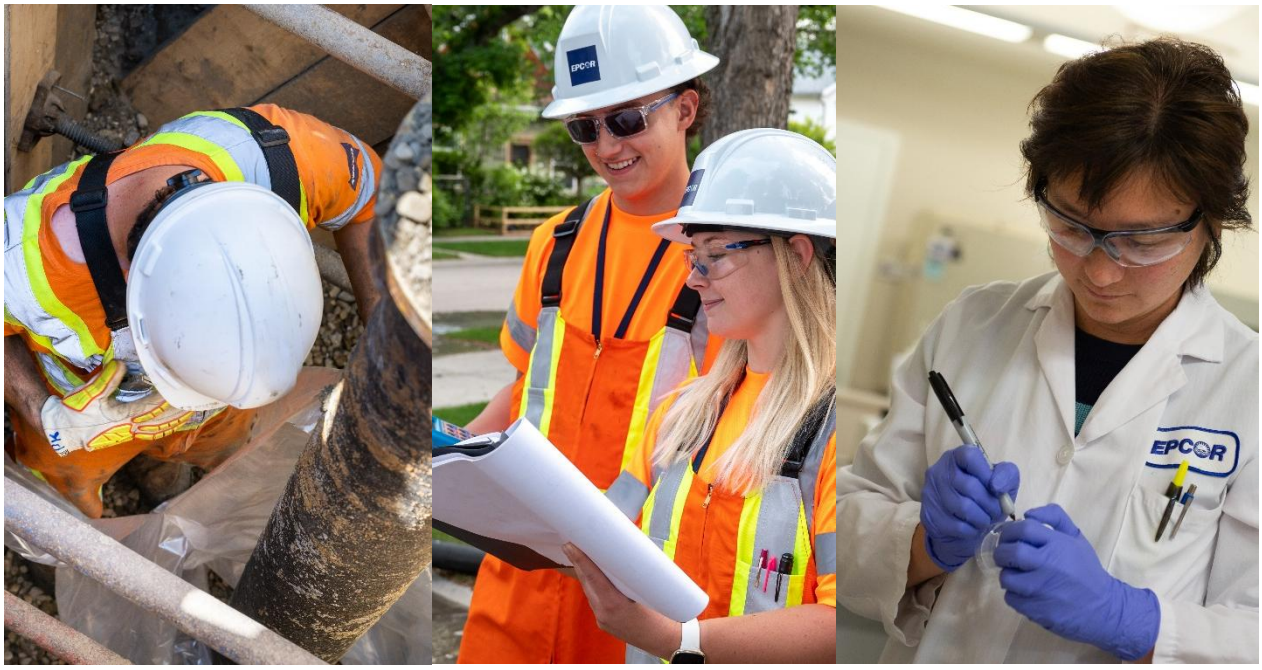
Performance Based Regulation
2024 Progress Report

2022-2024 Wastewater Collection and Treatment Services
and
2022-2026 Water Services



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1 Progress Report Overview

This report provides the annual progress update to the City of Edmonton on the financial and operational results for the year ended December 31, 2024 for water and fire protection services ("In-City Water"), wastewater treatment services ("Wastewater Treatment"), and sanitary and stormwater utility services ("Wastewater Collection," formerly known as "Drainage Services") provided within Edmonton by EPCOR Water Services Inc.

In 2023, EPCOR completed a comprehensive restructuring of its organizational framework, merging and integrating the two distinct businesses of Water Canada and Drainage Services into a unified business unit ("EPCOR Water Services" or "EWS"). The primary goal of this integration was to streamline operations and optimize resources across the entire water cycle by adopting a "one water" approach, while delivering an improved customer experience. Effective July 2023, EWS began operating as an integrated business unit and is responsible for the ongoing commitments for the PBR plans referenced in this report. The results summarized in this report reflect the operations of the new organizational structure.

Edmonton City Council regulates In-City Water in accordance with the 2022-2026 Performance Based Regulation ("PBR") Plans approved in EPCOR Water Services Bylaw No. 19626 ("Bylaw 19626") and Wastewater Collection and Wastewater Treatment services in accordance with the 2022-2024 PBR Plan approved in EPCOR Drainage Services Bylaw No. 19627 ("Bylaw 19627").

1.1 Financial Performance

In-City Water, Wastewater Treatment and Wastewater Collection's financial performance,[1] as measured by return on equity, is summarized and compared to the approved PBR forecast in Table 1.1-1 below:

Table 1.1-1
Revenue and Return on Equity
($ millions)

		A	B	C	D
		2024		2022-2024	
		Forecast	Actual	Forecast	Actual
1	**In-City Water**				
2	Regulated revenue	242.7	254.9	694.0	715.8
3	Return on equity	54.0	60.1	143.0	151.8
4	Rate of return on equity	9.51%	10.72%	8.68%	9.36%
5	**Wastewater Treatment**				

[1] Consistent with the 2022-2024/2026 PBR Applications, all financial data in this report, including totals and sub-totals, are rounded to the nearest $0.1 million to ensure continuity of data between tables and between years. However, the sum of the rounded financial data in certain tables may not be equal to the related rounded total or sub-total.

		A	B	C	D
		2024		2022-2024	
		Forecast	Actual	Forecast	Actual
6	Regulated revenue	131.8	137.9	383.1	396.1
7	Return on equity	21.8	17.7	66.0	65.1
8	Rate of return on equity	9.07%	8.20%	9.72%	10.34%
9	**Wastewater Collection**				
10	Regulated revenue	273.6	278.2	761.2	768.5
11	Return on equity	66.3	60.3	166.7	152.3
12	Rate of return on equity	7.77%	7.32%	7.19%	6.74%

In 2024, In-City Water's financial performance, as measured by return on equity, was higher than forecast, while 2024 financial performance for Wastewater Treatment and Wastewater Collection was lower than forecast. Actual to forecast differences in the 2024 return on equity for each utility are as follows:

- **In-City Water** achieved a 10.72% rate of return on equity, higher than its PBR forecast rate of return of 9.51%, primarily due to higher than forecast revenue resulting from higher customer growth, partially offset by higher operating expenses and interest costs.

- **Wastewater Treatment** achieved an 8.20% rate of return on equity, lower than its PBR forecast rate of return of 9.07%, primarily due to higher than forecast operating expenses and depreciation, partially offset by higher than forecast non-rate revenues collected from Arrow Utilities and slightly lower than forecast rate base.

- **Wastewater Collection** achieved a 7.32% rate of return on equity, lower than its PBR forecast rate of return of 7.77%, primarily due to higher than forecast operating expenses and interest costs, partially offset by lower than forecast depreciation and rate base.

Detailed analyses of In-City Water, Wastewater Treatment and Wastewater Collections' financial performance for 2024 are provided in Sections 2.1, 2.2, and 2.3, respectively, of this report. Supplemental financial information for the three utilities is provided in Sections 5.1 to 5.3 of this report.

1.2 Capital Expenditures

In-City Water, Wastewater Treatment and Wastewater Collections' capital expenditures for 2024 and for the PBR Term (the "2022-2026 Water PBR term" and "2022-2024 Wastewater Treatment and Wastewater Collection PBR term") are summarized in Table 1.2-1 below.

Table 1.2-1
Capital Expenditures
($ millions)

	A	B	C	D
Capital Expenditures	2024		2022-2024/2026	
	PBR Forecast	Actual	PBR Forecast	Actual / Projection
In-City Water	121.9	139.7	510.4	670.1
Wastewater Treatment	43.6	58.8	171.7	157.3
Wastewater Collection	279.3	213.9	754.3	697.7

Over the course of the PBR term, changes to capital programs are required to address emerging needs for repairs or rehabilitation, changes in regulatory or operational requirements, growth, customer demands, and other external factors. These changes are coordinated through EWS' Capital Governance and Review group and are authorized by EWS' Capital Project Steering Committee, EPCOR Utility Inc.'s (EUI) Financial Review Council, or EPCOR's Board of Directors, depending on the amount of the expenditure.

EWS' capital plan for Water Services, Wastewater Treatment and Wastewater Collection includes a range of capital projects and programs for ensuring the safety and reliability of ongoing operations, optimizing efficiency, managing customer growth, and ensuring compliance with federal and provincial regulation.

- **In-City Water's** 2022-2026 projected capital expenditures of $670.1 million are $159.7 million (31%) greater than the PBR forecast. Several factors are contributing to this projected variance. For example, a significant project contributing to this variance is the Water Treatment Plants Flood Protection Project ($42.9 million), which increased in scope following a detailed study that revealed additional complexities for flood protection at the two water treatment plants. Explanations for other significant variances are provided in Section 2.1.3.

- **Wastewater Treatment's** 2022-2024 capital expenditures of $157.3 million were $14.4 million (8.3%) lower than the PBR forecast. This difference reflects considerable efforts to rebalance Wastewater Treatment's capital program in response to changing priorities to ensure that Wastewater Treatment continues to provide a high level of service to its customers while mitigating risks and maintaining performance standards. Implementation of projects such as the Odour Control Improvements, Primary Effluent Channel Upgrades, EB-1 and EB-2 electrical upgrades, Expand Flare Capacity and Secondary Aeration Blower upgrades were deferred until the 2025-2027 PBR term to address complexities, minimize operational disruptions and to address engineering issues encountered during the design phase.

- **Wastewater Collection's** 2022-2024 capital expenditures of $697.7 million were $56.6 million (7.5%) lower than the PBR forecast. This difference was primarily driven by lower than anticipated spend on the Drainage Neighbourhood Renewal program due to inspections showing fewer required replacements and delayed implementation of the Dry Ponds Program to provide sufficient time to complete public consultation.

Detailed explanations for differences between capital expenditures in PBR forecast and EWS' current projections are provided in Sections 2.1.3, 2.2.3 and 2.3.3.

