenue East.

The City strives to continually update the hydraulic model based on available information, including past studies, field surveys, and record drawings. The model is calibrated using instrumentation data during updates to ensure that the network represents the sewer system performance. Sensitivity checks are then undertaken and all changes associated with model maintenance are documented.

4.6.2 CSO Reporting Limitations

Due to the complexities associated with snowmelt, it is not currently possible to numerically model the snowmelt related CSO events at the un-instrumented locations. Therefore, CSO analysis of un-instrumented locations is limited to CSO overflows caused by rainfall.

The calculations of CSO volumes are estimates based on hydraulic model representation of the sewer network, which is based on best available information. The field observed data also has limitations. The estimating process used meets federal guidance for appropriate estimation and includes processes for addressing assumptions for continuous improvement. Model results for the current year are based on observed rainfall data and annual results are validated against instruments installed at 46 of the 78 CSO locations.

Model updates are completed regularly. There will always be network changes or improved data that is not available at the time of the current update but will be included in subsequent updates.

4.7 Clause 8 Compliance

This section provides context for estimating the increase in runoff from small-scale development approvals compared to the decrease in runoff resulting from sewer separation projects. To comply with the licence, a separate calculation was developed to estimate increases in runoff resulting from small scale developments. This exercise is independent of the percent capture performance.

From 2014 to 2024, there were 6,735 cumulative small-scale property approvals. In 2025, there were an additional 1,061 approvals, bringing the cumulative property approvals since 2014 to 7,796. These developments represent an estimated increased runoff volume of 7,796 m^3. This estimate is based on a 1 m^3 average runoff volume for one small-scale development approval.

The 5-year design event, was also used to determine the decrease in runoff volume entering the combined sewer system as a result of sewer separation projects. In 2024, a cumulative decrease in runoff of 130,171 m^3 was reported. In 2025, as a result of model updates to reflect sewer separation in Jefferson East and Cockburn CSDs, the additional runoff volume reduction is 16,904 m^3. This results in a cumulative decrease in runoff of 147,075 m^3 and a net 2025 runoff reduction of 139,279 m^3 when accounting for increased runoff from small developments. As Table 7 demonstrates, sewer infrastructure improvements far exceed the additional small-scale development contributions.

Table 7 - Cumulative Reduction in Runoff Volume

	Estimated Runoff Volume Increase [m^3] (Small-scale Development)	Estimated Runoff Volume Reduction [m^3] (Sewer Separation*)	Net Runoff Volume Reduction [m^3]
2024 Cumulative Values	6,735	130,171	123,436
2025 Values	1,061	16,904	15,843
2025 Cumulative Values	**7,796**	**147,075**	**139,279**

** Values estimated from model maintenance area reductions for completed CSO construction projects and calculated equivalent runoff volume.*

5 Water Quality

The water quality objective of the *CSO Master Plan* is to reduce nutrient and bacterial loadings to the Red and Assiniboine Rivers by reducing the volume of CSOs discharged. The City collects CSO discharge samples and river samples to track and report on the river water quality every 5 years throughout the CSO program.

The water quality monitoring data collected in 2014 and 2015 will be used for the 2025 NPRI reporting and will be continually used until a new data approach is established.

The 2019 CSO Master Plan Provincial Approval Letter required the City to prepare the Water Quality Monitoring Plan and final report by December 31, 2024. The *2024 River, Stream, and Combined Sewer Overflow Discharge Water Quality Monitoring Report* was submitted on December 13, 2024. This report fulfilled the requirements specified in Clause D of the 2019 CSO Master Plan approval letter and the related City of Winnipeg Water Quality Monitoring Plan, dated January 6, 2023. Following comments from the Province from the July 23, 2025 letter and the August 18, 2025 meeting, a revised report was submitted on September 22, 2025. Please refer to the full report for further information. The next Water Quality Monitoring Report is due December 31, 2029.

The City conducts bi-weekly river and stream water quality monitoring for pollutants of concern (POC), including nutrients, dissolved oxygen, and bacteria. The monitoring data provides an updated characterization of the health of Winnipeg's waterways. These reports are published on the City of Winnipeg webpage:

https://legacy.winnipeg.ca/waterandwaste/sewage/monitoring/RiversSmallStreams.stm

6 Compliance

This section provides an overview and summary of the City's compliance with regulatory requirements.

Combined sewers are regulated by several federal and provincial requirements. The City reports on CSO discharge data to NPRI, WSER, and the Province on an annual basis to demonstrate regulatory compliance. Table 8 provides a list of required regulatory deliverables with their associated regulators, deadlines, and submission dates.