1.3 Operational Performance

In-City Water's operational performance is measured by the results of indices prescribed in Schedule 3, Section 3 of Bylaw 19626 with each index consisting of one or more performance measures. Wastewater Treatment and Wastewater Collection's operational performance is measured by the results of indices prescribed in Schedule 3, Section 3 and Section 4 of Bylaw 19627.

Operational performance under each index is measured independently on a points basis with 100 base points available if the standards for all performance measure indices are achieved. Bonus points are available for performance above standards and financial penalties are applied if EWS does not meet the 100 base point standard.

In 2024, In-City Water's actual performance exceeded the PBR performance standards on four out of five performance measure indices. Both Wastewater Treatment and Wastewater Collection's actual performance exceeded the PBR performance standards on three out of four performance measure indices. Actual operational performance for each of the indices is summarized in Table 1.3-1 and discussed in Section 3 of this report.

Table 1.3-1
2024 Performance Measures and Standards

	A	B	C	D	E	F
Performance Index	**In-City Water**		**Wastewater Treatment**		**Wastewater Collection**	
	Standard	**Actual Score**	**Standard**	**Actual Score**	**Standard**	**Actual Score**
1 Water Quality Index[2]	30.00	29.98	45.00	49.50	-	-
2 Customer Service Index	15.00	17.25	15.00	16.50	20.00	22.00
3 System Reliability and Optimization Index	25.00	28.14	25.00	24.30	30.00	29.90
4 Environmental Index[2]	15.00	17.25	-	-	35.00	38.50
5 Safety Index	15.00	17.25	15.00	16.50	15.00	16.50
6 **Aggregate Points Earned**	**100.00**	**109.87**	**100.00**	**106.80**	**100.00**	**106.90**

1.4 Consumption Deferral Account

For the 2022-2024/2026 PBR terms, City Council directed that EWS establish *"a deferral account for water consumption for each of Water Services, Wastewater Treatment and Drainage Services that would be accumulated during the 2022-2026 and 2022-2024 PBR terms and included in customer rates in each of the next PBR terms through a special rate adjustment."*

The effect of the consumption deferral in 2024 and over the 2022-2024 period for Water Services, Wastewater Treatment and Wastewater Collection is summarized in Table 1.4-1. For In-City Water, the existing balance and any additional amounts accumulated over the remainder of the current 2022-2026 PBR term will be refunded to customers over the next PBR term as outlined and approved in the PBR Bylaw.

For Wastewater Treatment and Wastewater Collection, EWS commenced the refund of the accumulated consumption deferral balances to ratepayers effective April 1, 2025.

Key drivers for the consumption variance are explained in Section 1.5.

[2] Water Quality and Environmental are combined into one index for Wastewater Treatment's and Drainage's operational performance

Table 1.4-1
Consumption Deferral Account

		A	B	C	D	E
		2024 Consumption (ML)			Deferral Account ($M)	
		Forecast	Actual	Difference	2024	2022-2024
1	In-City Water	85,784	96,144	10,360	22.5	45.7
2	Wastewater Treatment	82,713	93,042	10,329	13.7	29.1
3	Wastewater Collection	82,713	93,042	10,329	14.5	31.1
4	Carrying Charges				5.1	8.0

1.5 Customers & Consumption

2024 customer and consumption for In-City Water, Wastewater Treatment and Wastewater Collection are summarized below.

1.5.1 In-City Water Customers & Consumption

In-City Water provides services to residential, multi-residential and commercial customer classes. Average monthly customer counts, total annual consumption and monthly consumption per customer are shown in Table 1.5.1-1.

Table 1.5.1-1
In-City Water
Customers, Consumption and Consumption per Customer

		A	B
	Customers and Consumption	2024 PBR Forecast	2024 Actual
1	Customers		
2	Residential	287,954	293,381
3	Multi-Residential	3,811	3,870
4	Commercial	20,283	20,631
5	**Total Customers**	**312,048**	**317,882**
6	Annual Consumption (ML)		
7	Residential	44,712	51,601
8	Multi-Residential	17,595	20,048
9	Commercial	23,476	24,494
10	**Total Annual Consumption**	**85,784**	**96,143**
11	Consumption per Customer (m^3 per month)		
12	Residential	12.9	14.7
13	Multi-Residential	384.7	431.7
14	Commercial	96.5	98.9

The factors contributing to the differences between actual and forecast for 2024 are explained below:

Customer Growth

EWS' PBR forecast, which was prepared during mid-2020, anticipated a reduction in migration into Edmonton due to the COVID-19 pandemic, resulting in lower anticipated customer growth forecast. However, actual residential customer growth rates remained at or near pre-pandemic levels since the beginning of the current 2022-2026 PBR term, resulting in higher than forecast customer counts.

Annual Consumption

- **Residential** – 6,889 ML (15.4%) greater than forecast, with 843 ML due to higher customer counts and 6,046 ML due to higher consumption per customer. City of Edmonton population growth and bylaw changes that allow for more dwelling units on single-family residential lots in certain neighbourhoods have contributed to higher consumption per customer, indicating a new trend in residential consumption.
- **Multi-Residential** – 2,453 ML (13.9%) greater than forecast, with 271 ML due to customer growth and 2,182 ML due to higher per customer consumption. Higher consumption per customer for this class can be attributed to the increased population and multifamily buildings within the City of Edmonton and a significant drop in the rental property vacancy rate[3] experienced over the 2022-2024 period.
- **Commercial** – 1,017 ML (4.3%) greater than forecast, with 402 ML due to higher than forecast customer growth and 615 ML due to higher consumption per customer. Stronger than forecast economic growth, combined with weather-related variations, contributed to the increase in consumption.

Consumption per Customer

Higher than forecast customer growth continued to influence consumption per customer during 2024; however, a review of 2023 and 2024 consumption patterns highlight a potential shift and emergence of a new trend in residential consumption per customer within the mature neighbourhoods of Edmonton.

This shift in the consumption pattern can be primarily attributed to two factors:

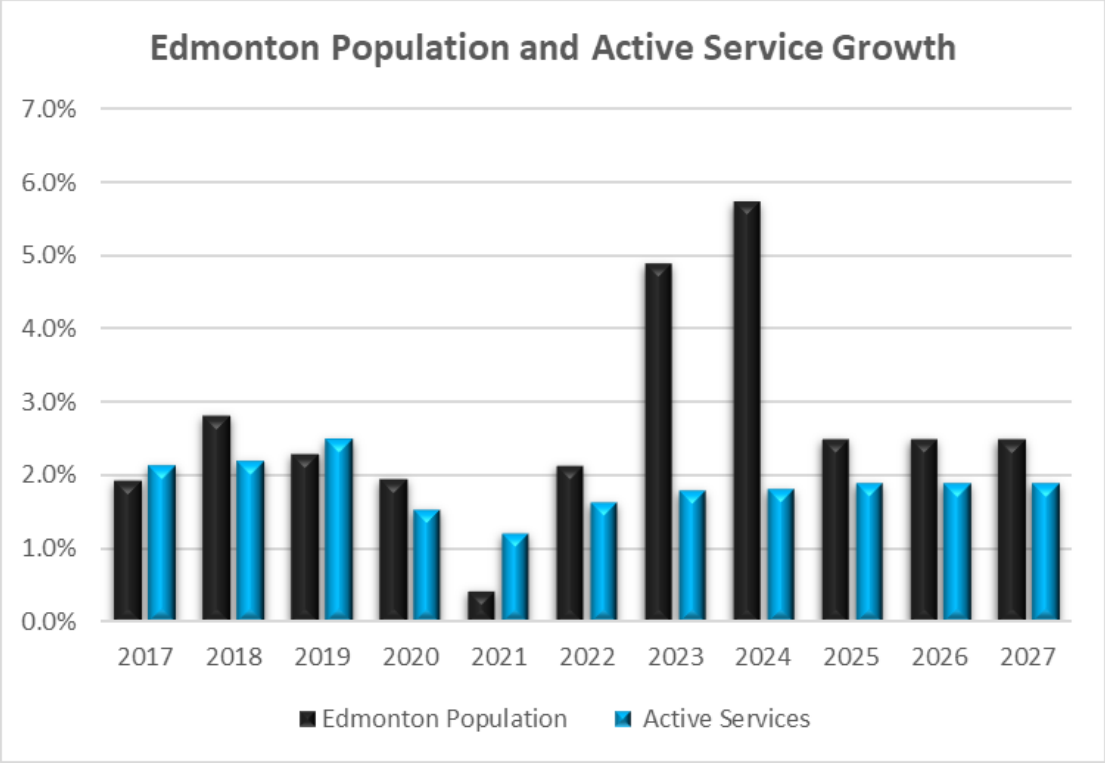
1. Initiatives from the City of Edmonton to densify core neighbourhoods and the recent zoning bylaw changes allowing multiple dwellings on residential lots; and,

2. Projected population increases for the City of Edmonton outpacing active service counts during 2023 and 2024 in comparison to the historical population trends, see Figure 1.5.1-1. Historically, increases in Edmonton's population and the customer growth experienced by EWS were relatively aligned. However, these new

[3] Source: CMHC Housing Market Information Portal

trends point to an increase in density within residential dwellings, resulting in higher consumption per customer.

Figure 1.5.1-1
Edmonton Population[4] and Customer Growth



The trends described above, can also be observed within Wastewater Treatment and Wastewater Collection as wastewater services are provided to the same customer classes as In-City Water. During 2025-2026, EWS will utilize real-time consumption data available through its Advanced Metering Infrastructure (AMI) devices to perform a thorough analysis of these new trends by neighbourhood to better inform its consumption forecasts.

1.5.2 Wastewater Treatment Customers & Consumption

Wastewater Treatment provides services to the same customer classes as In-City Water. Table 1.5.2-1 shows a comparison of PBR forecast to actual customer counts and consumption per customer for Wastewater Treatment. Differences in customer counts, consumption and consumption per customer are attributable to “water-only” customers who

[4] Source: Edmonton Population (2017-2024): Statistics Canada. Table 17-10-0155-01 Population estimates, July 1, by census subdivision, 2021 boundaries
Edmonton Population Growth (2025-2027): City of Edmonton, Q3 2024 Economic Update

are not tied into EWS' drainage system, such as in industrial parks that are served by septic systems, commercial lawn watering services and golf courses.

Table 1.5.2-1
Wastewater Treatment
Customers, Consumption and Consumption per Customer

		A	B
		2024	
	Customers and Consumption	PBR Forecast	Actual
1	Customers		
2	Residential	287,839	293,267
3	Multi-Residential	3,811	3,870
4	Commercial	17,412	17,702
5	**Total Customers**	**309,063**	**314,839**
6	Annual Consumption - ML		
7	Residential	44,694	51,109
8	Multi-Residential	17,595	19,913
9	Commercial	20,423	22,007
10	**Total Annual Consumption**	**82,713**	**93,028**
11	Monthly Consumption per Customer		
12	Residential	12.9	14.5
13	Multi-Residential	384.7	428.8
14	Commercial	97.7	103.6

Actual to forecast differences in Wastewater Treatment's customer counts and consumption are attributable to the same factors as In-City Water.

1.5.3 Wastewater Collection Customers & Consumption

Wastewater Collection provides sanitary and stormwater utility services to the same customers and customer classes as Wastewater Treatment. Therefore, actual to forecast differences in customer counts and consumption are attributed to the factors discussed above. Customers and consumption for Wastewater Collection are summarized in Table 1.5.3-1.

Table 1.5.3-1
Wastewater Collection
Customers and Consumption

		A	B
	Customers and Consumption	2024 PBR Forecast	2024 Actual
	Sanitary Utility		
	Customers		
1	Residential	287,839	293,267
2	Multi-Residential	3,811	3,870
3	Commercial	17,413	17,702
4	**Total Customers**	**309,064**	**314,839**
	Consumption per Customer (m^3 per month)		
5	Residential	12.9	14.5
6	Multi-Residential	384.7	428.8
7	Commercial	97.7	103.6
	Annual Consumption (ML)		
8	Residential	44,694	51,109
9	Multi-Residential	17,595	19,913
10	Commercial	20,423	22,007
11	**Total Annual Consumption**	**82,713**	**93,028**
	Stormwater Utility		
	Customers		
12	Residential	288,672	293,381
13	Multi-Residential	3,780	3,870
14	Commercial	17,249	18,448
15	**Total Customers**	**309,700**	**315,699**

The minor difference (860 customers or 0.3%) between the total number of sanitary utility and stormwater utility customers is due to stormwater-only customers, such as acreages in annexed areas and commercial customers that are not connected to the sanitary sewer system.

1.6 Non-Routine Adjustments

Non-Routine Adjustments (NRA) are defined in Bylaw 19626 for In-City Water Services and in Bylaw 19627 for Stormwater Utility Services, Sanitary Utility Services and Wastewater Treatment Services, as items that are “by their nature unusual, significant in size or nature and beyond EWS’ scope of control.” Bylaws 19626 and 19627 allow EWS to request positive or negative non-routine adjustments to rates from either the City Manager or City Council, depending on the revenue requirement threshold specified in the respective Bylaws.

All NRAs approved during the 2022-2024 / 2022-2026 PBR terms are to be charged to the Adjustment Deferral Accounts. A two-step approach is then followed whereby EWS receives interim approval and funding for the proposed adjustment with a final true-up of funding completed based on actual costs.

For 2024, EWS received approval from the City Manager to increase In-City Water rates effective April 1, 2024, for the following two projects that qualified as NRA in accordance with Bylaw 19626.

- LRT Relocates Program - Relocation of water distribution infrastructure in conflict with the City's South Capital Line LRT Project; and

- Franchise Agreement Relocates Program - Relocations required for various City projects, in particular the Yellowhead Trail Project, as reflected in EWS' Franchise Agreement Relocates Program.

In addition, on January 28, 2025, EWS received approval to increase In-City Water rates effective April 1, 2025, for the Water Private Development Transmission Mains Program, which qualified as an NRA. This NRA was required because of forecast changes to EWS' 2022-2026 revenue requirement due to higher than forecast construction and expansion of water transmission mains to new subdivisions within Edmonton and to provide adequate water supply to new and expanding neighbourhoods.

These NRAs expire at the end of the current 2022-2026 Water PBR term.

2 Financial Performance

Revenues, operating expenses and capital expenditure for each utility are provided in Sections 2.1 to 2.3. To enhance comparability, the PBR forecast and actual amounts for 2022 to 2024 have been restated to reflect the new functional organizational structure described in Section 1. Although the approved amounts for individual functions or cost components may differ, the total approved costs for 2024 and 2022-2024 remain unchanged. Supplemental financial information for each utility to satisfy the Minimum Filing Requirements (MFR) is included in Sections 5.1 to 5.3 of this report.

2.1 In-City Water & Fire Protection

The City of Edmonton regulates water services and fire protection services provided by EWS within the boundaries of the City of Edmonton ("In-City Water"). In addition to these services, EWS provides water services to regional water customers pursuant to a bulk water supply agreement with each regional water customer. Due to the fully integrated nature of EWS' water system, operating expenses, capital expenditures, depreciation and amortization and rate base are presented and analyzed on a total system basis in Sections 2.1.3 to 2.1.5. In-City Water's share of the total system costs is calculated in accordance with a cost of service model developed jointly by EWS, the Regional Water Customers Group (RWCG) and the City of Edmonton, shown as separate line items in each applicable table.

In-City Water's regulated rate revenue and revenue requirements for 2024 and for 2022-2024 are summarized in Table 2.1-1.

Table 2.1-1
In-City Water
Revenue and Revenue Requirements
($ millions)

		A	B	C	D
		2024		2022-2024	
		PBR Forecast	Actual	PBR Forecast	Actual
	Rate revenue				
1	Billed revenue	242.7	277.4	694.0	761.5
2	Less: consumption deferral		(22.5)		(45.7)
3	Regulated rate revenue	242.7	254.9	694.0	715.8
	Revenue requirement				
4	Operations and maintenance expenses	118.1	122.8	345.8	353.8
5	Less: revenue offsets	(6.5)	(8.1)	(19.1)	(18.2)
6	Depreciation and amortization	44.3	43.2	124.5	120.9
7	Return on rate base financed by debt	32.8	36.8	99.7	107.4
8	Return on rate base financed by equity	54.0	60.2	143.0	151.8
9	Revenue requirement	242.7	254.9	694.0	715.8
10	**Return on rate base financed by equity [5]**	**9.51%**	**10.72%**	**8.68%**	**9.36%**

In 2024, In-City Water achieved a rate of return on equity of 10.72% (9.36% for 2022-2024), higher than its forecast rate of return of 9.51% in 2024 (8.68% for 2022-2024). The factors contributing to forecast to actual differences are explained in Sections 2.1.1 to 2.1.5.

2.1.1 Revenue

In-City Water's revenue is derived from the provision of water and fire protection services. The rates for these services include fixed monthly service charges that vary with meter size, variable charges per cubic meter of water consumed, and fixed monthly fire protection charges that vary with meter size and fire flow requirements.

Table 2.1.1-1 provides a comparison of In-City Water's actual revenues to the PBR forecast. This table also includes public and private fire protection revenues. Historically, the costs for public fire protection, including hydrant maintenance and repairs, oversizing of distribution mains and dedicated reservoir storage for fire protection were recovered through property taxes. For the 2022-2026 PBR term, City Council directed EWS to include the recovery of public fire protection revenue requirement through water rates (line 17 of Table 2.1.1-1). Fire protection revenues also include a small amount of private fire protection charges (line 18 of

[5] In the PBR forecast, the special rate adjustment for rebasing is smoothed over the PBR term. Therefore, although EWS' PBR forecast for the 2022-2026 PBR term is based on its awarded rate of return, forecast rates of return for individual years of the PBR will differ from awarded ROE.

Table 2.1.1-1) related to the costs for providing standby fire flow capacity to customers who operate and maintain their own hydrants.

Table 2.1.1-1
In-City Water
Revenue
($ millions)

		A	B	C	D
		2024		2022-2024	
	Description	PBR Forecast	Actual	PBR Forecast	Actual
	Fixed monthly service charges				
1	Residential	45.9	50.1	127.7	133.2
2	Multi-residential	2.8	3.1	7.8	8.4
3	Commercial	8.1	9.0	22.8	24.1
4	Fixed monthly service charges	56.8	62.3	158.3	165.8
	Consumption charges billed to customers				
5	Residential	104.3	124.4	302.7	337.5
6	Multi-residential	31.2	36.6	90.5	100.5
7	Commercial	34.1	37.3	94.9	109.3
8	Consumption charges billed to customers	169.5	198.3	488.1	547.3
	Less: Consumption deferral				
9	Residential	-	(16.3)	-	(26.8)
10	Multi-residential	-	(4.2)	-	(7.4)
11	Commercial	-	(2.1)	-	(11.6)
12	Consumption deferral		(22.5)	-	(45.7)
	Consumption charges, net of deferral				
13	Residential	104.3	108.1	302.7	310.7
14	Multi-residential	31.2	32.4	90.5	93.1
15	Commercial	34.1	35.2	94.9	97.8
16	Consumption charges, net of deferral	169.5	175.8	488.1	501.6
	Fire Protection				
17	Public fire protection	13.4	14.2	39.0	40.3
18	Private fire protection	3.0	2.7	8.7	8.0
19	Fire Protection Charges	16.4	16.9	47.7	48.4
20	**Regulated Revenue**	**242.7**	**254.9**	**694.0**	**715.8**
21	Other revenue (“revenue offsets”)	6.5	8.1	19.1	18.2
22	**In-City Revenue**	**249.2**	**263.0**	**713.2**	**734.0**

In 2024, regulated revenue (line 20) was $12.2 million (5.0%) greater than forecast ($21.8 million or 3.1% greater for 2022-2024). Higher regulated revenue was entirely due to higher than forecast inflation, customer growth and revenues related to the Non-routine adjustments approved for 2024 as explained in Section 1.6. The consumption deferral (lines 9 – 12) offsets the effects of higher than forecast consumption during the PBR term.