Table 8 - Regulatory Submissions

Deliverable	Regulator	Reporting Period	Deliverable Deadline	Submission Date
Federal Submission				
2025 CSO Annual Results	WSER	Jan 1 - Dec 31, 2025	Feb 15, 2026	Feb 11, 2026
2025 NPRI CSO Annual Report	Canadian Environmental Protection Act, 1999	Jan 1 - Dec 31, 2025	June 1, 2026	N/A
Provincial Submission				
2025 CSO Annual Results	EA No. 3042 Clause 14	Jan 1 - Dec 31, 2025	Feb 15, 2026	Feb 5, 2026
2025 CSO Annual Report	EA No. 3042 Clause 13	Jan 1 - Dec 31, 2025	March 31, 2026	March 31, 2026
CSO Quarterly Results	EA No. 3042 Clause 14	Every Quarter	May 15, Aug 15 and Nov 15 of the reporting year	May 12, Aug 6, and Nov 3, 2025

Annual CSO Result Submissions

In compliance with both WSER and Clause 14 of EA No. 3042, the City is required to submit the Federal and Provincial CSO Annual Results that consist of CSO outfall data from both the instrumented and non-instrumented locations by February 15 of the subsequent year. The non-instrumented locations are supplemented with hydraulic modeling data and rainfall estimations to improve confidence in the results.

The 2025 CSO Annual Results were validated and submitted to both the Provincial and Federal governments on February 5, 2026 and February 11, 2026, respectively.

In addition to the Federal and Provincial CSO Annual Results submission, additional annual submissions include the CSO Annual Report and the NPRI CSO Annual Report,

which are due by March 31 and June 1 of the subsequent year, respectively. The *2024 CSO Annual Report* was submitted on April 11, 2025.

Quarterly CSO Result Submissions

The Quarterly CSO Results Reports consist of event, volume, and duration estimation data based on the instrumented outfall sites. The results are not validated and are submitted 45 days after the end of the quarterly reporting period as per Clause 14 of EA No. 3042.

The three 2025 Quarterly CSO Results deliverables were completed and submitted to the Province on May 12, August 6 and November 3, 2025, in accordance and in advance of the mandated deadlines.

CSO Master Plan Submissions

Additional submissions related to the *CSO Master Plan* development and implementation is provided in Table 9. This table provides a list of submission milestones pursuant to EA No. 3042.

Table 9 - CSO Master Plan Submission Milestone

Deliverable	Targeted Date	Actual Completion Date
Public Education Plan	Dec 31, 2013	Dec 9, 2013
Interim Monitoring Plan	Jan 31, 2014	Apr 28, 2014
CSO Public Notification Plan	Dec 31, 2015	Dec 15, 2015
CSO Preliminary Proposal	Dec 31, 2015	Dec 17, 2015
CSO Master Plan	Aug 31, 2019	Aug 28, 2019
River Water Quality Report	Dec 31, 2024	Dec 13, 2024
Percent Capture Assessment for Control Option No. 2	Apr 30, 2026	TBD
River Water Quality Report	Dec 31, 2029	TBD
CSO Master Plan Update	Apr 30, 2030	TBD
River Water Quality Report	Dec 31, 2034	TBD
River Water Quality Report	Dec 31, 2039	TBD
River Water Quality Report	Dec 31, 2044	TBD
CSO Master Plan Implementation	Dec 31, 2045	TBD

In 2024, the City began discussions with the Province regarding the scope of work and deadline for the *Percent Capture Assessment for Control Option No. 2*. In a Letter of Clarification issued by the Province on May 2, 2025, the Province granted an extended deadline of April 30, 2026 for the submission of the *Percent Capture Assessment*

Report. The City met with the Province on June 17, 2025 to discuss and clarify the scope of work. Further engagement with the Province will continue in 2026 to confirm whether the equivalent water quality performance shall be based on a single sampling location or an average value of multiple sampling locations.

7 Risks and Opportunities

Due to the complexity of the Program, there are many risks and opportunities associated with the *CSO Master Plan* that need to be tracked. The *CSO Background* document outlines further risks associated with the *CSO Master Plan*.

7.1 Risks

The *CSO Master Plan* documented several program implementation risks that can affect the budget, capital costs, feasibility, and schedule.

The district engineering plans (DEPs) comprise individual conceptual solutions to CSO mitigation for each combined sewer district. The risks and opportunities applicable to the control solutions recommended for each sewer district to meet Control Option No. 1 (85 percent capture) were documented in Part 3B – District Engineering Plans of the *CSO Master Plan*.

Risks are also tracked on a project-by-project basis. Any changes to the control solution could lead to a reevaluation of risks associated with each of the specific projects.

7.1.1 Risks Tracking

Some significant recent risks which are being tracked, and will need to be assessed with regards to their impact on the *CSO Master Plan*, are identified below:

- The November 2019 *CSO Master Plan* acceptance letter issued by the Province included a requirement for water quality monitoring every five years. The resources and funding needed to meet this requirement were not included in the *CSO Master Plan*.
- In 2021, the City proposed a strategic approach to remove the Clause 8 requirements for smaller developments in combined sewer areas. Any increases in CSO volume associated with these developments is to be mitigated by the *CSO Master Plan* improvements. The cost to offset any increase in discharges to combined sewer to ensure future control targets are met have not yet been included in the *CSO Master Plan*.