Other revenue for 2024 was $1.6 million higher than forecast, primarily due to non-response fees charged to customers who did not respond to EWS’ communications to confirm the installation of either an AMI device or a non-standard meter, and non-standard meter reading charges related to customers who have opted out of installing an AMI meter. The remainder of the variance relates to numerous small items.

Other revenue for the 2022-2024 period was $0.9 million lower than forecast. This is primarily due to Council's direction to make a regulatory adjustment that results in a refund of approximately $1.0 million per year to customers over the 2022-2026 PBR term related to an over-collection of charges for valve casings and service box replacements during the 2017-2021 PBR term. The remainder of the variance relates to numerous small items.

The consumption deferral account balance is included in the determination of regulated revenue for the 2022-2026 PBR term at the direction of City Council (see Section 1.4). The effects of the consumption deferral account on In-City Water for 2022 to 2024 are summarized in Table 2.1.1-2 below, which shows that actual consumption was 5,126 ML greater than forecast in 2022, 8,771 ML greater than forecast in 2023, and 10,360 ML greater than forecast in 2024 resulting in an accumulated consumption deferral account balance, including carrying costs, of $49.3 million. The consumption deferral account balance, together with any adjustments for 2025 and 2026, will be reflected in customer rates over the next PBR term.

Table 2.1.1-2
In-City Water
Consumption Deferral

		A	B	C
	Description	**2022**	**2023**	**2024**
	PBR Forecast Consumption (ML)			
1	Residential	34,391	44,784	44,712
2	Multi-Residential	13,351	17,627	17,595
3	Commercial	16,805	22,677	23,476
4	PBR Forecast Consumption	64,547	85,088	85,784
	Actual Consumption (ML)			
5	Residential	36,336	47,718	51,601
6	Multi-Residential	14,254	18,938	20,048
7	Commercial	19,083	27,203	24,494
8	Actual Consumption	69,673	93,859	96,143
	Consumption Deferral (ML)			
9	Residential	1,945	2,934	6,890
10	Multi-Residential	903	1,311	2,454
11	Commercial	2,278	4,526	1,017
12	Consumption Deferral	5,126	8,771	10,360
	Annual Consumption Deferral ($ millions)			
13	Residential	3.9	6.7	16.3
14	Multi-Residential	1.3	2.0	4.2
15	Commercial	3.0	6.5	2.1
16	**Annual Consumption Deferral**	**8.1**	**15.1**	**22.5**
	Cumulative Deferral ($ millions)			
17	Consumption Deferral, beginning of year	-	8.4	24.5
18	Annual Consumption Deferral	8.1	15.1	22.5
19	Carrying charges	0.3	1.0	2.3
20	**Consumption Deferral, end of year**	**8.4**	**24.5**	**49.3**

2.1.2 Operating Expenses by Function

Table 2.1.2-1 provides a comparison of EWS' total water system operating expenses for 2024 and for 2022-2024. As noted above, the PBR forecast and actual amounts for 2022 to 2024 have been restated to reflect the new functional organizational structure described in Section 1.

Table 2.1.2-1
Water Services Operating Expenses by Function
($ millions)

		A	B	C	D
		2024		2022-2024	
	Function / Sub-function	Forecast	Actual	Forecast	Actual
	Core Operations				
	Water Treatment Plants				
1	Power and other utilities	12.7	10.9	35.5	33.6
2	Chemicals	13.1	9.5	38.4	26.7
3	Operations	8.7	8.6	25.6	25.1
4	Maintenance	11.2	11.1	32.8	31.5
5	Sub-total	45.6	40.1	132.3	116.9
	Water Distribution & Transmission				
6	Operations	8.2	9.4	24.4	28.8
7	Maintenance	12.8	13.2	37.8	36.2
8	Fleet Services	(1.9)	(1.9)	(5.5)	(4.4)
9	Sub-total	19.1	20.7	56.7	60.5
10	Capital Overhead	(9.5)	(7.6)	(27.8)	(22.1)
11	**Core Operations**	**55.2**	**53.2**	**161.2**	**155.2**
12	Integrated Operations	18.9	19.6	56.0	54.7
13	Billing & Meter Services	11.4	11.4	34.6	32.8
14	EWS Shared Services	18.1	19.0	53.3	59.3
15	Corporate Shared Services	14.1	14.8	41.6	42.3
16	Franchise Fees & Property Taxes	19.7	22.5	56.0	61.2
17	**Total Operating Expenses**	**137.4**	**140.5**	**402.6**	**405.6**

Overall, total system operating expenses (line 17) in 2024 were $3.1 million (2.2%) greater than forecast ($3.0 million greater than forecast for 2022-2024).

Explanations for significant variances at the functional level include the following:

Power and other Utilities
$1.7 million lower than forecast for 2024 ($1.9 million lower than forecast for 2022-2024) primarily due to:

- $1.4 million decrease due to lower than forecast Renewable Energy Credits (REC) retired and associated environmental attributes claimed during the year. The REC costs need to be approved before EWS can claim the credits. These credits will be expensed in future periods once they are retired ($1.4 million for 2022-2024).
- $0.3 million decrease due to lower power usage ($1.7 million for 2022-2024).

For 2022-2024, the $3.1 million decrease was partially offset by a $1.5 million increase in power purchase costs due to the delayed regulatory approval of the kīsikāw pīsim solar farm.

Chemicals

$3.6 million lower than forecast for 2024 primarily due to lower chemical (alum, carbon and caustic soda) usage and therefore costs as a result of favourable water quality, partially offset by higher than forecast phosphoric acid costs. This has resulted in a $11.7 million lower than forecast variance over the 2022-2024 PBR term.

WTP Maintenance

$1.3 million lower than forecast for 2022-2024 primarily due to:

- $1.1 million decrease in contractor costs primarily due to EWS negotiating a new contract for maintenance support services with a new vendor at a lower rate.
- $1.0 million decrease in staff costs primarily due to a reduction in the amount of internal labour required to support maintenance activities.
- These decreases were partially offset by a $0.8 million increase in fleet costs, including fuel charges, primarily due to higher fleet utilization for maintenance activities compared to forecast.

Water D&T Operations

$1.3 million greater than forecast for 2024 ($4.4 million greater than forecast for 2022-2024) primarily due to:

- $1.1 million increase in staffing costs primarily due to higher volume of internal labour required to support operational initiatives ($4.4 million increase for 2022-2024). These included higher volume of emergency work related to chambers, hydrants, valves, flushing, etc. to maintain system reliability and service quality.

Water D&T Maintenance

$1.6 million lower than forecast for 2022-2024 primarily due to:

- $1.0 million decrease in expenditures related to frozen services (i.e., a customer connection is frozen/damaged during inclement weather conditions and requires repairs). Frozen services are weather dependent leading to variability in actual costs incurred each year.
- $0.9 million decrease due to fewer utilities locate requests.

Fleet Services

$1.1 million higher than forecast cost due to lower recovery of equipment and fleet charges as a result of higher shops, equipment and fleet costs for 2022-2024.

Capital Overhead

$1.9 million lower than forecast for 2024 due to lower capitalization of overhead charges to capital in 2024 ($5.7 million lower for 2022-2024).

Integrated Operations

$0.7 million greater than forecast for 2024 primarily due to:

- $2.4 million increase related to the reallocation of costs and resources for the One Water Planning group as part of the 2023 functional reorganization. Previously, the full costs for One Water Planning resided within Wastewater Collection; and
- $1.2 million increase in facility costs associated with the Aurum facility, including moving costs, facility maintenance, utilities, rent and storage costs; partially offset by
- $2.8 million decrease in staff and contractor costs in the Quality Assurance and Project Management group as a result of the 2023 functional reorganization.

$1.3 million lower than forecast for 2022-2024 primarily due to:

- $6.2 million decrease in staff costs related to the reallocation of costs and resources for the Project Management and Development & Infill groups as part of the 2023 functional reorganization. These decreases were partially offset by a $3.4 million increase in One Water Planning and a $2.0 million increase in facility costs over the 2022-2024 period.

Billing, Meters, and Customer Service

$1.8 million lower than forecast for 2022-2024 primarily due to lower customer billing and collection charges, partially offset by higher provisions for bad debts due to economic conditions. Customer billing and collection services are provided by EPCOR Energy Alberta LP (“EEA”) through a service level agreement. Customer billing and collection charges reflect costs approved in EEA’s 2023-2025 Non-Energy application approved by the Alberta Utilities Commission (“AUC”).

EWS Shared Services

$0.9 million greater than forecast for 2024 primarily due to a $0.7 million increase in salaries, wages and other compensation.

$6.0 million greater than forecast for 2022-2024 primarily due to:

- Higher salaries, wages and other compensation of $3.4 million;
- Higher supply chain management costs of $2.5 million primarily due to higher than forecast costs for supplies/materials and staff.

Franchise Fees and Property Taxes

$2.8 million greater than forecast for 2024 ($5.2 million greater than forecast for 2022-2024) due to higher than forecast billed revenues. The remainder of the 2024 and 2022-2024 variance results from higher than forecast property tax increases.

2.1.3 Capital Expenditures by Major Project and Category

Table 2.1.3-1 provides a comparison of forecast to actual capital expenditures for 2024 and PBR forecast to EWS' current projection for each project or program with capital expenditures in excess of $5.0 million over the 2022-2026 PBR term.

Table 2.1.3-1
Water Capital Expenditures
($ millions)

		A	B	C	D	E	F	
		2024			2022-2026			
	Major Category and Project	PBR Forecast	Actual	Variance	PBR Forecast	Projection	Variance	Note
	Regulatory							
1	Water Services Replacement and Refurbishment Program	4.2	4.6	0.4	24.7	24.5	(0.2)	
2	Phosphoric Injection for Lead Control	-	0.1	0.1	-	11.7	11.7	1
3	Rossdale Ammonia Upgrades - Conversion to LAS	-	5.5	5.5	-	9.5	9.5	2
4	Projects < $5 million	0.8	-	(0.8)	0.8	0.1	(0.7)	
5	Subtotal	5.0	10.2	5.2	25.5	45.8	20.3	
	Growth/Customer Requirements							
6	Water Service Connections Program	5.7	7.3	1.6	28.4	34.8	6.4	3
7	Network Private Development Transmission Mains Program*	12.6	4.4	(8.2)	61.3	61.1	(0.2)	
8	QEII / 41 Avenue Crossing Project	14.1	-	(14.1)	14.1	-	(14.1)	4
9	New Meter Purchases and Installations Program	2.8	2.9	0.1	13.9	14.0	0.1	
10	Customer Distribution Main Infrastructure Requests	2.2	2.4	0.2	11.2	13.4	2.2	
11	LRT Relocates Program*	4.0	7.8	3.8	18.9	26.1	7.2	5
12	Private Development Construction Coordination Program*	1.9	3.1	1.2	9.7	14.2	4.5	
13	Winterburn Booster Station Project	3.9	0.1	(3.8)	7.2	1.4	(5.8)	6
14	Franchise Agreement Distribution Main Relocations*	2.0	3.5	1.5	14.5	20.1	5.6	7
15	Yellowhead Trail Upgrades / Relocations Project*	6.1	3.9	(2.2)	22.6	27.1	4.5	8
16	Projects < $5 million	0.7	1.3	0.6	4.2	7.8	3.6	
17	Subtotal	56.0	36.7	(19.3)	206.1	220.0	13.9	
	Health, Safety and Environment							
18	kīsikāw pīsim Solar Farm	-	1.0	1.0	-	13.8	13.8	9
19	Battery Energy Storage System	-	0.1	0.1	1.0	6.0	5.0	9
20	Projects < $5 million	1.6	1.7	0.1	10.4	11.0	0.6	
21	Subtotal	1.6	2.8	1.2	11.4	30.8	19.4	
	Reliability and Life Cycle Improvements							
22	Risk Based Distribution Main Renewals	5.8	5.8	0.0	29.0	49.3	20.3	10

		A	B	C	D	E	F	
		2024			2022-2026			
	Major Category and Project	PBR Forecast	Actual	Variance	PBR Forecast	Projection	Variance	Note
23	Water Treatment Plants Flood Protection Project	0.7	14.8	14.1	22.9	65.8	42.9	11
24	Infill Fire Protection Program	4.0	2.0	(2.0)	20.2	14.2	(6.0)	12
25	EL Smith Stage 1 Filter Upgrades Project	3.7	2.5	(1.2)	13.5	15.8	2.3	
26	Obsolete Valve Replacements Program	2.2	2.5	0.3	11.2	12.2	1.0	
27	Transmission Mains and Appurtenances	2.1	5.5	3.4	10.7	15.3	4.6	
28	Reservoir Structural Rehabilitation and Roof Replacement	2.4	3.9	1.5	9.6	4.3	(5.3)	13
29	Vehicle and Fleet Additions Program	1.4	2.0	0.6	7.0	15.0	8.0	14
30	Critical Pipeline Inspection Program	1.4	1.0	(0.4)	6.8	6.4	(0.4)	
31	Obsolete Hydrant Replacements Program	1.2	1.2	0.0	6.0	6.4	0.4	
32	Water Meter Change Outs Program	-	2.3	2.3	5.8	12.3	6.5	15
33	EL Smith 5kV Upgrades & Electrical Room Expansion Project	-	4.6	4.6	5.0	10.3	5.3	16
34	EL Smith HLPH Expansion Project	-	0.3	0.3	5.0	1.1	(3.9)	17
35	Strathcona Twinning (NEW)	-	-	-	-	8.1	8.1	18
36	156 Street Transmission Main Redundancy (NEW)	-	5.4	5.4	-	6.3	6.3	19
37	Projects < $5 million	13.4	19.8	6.4	82.8	85.4	2.6	
38	Subtotal	38.3	73.6	35.3	235.4	328.2	92.8	
	Performance Efficiency and Improvement							
39	Water Main Cathodic Protection Program	3.0	1.3	(1.7)	15.1	12.1	(3.0)	
40	Advanced Metering Infrastructure (AMI) Deployment Project	25.5	31.3	5.8	62.9	74.4	11.5	20
41	Water D&T Facility	-	0.1	0.1	-	17.8	17.8	21
42	Projects < $5 million	0.8	1.1	0.3	5.1	6.3	1.2	
43	Subtotal	29.3	33.8	4.5	83.0	110.6	27.6	
44	**Capital Expenditures**	**130.2**	**157.1**	**26.9**	**561.5**	**735.4**	**173.9**	
	Contributions							
45	Water Service Connections Contributions	(5.7)	(6.0)	(0.3)	(28.4)	(26.2)	2.3	3
46	Customer Infrastructure Requests Contributions	(2.2)	(2.3)	(0.1)	(11.2)	(12.5)	(1.3)	
47	Private Development Construction Coordination Contributions	(0.2)	(0.3)	(0.1)	(1.0)	(1.6)	(0.6)	
48	Solar Power Systems (including BESS) Contributions	-	-	-	(3.6)	(3.1)	0.5	9
49	Water Treatment Plants Flood Protection Contributions	(0.1)	(8.9)	(8.8)	(6.7)	(21.8)	(15.1)	11
50	**Contributions**	(8.2)	(17.4)	(9.2)	(51.0)	(65.3)	(14.2)	
51	**Capital Expenditures, net of Contributions**	**122.0**	**139.7**	**17.7**	**510.4**	**670.1**	**159.7**	

*The 2022-2026 PBR Forecast includes approved NRA capital of $8.6 million for the LRT Relocates Program, $7.2 Million for Franchise Agreement Distribution Main Relocations, $18.9 million for Yellowhead Trail Upgrades/Relocations and $46.3 million for Private Development Transmission Mains Program.

In 2024, capital expenditures, net of contributions, were $17.7 million greater than forecast. Since weather-related delays, scope and design changes, supply chain disruptions and other factors can affect capital expenditures in any single year of the PBR term, capital expenditures are more appropriately assessed over the entire 2022-2026 PBR term.

Over the 2022-2026 PBR term, capital expenditures are projected to be $159.7 million greater than the PBR forecast. Explanations for differences between PBR forecast capital expenditures and EWS' current projection in excess of $2.0 million include:

1. **Phosphoric Injection for Lead Control** – $11.7 million greater than forecast (carry-over project). Although this project was scheduled for completion during the 2017-2021 PBR term, delays related to COVID-19 deferred some work into the 2022-2026 PBR term.

2. **Rossdale Ammonia Upgrades** – $9.5 million greater than forecast (new project). This project provides for the use of liquid ammonium sulphate ("LAS"), rather than aqueous ammonia, to combine with chlorine to form chloramines. This upgrade was advanced to address safety considerations with aqueous ammonia.

3. **Water Services Connections Program** – $6.4 million greater than forecast. This program provides for the construction of new water services for infill developments and redevelopments and for recovery of these costs from private developers. Cost increases reflect requests from developers for larger and more complex service connections (primarily infills) than anticipated in the PBR forecast.

4. **QE II / 41st Avenue Crossing Project** – $14.1 million lower than forecast as this project has been deferred to accommodate higher priority water transmission main projects due to recent failures and to enhance system reliability.

5. **LRT Relocates** – $7.2 million greater than forecast. The PBR forecast was approved before the final approval and funding for the Metro/Capital Line LRT was secured. The City's approved track alignments require EWS to complete more infrastructure relocations than anticipated in the PBR forecast. In 2023, EWS requested approval that the incremental costs associated with this project be treated as a non-routine adjustment in accordance with Bylaw 19626, which was subsequently approved in 2024. The approved non-routine adjustment is included in the PBR forecast.

6. **Winterburn Booster Station Project** – $5.8 million lower than forecast. The acquisition of the Parkland Booster Station from the Capital Region Parkland Water Services Commission in 2021 allowed EWS to enhance its resilience in the Edmonton West Secondary Zone at a lower overall cost instead of building a new booster station.

7. **Franchise Agreement Distribution Main Relocations** – $5.6 million greater than forecast. EWS has experienced higher than forecast hydrant relocation work requests from the City. In 2023, EWS requested approval that the incremental costs associated with this project be

treated as a non-routine adjustment in accordance with Bylaw 19626, which was subsequently approved in 2024. The approved non-routine adjustment is included in the PBR forecast.

8. **Yellowhead Freeway Conversion** – $4.5 million greater than forecast. EWS has received a greater volume of utility relocation requests from the City than anticipated in the PBR forecast. In 2023, EWS requested approval of the incremental costs associated with this project to be treated as a non-routine adjustment in accordance with Bylaw 19626, which was subsequently approved in 2024. The approved non-routine adjustment is included in the PBR forecast.

9. **kīsikāw pīsim Solar Farm and Battery Energy Storage System** – $18.8 million greater than forecast. Longer than anticipated timeframes for regulatory and bylaw approvals resulted in carryover of work from the 2017-2021 PBR term and delayed project completion. The solar farm was not fully commissioned until the end of 2022.