- Qualified City resources are required to deliver the *CSO Master Plan* and for compliance with EA No. 3042 and associated Provincial correspondence requirements.
- There is a risk that the local consulting and construction industries will not have the capacity to meet the needs of a significantly increased CSO budget.
- There is a risk of increased delivery costs and reduced work quality with expanding the scale of the program quickly over a short timeline.

7.2 Opportunities

Several opportunities to improve the volume percent capture were identified during the development of the *CSO Master Plan*. The following section describes the main areas that the City could benefit from in the coming years as the program is implemented.

7.2.1 Green Infrastructure

Implementation of GI technologies in the design and operation of all new and upgraded infrastructure could promote long term sustainability in CSO volume reduction performance. An allowance of 10 percent of the capital program is included in the *CSO Master Plan* to account for the increased capital cost to include GI.

GI projects undertaken to date include the John Hirsh Place reconstruction in the North East Exchange in the Bannatyne CSD and the Parker Storm Retention Basin in the Cockburn CSD.

GI solutions are also at various stages of identification, design, and implementation in ongoing combined sewer separation projects.

- The Armstrong Detailed Design and Contract Administration project is moving to construction, with the first contract planned in the third quarter of 2026. It includes two GI solutions, including green streetscapes along Leila Avenue, as well as construction of a new bioretention facility located north of Leila Avenue and west of McGregor Street.

- In the Cockburn East Preliminary Design project, two GI solutions are being developed in the preliminary design phase. Both incorporate rain garden and bioswale components.
- The Mission and Roland Preliminary Design project will identify and evaluate a variety of green infrastructure opportunities. Up to six potential green infrastructure solutions will be progressed to a preliminary design level of detail.

GI solutions will continue to be explored as CSD separation work are initiated and progressed through the design stages.

The *CSO Master Plan* estimated that adding GI could increase district costs by about ten percent to achieve 85 percent capture in a representative year; however, actual costs will vary by district. The City does not currently track GI investments separately from other CSO program spending, as these costs are included in the overall CSO solution. The City is reviewing how GI investments are tracked to allow for reporting on these costs in the future.

For more information on green infrastructure, see the *CSO Background* Document or CSO website.

7.2.2 Floatable Management

Clause 12 of EA No. 3042 requires the *CSO Master Plan* to demonstrate the prevention of floatable materials in CSO effluent. The *CSO Master Pla*n included the proposed use of end-of-pipe screening to the primary CSO outfall in each CSD where it was determined to be hydraulically feasible, and where complete sewer separation of the district was not recommended. In addition to the traditional approach to floatable management, the *CSO Master Plan* has identified an alternative approach to eliminate floatables, where floatables will be captured at the surface runoff level before entering the sewer system.

There are high capital costs, long-term operation and maintenance costs, and other risks associated with screening facilities. This alternative floatable management approach will undergo a trial to determine its feasibility as an opportunity for addressing the floatable management requirements at a lower life cycle cost compared to screening facilities recommended under the *CSO Master Plan*. The assessment of the alternative floatable management approach will

lead to a better understanding of system floatables and will determine the most efficient long-term approach.

An allowance has been included in the DEPs for the Jessie, Polson, and Marion sewer districts to pilot the alternative floatable management approach. These districts are planned for the tail end of CSO implementation. Floatable management will be required where overflows cannot be fully eliminated through sewer separation, or other solutions. Staging this work later in the program after key separation works have been completed allows the City to align with other related investments, such as RTC, additional sewer storage, and mechanical controls.

7.2.3 Real-Time Control

The incorporation of RTC and monitoring instrumentation will provide enhanced operation and control of the sewer system on a real-time basis, with the opportunity to attenuate and optimize flows to the wastewater treatment plants. This will also provide opportunities to enhance the public notification system. A feasibility study of the requirements for RTC incorporation is in the planning stage as per the *CSO Master Plan*'s schedule.

The work related to RTC will commence with the West End Real-Time Control Feasibility Study. The work will involve hiring an engineering consultant to create and evaluate a RTC plan for future program implementation in the West End. A Request for Proposal will be posted in Q1 2027 and the feasibility study is expected to take 3 to 5 years to complete.

In addition to the larger feasibility study, RTC opportunities are assessed as part of a district's preliminary design process. Solutions identified in the Cockburn East Sewer Separation preliminary design are being progressed for future implementation. Opportunities will also be assessed as part of the Mission and Roland Preliminary Design project. Where opportunities are identified, allowances to advance up to two solutions to a preliminary design level is included in the work.