10. **Risk Based Distribution Main Renewals** – $20.3 million greater than forecast. Program spending was decreased in the PBR application from historical averages to accommodate higher priority reliability projects such as the Water Treatment Plants Flood Protection Project. However, a rising trend of multiple failures in localized areas indicate wider reliability concerns such as severe corrosion or system deterioration. As a result, the risk-based renewal program spending has been increased to address these recent concerns.

11. **Water Treatment Plants Flood Protection –** $42.9 million greater than forecast. The scope of this project increased mainly due to the complexity of flood protection infrastructure needed for the two water treatment plants, following more detailed study and review, resulting in higher than forecast costs.

    In addition, the timeline for this project was adjusted to enable greater community consultation and close collaboration with Indigenous communities, fully recognizing the archaeological, historical and cultural significance of the plant sites.

    Cost increases have been partially offset by advancing grant funding from the Federal Disaster Mitigation and Adaptation Fund (DMAF) and the Alberta Community Resilience Program (ACRP) into the current PBR term.

12. **Infill Fire Protection Program** – $6.0 million lower than forecast. During the 2017-2021 PBR term, EWS worked closely with infill developers to develop criteria for funding infill fire protection, to develop forecasts of eligible projects, and to forecast the funding required over the 2022-2026 PBR term. In 2022, EWS' design standards modernization initiative in conjunction with Edmonton Fire Rescue Services and the development community resulted in updated design standards for fire protection to reflect modern building practices. The projected cost of this program has been reduced to reflect the results of the Infill Fire

Protection Assessment program and the standards modernization efforts. This program determines the actual fire flows required and, therefore, the investment required for each infill development based on the proposed building structure, rather than the zoning of the property.

13. **Reservoir Structural Rehabilitation and Roof Replacement** – $5.3 million lower than forecast. The scope of this program has been partially deferred to a future PBR to balance increased capital spending in other higher priority, reliability-driven projects such as the Flood Protection project.

14. **Vehicle and Fleet Additions Program** – $8.0 million greater than forecast mainly due to the need to replace aging fleet units earlier than anticipated.

15. **Water Meter Change-outs Program** – $6.5 million greater than forecast. Scheduled replacements have been advanced to align with the Advanced Metering Infrastructure (AMI) Deployment Project to provide a coordinated customer experience and improve city-wide service levels by supporting a fully integrated operations centre for the water system.

16. **E.L. Smith 5kV Upgrades and Electrical Room Expansion** – $5.3 million greater than forecast. Cost increases reflect additional complexities identified during the design phase of this project.

    Following the electrical equipment failure event at the E.L. Smith Water Treatment Plant (WTP) in January 2024, EWS took further steps to enhance the resiliency of its water system. The following capital upgrades at the E.L. Smith WTP have been completed or are currently in progress to address aging electrical assets and protect assets from flood events:

    a. **Highlift Pumphouse Transformers Replacement** – The replacement of two transformers with functional electrical protection that supplies power to the highlift pumphouse has been completed.

    b. **New 5kV Electrical Building** – Construction of a new 5kV electrical building commenced in May 2024 for replacement of high voltage electrical equipment feeding the highlift pumps. The new building and equipment are planned to be in-service by mid-2025.

    c. **Second Power Feed to E.L. Smith WTP** - Currently, the E.L. Smith WTP has two utility power feeds that are solely fed from a single substation. A redundant power feed from a second substation to E. L. Smith has been planned, with design work starting in fall 2024 and the new power feed expected to be in service by 2027.

    d. **Additional E.L. Smith WTP Highlift Pumphouse** – A conceptual design with three options for a new highlift pumphouse at E.L. Smith WTP that would provide redundancy and pumping capacity has been completed. This additional highlift pumphouse project is under review to be included in the next PBR application.

e. **E.L. Smith WTP Electrical Master Plan** – An Electrical Master Plan for the E.L. Smith WTP has been completed, outlining a path for modernizing existing electrical equipment, considering flood protection for electrical asset resiliency and incorporating future load requirements to increase plant capacity. The plan identifies electrical asset improvements that will be integrated into the long-term plan and strategy to establish two independent treatment trains at the E.L. Smith WTP.

17. **E.L. Smith Highlift Pumphouse (HLPH) Expansion Project** – $3.9 million lower than forecast. Implementation of this project has been extended to the next PBR term to enable EWS to coordinate project delivery with other related projects at the E.L. Smith WTP.

18. **Strathcona Twinning** – $8.1 million greater than forecast (new project). Inspection of a critical transmission main along 92 Avenue NW (the single source of supply to Strathcona County), was unable to proceed in 2024 due to two deficient isolation valves. This project was initiated to ensure continued water service by installing a permanent bypass line, allowing time for valve repairs and enabling isolation of the damaged section. The new line will also enhance future system redundancy. Projected spend for this project is offset by lower spend on the QE II / 41st Avenue Crossing Project.

19. **156 Street Transmission Main Redundancy** – $6.3 million greater than forecast (new project). In 2023, final inspections of a critical transmission main from E.L. Smith to St. Albert identified necessary repairs requiring alternate infrastructure to maintain service. This project addresses that need by installing a smaller, permanent bypass line to enable isolation of the damaged section and provide future redundancy. Projected spend for this project is offset by lower spend on the QE II / 41st Avenue Crossing Project.

20. **AMI Deployment Project** – $11.5 million greater than forecast. The original AMI project scope was expanded to include the replacement of previously deferred water meters. Along with the new Integrated Operations Centre, this change leverages real-time water usage data and leak detection alerts to effectively respond to system needs and to offer an increased level of service across the city.

21. **Water D&T Facility** – $17.8 million greater than forecast (carry-over project). This project was expected to be completed during the 2017-2021 PBR term. The project was delayed due to changes in scope and the need to address higher than expected construction bid costs. This project, now known as the Water/Drainage Shared Facility (Aurum facility) was completed in December 2022.

2.1.4 Depreciation and Amortization

Depreciation expense and amortization of contributed assets for 2024 for Water Services are shown in Table 2.1.4-1 below:

Table 2.1.4-1
Water Services
Depreciation and Amortization
($ millions)

		A	B	C	D
		2024		2022-2024	
		PBR Forecast	Actual	PBR Forecast	Actual
1	Gross depreciation expense	66.6	65.5	188.1	184.2
2	Amortization of contributions	(14.8)	(14.7)	(42.1)	(41.7)
3	Depreciation expense	51.8	50.8	146.0	142.5
4	Gains, losses and adjustments	-	(5.7)	-	(4.5)
5	**Depreciation, net**	**51.8**	**45.2**	**146.0**	**138.0**

Depreciation expense and amortization of contributions (line 5) in 2024 were $6.6 million lower than forecast and $8.0 million lower than forecast for 2022-2024 mainly due to gains related to the Pylypow land sale and higher than forecast construction work in progress.

2.1.5 Return on Rate Base

In the 2022-2026 PBR plan, EWS' In-City rate base is deemed to be financed by a ratio of 60% debt and 40% equity. The return on the debt-financed portion of the rate base is calculated at EWS' forecast average cost of debt, while the return on the equity-financed portion of the rate base is calculated at EWS' approved return on equity (ROE) of 9.64%. In the PBR forecast, the special rate adjustment for rebasing was smoothed over the PBR term to mitigate "rate shock" at the beginning of the PBR term. Therefore, although rates are designed to provide EWS with the opportunity to earn its approved ROE of 9.64% over the 2022-2026 BPR term, forecast rates of return for individual years of the PBR term will differ from awarded ROE. Table 2.1.5-1 shows the calculation of debt and equity returns on rate base for 2024 and the cumulative returns for 2022-2024.

Table 2.1.5-1
In-City Water
Return on Mid-Year Rate Base
($ millions)

		A	B	C	D
Return on Rate Base		2024		2022-2024	
		PBR Forecast	Actual	PBR Forecast	Actual
1	Opening Water rate base	1,595.4	1,607.5		
2	Closing Water rate base	1,663.1	1,626.0		
3	Mid-year Water rate base	1,629.3	1,616.7		
4	In-City Water share - %	87.1%	86.9%		

	Return on Rate Base	A 2024 PBR Forecast	B 2024 Actual	C 2022-2024 PBR Forecast	D 2022-2024 Actual
5	In-City Water share of mid-year rate base	1,418.8	1,404.6		
	Deemed capital structure				
6	Debt	60.00%	60.00%		
7	Equity	40.00%	40.00%		
	Cost Rates				
8	Debt	3.85%	4.37%	4.04%	4.42%
9	Equity	9.51%	10.72%	8.68%	9.36%
10	Weighted Average Cost of Capital (WACC)	6.12%	6.91%	5.89%	6.39%
6	Return on rate base financed by debt	32.8	36.8	99.7	107.4
9	Achieved return on rate base financed by equity	54.0	60.1	143.0	151.8
10	**Return on Mid-year Rate Base**	**86.7**	**97.0**	**242.8**	**259.3**

The return on the debt-financed portion for the rate base (i.e. regulated interest expense, Table 2.1.5-1 line 6) was $4.0 million greater than forecast in 2024 ($7.7 million greater for 2022-2024), because the actual average cost of debt (see Table 2.1.5-2) was 0.52% greater than forecast due to the measures introduced by the Bank of Canada during 2022 and 2023 to curb inflation. Under the terms of the PBR Plan, EWS bears interest rate risk and therefore, higher than forecast debt costs are not borne by ratepayers.

Table 2.1.5-2
Water Services
Interest Expense and Cost of Debt
($ millions)

	Interest Expense and Cost of Debt	A 2024 PBR Forecast	B 2024 Actual
	Interest expense		
1	Interest on long-term debt	36.9	41.2
2	Interest on short-term debt	0.9	2.1
3	Total interest expense	37.8	43.3
	Mid-year debt		
4	Mid-year long-term debt	943.4	988.4
5	Mid-year short-term debt	36.2	1.3
6	Mid-year debt	979.6	989.6
7	**Average cost of debt**	**3.85%**	**4.37%**

In 2024, EWS achieved a ROE of 10.72% (9.36% for 2022-2024), compared to PBR forecast ROE of 9.51% (8.68% for 2022-2024). Higher than forecast rates of return, reflect the approval of the NRA (Section 1.6) and higher customer growth and inflation, resulting in higher than forecast revenues (Section 2.1.1), which more than offset higher than forecast operating expenses (Section 2.1.2) and higher than forecast regulated interest expense.

2.2 Wastewater Treatment

Wastewater Treatment's financial performance for 2024 and 2022-2024 are summarized in Table 2.2-1 below.

Table 2.2-1
Wastewater Treatment
Revenue and Revenue Requirements
($ millions)

		A	B	C	D
		2024		2022-2024	
	Description	PBR Forecast	Actual	PBR Forecast	Actual
	Rate Revenue				
1	Billed revenue	131.8	151.6	383.1	425.1
2	Less: consumption deferral	-	(13.7)	-	(29.1)
3	Regulated rate revenue	131.8	137.9	383.1	396.1
	Revenue requirement				
4	Operations and maintenance expenses	77.3	88.4	225.8	238.9
5	Less: revenue offsets	(7.3)	(9.3)	(20.3)	(24.8)
6	Depreciation and amortization	26.4	28.1	73.5	78.4
7	Return on rate base financed by debt	13.6	13.1	38.2	38.5
8	Return on rate base financed by equity	21.8	17.7	66.0	65.1
9	Revenue requirement	**131.8**	**137.9**	**383.1**	**396.1**
10	**Return on rate base financed by equity***	**9.07%**	**8.20%**	**9.72%**	**10.34%**

* In the PBR forecast, the special rate adjustment for rebasing is smoothed over the PBR term. Therefore, although EWS' PBR forecast for the 2022-2024 PBR term is based on its awarded rate of return, forecast rates of return for individual years of the PBR will differ from awarded ROE.

In 2024, Wastewater Treatment achieved a rate of return on equity of 8.20%, less than its forecast rate of return of 9.07% (2022-2024 actual return of 10.34% compared to its forecast return of 9.72%). The factors contributing to forecast to actual differences are explained in Sections 2.2.1 to 2.2.5.

2.2.1 Revenue

Wastewater Treatment's rates include fixed monthly service charges applied on a per connection basis, consumption charges applied to each cubic metre of consumption and overstrength surcharges applicable to commercial customers subject to overstrength monitoring, whose wastewater includes wastewater constituents in excess of prescribed concentrations. Table 2.2.1-1 provides a comparison of Wastewater Treatment's actual revenues to the PBR forecast.

Table 2.2.1-1
Wastewater Treatment
Revenue
($ millions)

		A	B	C	D
	Wastewater Treatment Revenue	**2024**		**2022-2024**	
		PBR Forecast	**Actual**	**PBR Forecast**	**Actual**
	Fixed monthly service charges				
1	Residential	21.5	22.8	62.3	64.4
2	Multi-residential	0.3	0.3	0.8	0.9
3	Commercial	1.3	1.4	3.8	3.9
4	Fixed monthly service charges	23.1	24.5	67.0	69.2
	Consumption charges billed to customers				
5	Residential	56.5	67.4	165.5	184.4
6	Multi-residential	22.2	26.3	65.1	72.9
7	Commercial	24.5	26.9	69.1	78.8
8	Consumption charges billed to customers	103.2	120.5	299.8	336.1
	Less: Consumption deferral				
9	Residential	-	(8.5)		(14.1)
10	Multi-residential	-	(3.1)		(5.8)
11	Commercial	-	(2.2)		(9.2)
12	Consumption deferral	-	(13.7)		(29.1)
	Consumption charges, net of deferral				
13	Residential	56.5	58.9	165.5	170.3
14	Multi-residential	22.2	23.2	65.1	67.1
15	Commercial	24.5	24.7	69.1	69.6
16	Consumption charges, net of deferral	103.2	106.9	299.8	307.0
17	Overstrength surcharges	5.5	6.6	16.4	19.9
18	**Regulated Revenue**	**131.8**	**137.9**	**383.1**	**396.1**
19	Other revenue (“revenue offsets”)	7.3	9.3	20.3	24.8
20	**Revenue**	**139.1**	**147.2**	**403.5**	**420.8**

Wastewater Treatment’s regulated revenues (row 18) were $6.1 million greater than forecast in 2024 ($12.9 million greater than forecast for 2022-2024). Higher regulated revenue was entirely due to higher than forecast inflation, customer growth and higher volumes of surchargeable matter, since the consumption deferral account balance (lines 9 – 12) offsets the effects of higher than forecast consumption during the PBR term.

In 2024, other revenue was $2.0 million higher than forecast ($4.4 million higher than forecast for 2022-2024) primarily due to the execution of a new biosolids management agreement with Arrow Utilities (formerly Alberta Capital Region Wastewater Commission), resulting in higher than forecast revenues collected from Arrow Utilities. Other revenue includes biosolids management, wastewater “swaps” with Arrow Utilities and other suburban customers, phosphorus sales, late payment charges, and other incidental services.

The consumption deferral account balance is included in the determination of regulated revenue for the 2022-2024 PBR term at the direction of City Council. Pursuant to this direction, the amounts accumulated during the 2022-2024 PBR term will be refunded to customers through a special rate adjustment during the 2025-2027 PBR term. The effects of the consumption deferral

account on Wastewater Treatment for 2022-2024 are summarized in Table 2.2.1-2 below. This table shows that actual consumption was 4,966 ML greater than forecast in 2022, 8,101 ML greater for 2023, and 10,329 greater in 2024, resulting in an accumulated consumption deferral account balance, including carrying costs of $31.4 million. For Wastewater Treatment, EWS commenced the refund of the accumulated consumption deferral balances to ratepayers effective April 1, 2025.

Table 2.2.1-2
Wastewater Treatment
Consumption Deferral

		A	B	C
	Description	**2022**	**2023**	**2024**
	PBR Forecast Consumption ML			
1	Residential	34,378	44,766	44,694
2	Multi-Residential	3,351	17,627	17,595
3	Commercial	14,594	19,825	20,423
4	Total Consumption	62,323	82,218	82,713
	Actual Consumption (ML)			
5	Residential	35,865	47,699	51,107
6	Multi-Residential	14,086	19,020	19,918
7	Commercial	17,338	23,600	22,017
8	Total Consumption	67,289	90,319	93,042
	Consumption Deferral (ML)			
9	Residential	1,487	2,933	6,413
10	Multi-Residential	735	1,393	2,323
11	Commercial	2,744	3,775	1,594
12	Total Consumption	4,966	8,101	10,329
	Annual Consumption Deferral ($ millions)			
13	Residential	1.8	3.8	8.5
14	Multi-Residential	0.9	1.8	3.1
15	Commercial	2.7	4.3	2.2
16	**Annual Consumption Deferral**	**5.5**	**10.0**	**13.7**
	Cumulative Deferral ($ millions)			
17	Consumption Deferral, beginning of year	-	5.6	16.3
18	Annual Consumption Deferral	5.5	10.0	13.7
19	Carrying costs	0.2	0.7	1.5
20	**Consumption Deferral, end of year**	**5.6**	**16.3**	**31.4**

2.2.2 Operating Expenses by Function

Table 2.2.2-1 provides a comparison of Wastewater Treatment operating expenses for 2024 and 2022-2024. As noted in Section 2, the PBR forecast and actual amounts for 2022 to 2024 have been restated to reflect the new functional organizational structure described in Section 1.

Table 2.2.2-1
Wastewater Treatment
Operating Expenses by Function
($ millions)

		A	B	C	D
		2024		2022-2024	
	Function / Sub-Function	Forecast	Actual	Forecast	Actual
	Core Operations				
1	Power and Other Utilities	6.9	5.6	19.3	16.3
2	Chemicals	1.5	1.7	4.5	4.5
3	Wastewater Treatment Plant Operations	6.5	6.8	19.0	19.6
4	Biosolids Management	15.9	19.2	46.0	46.7
5	Monitoring and Compliance	1.8	1.8	5.2	5.4
6	Maintenance	10.6	11.2	31.1	33.0
7	Capital Overhead	(3.4)	(3.4)	(10.0)	(8.3)
8	**Core Operations**	**39.7**	**42.9**	**115.0**	**117.2**
9	Integrated Operations	10.1	10.4	29.5	28.0
10	Billing & Meter Services	5.9	6.9	18.3	20.2
11	EWS Shared Services	5.3	9.1	15.6	21.6
12	Corporate Shared Services	5.4	6.9	16.0	17.7
13	Franchise Fees & Property Taxes	10.9	12.2	31.6	34.3
14	**Total Operating expense**	**77.4**	**88.4**	**226.1**	**239.0**

Overall, Wastewater Treatment's operating expenses (row 14) for 2024 were $11.0 million greater than forecast ($12.9 million greater for 2022-2024). Explanations for significant variances at the functional level include the following:

Power and Other Utilities

$1.3 million lower than forecast for 2024 ($3.0 million lower than forecast for 2022-2024) primarily due to lower power consumption resulting in power costs savings.

Biosolids Management

$3.3 million greater than forecast for 2024 ($0.7 million greater than forecast for 2022-2024) primarily due to higher volumes processed during the year and the utilization of a third-party seasonal dewatering service as a temporarily solution while cost-effective long-term solutions for dewatering are being evaluated, including the long-term feasibility of utilizing a third-party seasonal dewatering service.

Maintenance

$0.6 million greater than forecast for 2024 ($1.9 million greater than forecast for 2022-2024) primarily due to higher requirements for internal labour, materials and contractor costs to support planned and unplanned maintenance activities. The trend of higher maintenance activity

remained consistent throughout the 2022-2024 PBR term. This trend was used to inform the forecast maintenance expenses requested for the 2025-2027 Wastewater PBR Application.