8 Record Keeping and Documentation

In compliance with Clause 16 of EA No. 3042, the City will comply with sampling record requirements, requirements for summaries of laboratory analytical results of grab samples, and CSO event and location records. The City will make records available to an Environment Officer upon request and within three months of the end of each year (or earlier as directed with regards to the CSO annual results). The City will post the results on the public webpage as required by Clause 10 of the Licence.

In compliance with subsection 46(8) of The Canadian Environmental Protection Act, City of Winnipeg's Water and Waste Department will retain copies of all information on which reports are based, including any calculations, measurements, and other related data, for a minimum period of three years. This information will be kept at City of Winnipeg Water and Waste offices at 1199 Pacific Avenue.

9 Next Steps

The next steps are to continue to implement the control technologies recommended as per the *CSO Master Plan*.

The 2026 planned capital construction projects, preliminary design, and other planned work are provided in Table 4. A summary of the 2026 planned capital projects includes:

- Planning and design of control technologies in Armstrong, Ferry Road, Cockburn, Mission, Roland districts
- Construction in Ferry Road, Jefferson East, and Armstrong districts
- Execution of the Rainfall Monitoring Program

In 2026, the City will also work towards delivering the *Percent Capture Assessment for Control Option No. 2.*

The City will continue to explore opportunities to further promote CSO volume reduction and maintain regular communication with regulatory bodies, and the public, on the progress of the *CSO Master Plan* performance.

10 References

AACE International. 1997. Cost Estimate Classification System – As Applied In Engineering, Procurement, and Construction for the Process Industries. AACE International Recommended Practice No. 18R-97. (pg. 3-46).

CH2M HILL Canada Ltd, XCG Consultants Ltd, Dillon Consulting. 2015. *CSO Master Plan Preliminary Report.* Prepared for: City of Winnipeg, Water and Waste Department. Winnipeg, Manitoba. December 2015.

City of Winnipeg. 2021. *2020 CSO Annual Results Report*. City of Winnipeg. Water and Water Department. February 11, 2021.

Jacobs Engineering Group. 2019. *CSO Master Plan.* Prepared for: City of Winnipeg, Water and Waste Department. Winnipeg, Manitoba. August 2019.

Manitoba Conservation and Water Stewardship (MCWS). 2013. *Environment Act Licence No. 3042.* Client File No.: 3205.00. September 4, 2013.

Wardrop Engineering Inc. (Wardrop), TetrES Consultants Inc., CH2M Hill Canada and EM Services Inc. 2002. *Combined Sewer Overflow Management Study* (2002 CSO Study). Final Report. Prepared for: City of Winnipeg, Water and Waste Department. November 2002.

Appendix A – 2025 Ongoing / Completed Capital Projects

Project Name	District	Contract #	Project Type	Description	Class of Estimate	Baseline Budget	Committed Cost	Targeted Completion Date	Actual Completion Date	Volume Reduction (m3)	Comments
NEWPCC											
Ferry Road / Riverbend - Consultant Assignment 5	Ferry Road / Riverbend	439-2010	Sewer Separation	Consulting Services for completing Preliminary Design for the district and undertaking Detailed Design and Contract Administrator construction contracts	Class 3	$2,500,000	$2,750,000	2030	TBD	N/A	Ongoing
Ferry Road / Riverbend – Construction Contract 6A	Ferry Road / Riverbend	286-2024	Sewer Separation	Construction of Rutland Trunk Sewer on Rutland Street from Assiniboine River to Silver Avenue	Class 3	$65,700,000	$36,500,000	2027	TBD	TBD	Ongoing
Jefferson East - Consultant Assignment 3	Jefferson East	440-2010	Sewer Separation	Professional Consulting Services for Detailed Design and Contract Administrator construction Contracts #6 to #10 for the Jefferson East Combined Sewer District	Class 3	$2,500,000	$3,500,000	2025	TBD	N/A	Ongoing
Jefferson East - Construction Contract 6B	Jefferson East	863-2021	Sewer Separation	Sewer separation and land drainage connection from Salter Street to Main Street at Burrin Avenue, Belmont Avenue, Hartford Avenue, and Perth Avenue, and from Burrin Avenue to Hartford Avenue at Aikins Street	Class 3	$3,000,000	$2,100,000	2023	TBD	32,385	Ongoing
Jefferson East - Construction Contract 7A	Jefferson East	556-2022	Sewer Separation	Connection and construction of LDS on Salter Street from Semple Avenue to Jefferson Avenue, and on Kilbride Avenue, Belmont Avenue, Hartford Avenue, and Perth Avenue from Powers Street to Aikins Street	Class 3	$5,000,000	$4,400,000	2023	TBD	13,879	Ongoing (C7 split into C7A and C7B)
Jefferson East - Construction Contract 8	Jefferson East	530-2024	Sewer Separation	Construction of LDS on Andrews Street from Royal Avenue to Hartford Avenue, Royal Avenue, Kingsbury Avenue and Burrin Avenue from Andrews Street to Powers Street, and Kilbride Avenue from McGregor Street to Powers Street	Class 3	$5,084,826	$4,600,000	2025	TBD	18,285	Ongoing

Project Name	District	Contract #	Project Type	Description	Class of Estimate	Baseline Budget	Committed Cost	Targeted Completion Date	Actual Completion Date	Volume Reduction (m3)	Comments
Jefferson East - Construction Contract 9	Jefferson East	332-2023	Sewer Separation	Construction of LDS on McGregor Street from Partridge Avenue to Semple Avenue, Forest Avenue, Royal Avenue, Kingsbury Avenue, Burrin Avenue from CNR Railway to Andrews Street	Class 3	$3,000,000	$3,500,000	2024	TBD	12,619	Ongoing
Jefferson East – Construction Contract 10	Jefferson East	410-2025	Sewer Separation	Sewer separation work on McKenzie Street, Kilbride Avenue, Belmont Avenue, Hartford Avenue, Perth Avenue, St. Anthony Avenue, Royal Avenue, Aikins Street, Semple Avenue, and Andrews Street	Class 3	$8,300,000	$7,100,000	2027	TBD	18,294	Ongoing
Armstrong - Consultant Assignment 1	Armstrong	943-2020	Sewer Separation	Professional Consulting Services for Armstrong Combined Sewer District Preliminary Design	Class 3	$3,000,000	$1,500,000	2023	2024	N/A	Complete
Armstrong – Consultant Assignment 2	Armstrong	755-2024	Sewer Separation	Professional Consulting Services for Armstrong Combined Sewer District Detailed Design	Class 3	$5,000,000	$4,000,000	2030	TBD	N/A	Ongoing
Hawthorne - Consultant Assignment 1	Hawthorne	802-2022	Basement Flood Relief	Professional Consulting Services for McLeod Creek Drainage Improvements	Class 3	$1,000,000	$425,000	2023	TBD	N/A	Ongoing
Hawthorne - Construction Contract 1	Hawthorne	350-2023	Sewer Separation	McLeod Creek Drainage Improvements and combined sewer separation along Kildonan Drive and Irving Place	Class 3	$4,000,000	$5,300,000	2024	2024	TBD	Complete
St Johns (Redwood) Consultant Assignment 1	St John's	528-2021	Sewer Separation	Professional Consulting Services for 2022 Redwood Reconstruction Project	Class 3	$80,000	$78,000	2023	TBD	N/A	Completed
St Johns (Redwood) Construction Contract 1	St John's	453-2022	Sewer Separation	New LDS at Redwood Ave from Salter Street to Charles Street	Class 3	$700,000	$986,000	2025	TBD	TBD	Ongoing (on warranty period; construction completed)
Polson (Inkster) Construction Contract 1	Polson	155-2024	Sewer Separation	Westbound catch basin leads connection to SRS on Inkster Boulevard from Sinclair Street to Main Street	Class 3	$1,026,995	$882,000	2024	TBD	TBD	Ongoing (on warranty period; construction completed)
Mission / Roland Consultant Assignment 1	Mission / Roland	886-2024	Sewer Separation	Consulting Services for Mission / Roland Combined Sewer District Preliminary Design	Class 3	$6,450,000	$4,800,000	2027	TBD	N/A	Ongoing

Project Name	District	Contract #	Project Type	Description	Class of Estimate	Baseline Budget	Committed Cost	Targeted Completion Date	Actual Completion Date	Volume Reduction (m3)	Comments
SEWPCC											
Cockburn / Calrossie - Consultant Assignment 5	Cockburn / Calrossie	441-2010	Sewer Separation	Professional consulting services for detailed design and contract administration services for phase 5 of the Cockburn and Calrossie Combined Sewer Relief Works	Class 3	$2,100,000	$2,200,000	2025	TBD	N/A	Ongoing
Cockburn / Calrossie - Construction Contract 6B	Cockburn / Calrossie	212-2020	Sewer Separation	Sewer separation and new LDS at Carter and Weatherdon Avenue between Stafford Street and Pembina Highway, Wentworth Street, Lilac Street and Arbuthnot Street	Class 3	$9,000,000	$5,300,000	2022	TBD	4,385	Ongoing
Cockburn / Calrossie - Construction Contract 7	Cockburn / Calrossie	537-2021	Sewer Separation	Sewer separation and new LDS at Harrow Street, Grant Avenue, Weatherdon Avenue, Carter Avenue, Hector Avenue, Ebby Avenue, Harrow Street E, and Sparling Avenue	Class 3	$8,500,000	$6,900,000	2022	TBD	9,813	Ongoing
Cockburn / Calrossie - Construction Contract 9a	Cockburn / Calrossie	104-2023	Sewer Separation	Construction of LDS on Taylor Avenue from Wilton Street to Poseidon Bay	Class 3	$9,000,000	$12,900,000	2025	TBD	13,542 between C9A and C9B	Ongoing
Cockburn / Calrossie Construction Contract 13	Cockburn / Calrossie	375-2024	Sewer Separation	Construction of new LDS on Poseidon from Taylor Avenue to Grant Avenue	Class 3	$6,000,000	$5,900,000	2025	TBD	4,387	Ongoing (Combines C9B and C13)
Cockburn East Consultant Assignment 1	Cockburn	496-2023	Sewer Separation	Consulting Services for Cockburn East Combined Sewer District Preliminary Design	Class 5	$2,679,000	$2,100,000	2025	TBD	N/A	Ongoing

Project Name	District	Contract #	Project Type	Description	Class of Estimate	Baseline Budget	Committed Cost	Targeted Completion Date	Actual Completion Date	Volume Reduction (m3)	Comments
Overall System											
River, Stream and Combined Sewer Overflow Discharge Water Quality Monitoring	N/A	949-2022	Water Quality Monitoring	River, Stream & CSO Discharge WQ Monitoring	Class 3	$1,300,000	$900,000	2024	TBD	N/A	Ongoing (additional scope change)
Flow Monitoring Program Instrumentation Supply	N/A	817-2019 Ext 2	Flow Monitoring Program	Supply and delivery of wireless portable area velocity sewer flow meters from Aug 1, 2021 to July 31, 2024	N/A	$125,000	$214,000	2023	2026	N/A	Completed
Rainfall Monitoring Program - Annual Provision, Installation, Data Hosting and Maintenance	N/A	910-2021 Ext 3	Rainfall Monitoring Program	Provision, Installation, Data Hosting and Maintenance for a Rainfall Network Service from May 1, 2025 to March 31, 2026	Class 3	$77,678	$90,000	N/A	N/A	N/A	Annual

	Unvalidated
	Committed costs are subject to change as projects progress

Note:
1) All costs are rounded to the nearest relevant whole number
2) The above table includes the list of projects that were either in progress or completed in the reporting year. The list of historic projects is referenced in the past CSO Annual Reports.

Appendix B – Previous Year's Record of Meeting Minutes

Meeting Minutes

2024 Combined Sewer Overflow Annual Report Presentation

Date of Meeting:	May 6, 2025	**Time of Meeting:**	2:00 PM
Meeting Location:	MS Teams	**File No.**	S-734
Chairperson:	Patrick Coote	**Recorder:**	Jennilee Marcial
Meeting Purpose:	2024 Combined Sewer Overflow (CSO) Annual Report Presentation		

Attendees

Name	Initials	Organization
Andrew Burton	AB	MB Environment & Climate Change | Environmental Approvals | Water Quality Management Section
Barsha Sagan	BS	MB Environment & Climate Change | Environmental Approvals | Industrial and Wastewater Section
Cynthia Wiebe	CW	City of Winnipeg | Water & Waste Dept | Engineering Services | Manager
Jennilee Marcial	JKM	City of Winnipeg | Water & Waste Dept | Engineering Services | Administrative Assistant
Jon Goodbrandson	JG	City of Winnipeg | Water & Waste Dept | Engineering Services | Wastewater Planning & Project Delivery Branch
Joy Kennedy	JK	MB Environment & Climate Change | Environmental Approvals | Water Quality Management Section
Mikhaela Solis	MS	City of Winnipeg | Water & Waste Dept | Engineering Services | Wastewater Planning & Project Delivery Branch
Patrick Coote	PTC	City of Winnipeg | Water & Waste Dept | Engineering Services | Wastewater Planning & Project Delivery Branch
Selina Leung	SL	City of Winnipeg | Water & Waste Dept | Engineering Services | Wastewater Planning & Project Delivery Branch
Siobhan Burland Ross	SBR	MB Environment & Climate Change | Environmental Approvals | Industrial and Wastewater Section
Sonja Bridges	SB	MB Environment & Climate Change | Environmental Approvals | Water Quality Management Section
Tim Shanks	TWS	City of Winnipeg | Water & Waste Dept | Director

Regrets

Name	Initials	Organization
Neil Rentz	NR	MB Environment & Climate Change | Environmental Approvals | Water Quality Management Section

City of Winnipeg Treaty Acknowledgement:

Winnipeg is located in Treaty One Territory, the home and traditional lands of the Anishinaabe (Ojibwe), Ininew (Cree), and Dakota peoples, and in the National Homeland of the Red River Métis. Our drinking water comes from Shoal Lake 40 First Nation, in Treaty Three Territory.

Item	Description	Action By

1.0	Presentation	Action By
	2024 CSO Annual Report was presented. The presentation is appended to these minutes.	N/A

2.0	City Requests	Action By
	• On May 2, 2025 the Province provided clarification on the percent capture requirement and extended the deadline to April 30, 2026. The City will schedule a meeting with the Province to review the percent capture assessment scope and confirm expectations, ideally before May 31st. Province agreed to meet to discuss.	JKM
	• The City asked if the Province would consider removing the requirement for quarterly CSO reporting and/or advise if there continues to be a need for it. The raw data that is provided in the quarterly reports is not validated. Only the annual report data is validated. The public notification system provides current overflow notifications and can be used to inform the Province of CSO overflows. The Province will review the need for quarterly CSO reporting.	SBR

3.0	Presentation Questions	Action By

	Future Highlights (Slide 33, Page 17)
	BS asked if the percent capture assessment will include the impact of climate change.
	• When the CSO Master Plan was developed, climate change was incorporated. It focused on sewer separation first, as it negates the risk of increased overflows. Incorporating a 35-year design horizon builds capacity into the infrastructure. The Percent Capture Assessment scope will be discussed at a later meeting.
	SBR asked what non-separation projects are active, as Green Infrastructure (GI) on Leila was mentioned on this slide.
	• The Leila project consists of sewer separation works and green infrastructure. It will be the same style of work that went into the North East Exchange – silva cells.
	  ○ Pictures of silva cells can be found here: Silva Cell Tree and Stormwater Management System | DeepRoot
	  ○ Info/photos on the John Hirsch project can be found here: Winnipeg's First Woonerf - John Hirsch Place - Citygreen
	• A dry retention pond is being considered for the McGregor project. It is a green patch that would stay dry unless a rainfall event occurred, wherein it would pool with water. There is also a potential opportunity for community planters.
	• These are the GI opportunities in progress. Opportunities are being assessed for Cockburn East and Mission & Roland projects.
	2024 Results Analysis: Tracking & Reporting Progress (Slide 17, Page 9)
	JK asked for the value of the blue line on the graph.
	• The value is 5,260 ML. The blue line on the graph represents the baseline performance which was based on the updated 2013 baseline performance model using the 1992 representative year data. The representative year data is always used to compare the updates to the hydraulic model for consistency.
	JK asked for the rainfall value in 1992.	

3.0	Presentation Questions	Action By
	• The value was 362 mm which was obtained from the one rain gauge located at The Forks. There was no permanent City rain gauge network in 1992. Over the years, a City rain gauge network has been built and currently consists of 36 rain gauges. The rain gauge at The Forks is the long-term historic rain gauge. The City rain gauge network covers spatial rainfall which is essential for real-time control.	

4.0	General Questions	Action By
	AB asked what material the new pipes being installed are made of and if they are made with different materials depending on if the pipe contains runoff or sewage. • Land drainage pipes are made of concrete. Smaller wastewater pipes are made of PVC. There are various factors that decide what material type is used. Currently in the sewer system, pipes consist of a range of materials such as clay, concrete, and PVC. There are ISO industry standards for sewer pipes, and the pipes need to have passed these standards to be used in this type of environment. AB asked how long do these pipes last and whether they good until 2050. • These pipes have a long life. For example, land drainage pipes aren't inspected for the first time until 30 years have passed. There is a sewer inspection program so some pipes may get inspected prior to when they are needed. AB asked if there is ever an overflow that does not get reported. • No, there should not be any overflows that do not get reported. • AB advised that the Province has created a report regarding contaminants found during a dry weather overflow following a fire and would like to share that info with the City eventually. AB said the province would be interested in the offer by the City to present on water quality (slide 30). AB inquried if the Rivers and Small Streams Monitoring Reports on the City webpage are in regards to the water quality report (slide 30) • No, this data is a separate program than what was completed for the Water Quality report. The report targeted dry and wet weather events, whereas this program does not. AB asked if the City performs sediment/wildlife monitoring of the rivers. • Only the CSO pollutants of concern were included in the CSO water quality monitoring.	PTC

Meeting adjourned at: 3:15 PM

Report any errors, misrepresentations or omissions in the meeting minutes within **5 business days** to Darlene Ramos by e-mail at dramos@winnipeg.ca, otherwise these minutes are considered accurate and accepted.

Attachment(s): 2024 CSO Annual Report PowerPoint Presentation

Appendix C – Provincial Letter on Previous Year's Annual Report

Manitoba
Environment and Climate
Environmental Compliance and Enforcement
Box 36, 14 Fultz Blvd.
Winnipeg MB R3Y 0L6
T 204-945-7100
ECEBranch@gov.mb.ca

File No.: 3205.10

December 24, 2025

Tim Shanks
Director of Water and Waste
City of Winnipeg
2nd Floor, 510 Main Street
City of Winnipeg
Winnipeg MB R3B 1B9
tshanks@winnipeg.ca

Dear Tim Shanks:

RE: Combined Sewer Overflow (CSO) 2024 Annual Report

Environment and Climate Change reviewed the 2024 Combined Sewer Overflow Annual Report, dated April 11, 2025, which was submitted as per the requirements of Clause 13 of Environment Act Licence No. 3042.

Upon review, the department requires clarification on the following:

1. Financial planning is based on city-only funding scenario. Has the City requested funding from other levels of government to meet the 2045 deadline?
2. Can the City provide more details on the pilots for green infrastructure and floatable management, as well as the schedule of the feasibility study for the real time control system?

If you have any questions, please contact Neil Rentz, Senior Strategic Environmental Analyst, at 204-794-3546, or Neil.Rentz@gov.mb.ca.

Yours sincerely,

Yvonne Hawryliuk
Director

c. Cynthia Wiebe (cwiebe@winnipeg.ca), Chris Carroll (ccarroll@winnipeg.ca), Renee Grosselle (rgrosselle@winnipeg.ca), Susan Lambert slambert@winnipeg.ca), Jon Goodbrandson (jgoodbrandson@winnipeg.ca) – City of Winnipeg
Sonja Bridges, Neil Rentz – Environmental Compliance and Enforcement
Environmental Approvals Branch (EABDirector@gov.mb.ca)
Public Registry

Appendix D - CSO Master Plan Program Tracking

District	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047
Jefferson																													
Cockburn																													
Ferry Road																													
Jessie																													
Armstrong																													
St. John's																													
Hawthorne																													
Mager																													
Polson																													
Mission																													
Roland																													
Ash																													
Tuxedo																													
Doncaster																													
Tylehurst																													
Linden																													
Riverbend																													
Despins																													
Metcalfe																													
La Verendrye																													
Newton																													
Hart																													
Marion																													
Syndicate																													
Strathmillan																													
Assiniboine																													
Aubrey																													
Cornish																													
Munroe																													
River																													
Moorgate																													
Alexander																													
Bannatyne																													
Colony																													
Baltimore																													
Woodhaven																													
Clifton																													
Dumoulin																													
Selkirk																													
Parkside																													
Douglas Park																													
Number of Districts CSO Mitigation Work Underway	3	4	4	4	7	8	8	6	5	5	5	5	3	3	3	3	3	4	6	6	8	7	7	9	13	16	14	9	4

CSO Master Plan Scenario 1 Schedule | Finish | Opportunistic Separation | Revised Schedule

CSO Master Plan Program Scenario 1 Sewer District Based Implementation Schedule (Jacobs, 2019)*

*Updated to compare initial and latest project schedules as per end of reporting year evaluation

Appendix E - District Plans Design Status

	Completion Progress			
CS Districts	Conceptual Design	Preliminary Design	Detailed Design	Construction
Parkside				
Jefferson E				
Armstrong				
Cockburn				
Ferry Road				
Douglas Park				
Hawthorne				
Mission				
Roland				
Bannatyne				
St John's				
Assiniboine				
River				
Riverbend				
Ash				
Tuxedo				
Doncaster				
Tylehurst				
Despins				
Jefferson W				
Aubrey				
Colony				
Hart				
Clifton				
Jessie				
Mager				
Strathmillan				
Munroe				
Marion				
Linden				
La Verendrye				
Metcalfe				
Moorgate				
Dumoulin				
Baltimore				
Syndicate				
Newton				
Alexander				
Woodhaven				
Cornish				
Selkirk				
Polson				
	Progress update as per end of reporting year evaluation The shaded cells represent the amount of w ork that has been completed.			

Appendix F - 2026 Planned Capital Projects

Project Name	District	Project Type	Class of Estimate	Forecasted Budget	Volume Reduction (m^3)
NEWPCC					
Jefferson East Construction Contract 7B – Installation of LDS pipe, manholes, and catch basins at Royal Ave, Kingsbury Ave, and Aikins St	Jefferson East	Sewer Separation	Class 3	$2,800,000	13,621
Armstrong Construction Contract 1 – Construction of wastewater trunk on Leila Avenue from Main Street to McPhillips Street, lateral wastewater sewers, and LDS	Armstrong	Sewer Separation	Class 3	$25,800,000	N/A
Ferry Road and Riverbend Contract Extension – Detailed Design and Contract Administration for construction contracts 6B-13	Ferry Road and Riverbend	Sewer Separation	Class 5	$4,200,000	N/A
SEWPCC					
Cockburn East Consultant Assignment 2 – Detailed Design	Cockburn	Sewer Separation	Class 5	$2,400,000	N/A
Overall System					
Rainfall Monitoring Program – Annual Operation and Maintenance	N/A	Rainfall Monitoring Program	Class 3	$120,000	N/A
NEWPCC Laboratory Upgrades	N/A	Strategic Infrastructure	Class 5	$2,000,000	N/A
Note: The status of the planned contracts is subject to change.					