Capital Overhead Recoveries

$1.7 million lower than forecast for 2022-2024 primarily due to lower capitalization of overhead charges to capital as a result of lower than forecast capital expenditures during 2022-2024, refer to Section 2.2.3.

Integrated Operations

$1.5 million lower than forecast for 2022-2024 primarily due to lower staff and related costs as a result of vacancies and reallocation of costs and resources as part of the functional reorganization.

Billing and meter services

$1.0 million greater than forecast for 2024 ($1.9 million greater than forecast for 2022-2024) primarily due to higher than forecast provisions for bad debts due to economic conditions and higher customer billing and collection charges. Customer billing and collection services are provided by EPCOR Energy Alberta LP “EEA” through an agreed upon service level agreement. Customer billing and collection charges reflect costs approved in EEA’s 2023-2025 Non-Energy application approved by the Alberta Utilities Commission (AUC).

EWS Shared Services

$3.8 million greater than forecast for 2024 ($6.0 million great than forecast for 2022-2024) primarily due to:

- Higher supply chain management costs related to an increase in supplies/materials and staff costs of $1.2 million ($1.5 million for 2022-2024);
- Higher salaries, wages and other compensation of $0.7 million ($1.9 million for 2022-2024);
- Higher IT costs related to an increase in infrastructure and licensing fees of $0.7 million ($1.1 million for 2022-2024);
- Higher insurance costs $0.4 million ($0.4 million for 2022-2024); and
- Other minor differences, none of which were individually significant, amounting to $0.8 million ($1.1 million).

Corporate Services

$1.4 million greater than forecast for 2024 ($1.6 million greater than forecast for 2022-2024) primarily due to higher corporate information service costs related to initiatives such as Service Management, Service Desk Transition and the Corporate website, higher corporate asset usage

fees (i.e., Oracle, servers, etc.), higher communications and public engagement costs and higher at-risk compensation.

Franchise Fees and Property Taxes

$1.3 million greater than forecast for 2024 ($2.6 million greater than forecast for 2022-2024) primarily due to higher than forecast billed revenues.

2.2.3 Capital Expenditures by Major Project and Category

Table 2.2.3-1 provides a comparison of forecast to actual capital expenditures for 2024 and 2022-2024 PBR term for each project or program with capital expenditures in excess of $5.0 million.

Table 2.2.3-1
Wastewater Treatment
Capital Expenditures
($ millions)

		A	B	C	D	E	F	
		2024			2022-2024			
	Major Category and Project	PBR Forecast	Actual	Variance	PBR Forecast	Actuals	Variance	Note
	Health, Safety and Environment							
1	Maintenance Hygiene Improvements	-	0.2	0.2	-	6.9	6.9	1
2	Projects < $5 million	0.4	0.8	0.4	0.8	2.4	1.6	
3	Sub-total	0.4	1.0	0.6	0.8	9.3	8.5	
	Regulatory							
4	Odour Control Improvements	2.3	1.3	(1.0)	5.6	1.9	(3.7)	2
5	Projects < $5 million	-	(0.4)	(0.4)	-	0.3	0.3	
6	Sub-total	2.3	0.9	(1.4)	5.6	2.2	(3.4)	
	Growth/Customer Requirements							
7	Projects < $5 million	0.8	0.5	(0.3)	5.5	4.5	(1.0)	
	Reliability and Life Cycle Improvements							
8	Digester 4 Upgrades Project	6.2	8.4	2.2	13.4	17.1	3.7	3
9	Utility Rack West	-	1.4	1.4	-	1.8	1.8	
10	Square 1 Biogas System Upgrade	-	3.3	3.3	-	11.4	11.4	4
11	Primary Effluent Channel Upgrades Project	6.5	7.3	0.8	17.0	8.6	(8.4)	5
12	Aux Control Room E-House (EB-1)	3.1	1.2	(2.0)	11.2	2.2	(9.0)	6
13	600v Electrical Building (EB-2)	3.7	0.1	(3.6)	11.8	0.9	(10.9)	6
14	Clover Bar Dewatering Facility	4.1	0.0	(4.1)	38.4	0.5	(37.9)	7
15	EPT Scrubber Upgrades	-	1.0	1.0	-	17.3	17.3	8
16	Expand Flare Capacity	2.9	1.2	(1.7)	8.0	1.8	(6.2)	9
17	Projects < $5 million	10.7	24.6	13.9	41.5	64.5	23.0	11
18	Sub-total	37.2	48.5	11.3	141.4	126.1	(15.3)	
	Performance Efficiency and Improvement							
19	Secondary Aeration Blower Upgrades	1.6	0.9	(0.7)	8.0	2.0	(6.0)	10
20	Laboratory Facility Consolidation	0.0	5.2	5.2	5.9	5.9	0.0	
21	Projects < $5 million	1.2	1.8	0.6	4.5	7.3	2.8	11
22	Sub-total	2.8	7.9	5.1	18.4	15.2	(3.0)	
23	**Capital Expenditures, net of Contributions**	**43.6**	**58.8**	**15.2**	**171.7**	**157.3**	**(14.4)**	

In 2024, capital expenditures, net of contributions were $15.2 million greater than forecast. Since weather-related delays, scope and design changes, supply chain disruptions and other factors can affect capital expenditures in any single year of the PBR term, capital expenditures are more appropriately assessed over the entire 2022-2024 PBR term.

Over the 2022-2024 PBR term, capital expenditures were $14.4 million lower than the PBR forecast. Explanations for projects and programs with actual costs that were $2.0 million greater or lower than the PBR forecast are provided below:

1. **Maintenance Hygiene Improvements** – $6.9 million greater than forecast (carry-over project). Although this project was originally planned to be completed by the end of 2021, extensive stakeholder consultation related to the Gold Bar Integrated Resource Plan (IRP), resulted in significant scope adjustments to the project, delaying project completion and increasing project costs.

2. **Odour Control Improvements** – $3.7 million lower than forecast primarily due to complexities identified during the design phase resulting in the delay of the project to the next PBR period (2025-2027).

3. **Digester 4 Upgrades Project** – $3.7 million greater than forecast. The increase is primarily due to higher construction material prices and inflation. Work on the Digester 4 project was delayed due to leak issues experienced during the completion of the Digester 3 Upgrades project, and the shutdown of Digester 5 due to structural concerns. EWS determined that completing Digester 3 before commencing Digester 4 increased operational capacity and reliability.

4. **Square 1 Biogas System Upgrade** – $11.4 million greater than forecast (carry-over project). This project was partially deferred from the 2017-2021 PBR term to the 2022-2024 PBR term due to a revision in the engineering solution to relocate new gas mixing compressors to a separate enclosure. Project costs increased primarily due to higher than forecast construction and process equipment supply costs.

5. **Primary Effluent Channel Upgrades Project** – $8.4 million lower than forecast. Project completion has been delayed into the next PBR term (2025-2027) because of the additional design and engineering work needed to address the complexities and risks associated with the project.

6. **Auxiliary Control Room E-House (EB-1) and 600v Electrical Building (EB-2)** – $19.9 million lower than forecast. During the detailed design phase, EWS identified challenges in commissioning and transferring electrical loads while minimizing operational disruptions. To overcome this, additional planning to address the complexities was required, resulting in the delay of these projects to the next PBR period (2025-2027).

7. **Clover Bar Biosolids Dewatering Facility** – $37.9 million lower than forecast. The dewatering facility project has been deferred due to the project cost estimate being higher than the originally forecast cost. EWS is conducting a comprehensive review and assessment of cost-effective alternatives, including the long-term feasibility of utilizing a third-party seasonal dewatering service, which is serving as a temporary solution while the current facility is shut down. As a result, the project will be reassessed in the future.

8. **Enhanced Primary Treatment (EPT) Scrubber Upgrades** – $17.3 million greater than forecast (carry-over project). The EPT Scrubber Upgrades project was originally part of the Site HVAC Rehabilitation project to be completed in 2021 at a total cost of $9.5 million. During the design phase of the Site HVAC project, the EPT Scrubber Upgrades project was identified and set up as a standalone project. The EPT Scrubber Upgrades project was subsequently delayed and commissioned in 2023 with trailing costs incurred in 2024. The increased cost is primarily due to a combination of project scope and design refinements, and a general increase in costs related to market conditions.

9. **Expand Flare Capacity** – $6.2 million lower than forecast. Implementation of this project has been deferred to the next PBR term (2025-2027) to address other critical projects approved in the 2022-2024 PBR.

10. **Secondary Aeration Blower Upgrades** – $6.0 million lower than forecast. This project encountered several design and engineering issues, extending design completion, requiring its delay into the next PBR term (2025-2027).

11. **Projects < $5 million** – $25.8 million greater than forecast. Explanations for the larger projects with variance in excess of $2 million include:

    a. Gold Bar Building Pipe Racks – $3.7 million higher than forecast due to cost increases for a failed section of pipe requiring immediate remediation. This was an emergency project and was not included in the 2022-2024 forecast.

    b. Gold Bar Operation Center – $3.6 million higher than forecast primarily due to scope changes and higher costs due to project delays as a result of protracted stakeholder engagement requirements.

    c. Gold Bar Loop 5 Rehab and Upgrade – This $3.2 million project was advanced to meet operational heating requirements as the equipment had reached the end of its useful life. The project was completed in 2023.

    The remainder of the variances are attributed to several smaller projects, none of which were individually significant or exceeding the $2.0 million variance threshold.

2.2.4 Depreciation and Amortization

Wastewater Treatment's depreciation expense and amortization of contributed assets for 2024 are shown in Table 2.2.4-1 below:

Table 2.2.4-1
Wastewater Treatment Depreciation and Amortization
($ millions)

	A	B	C	D
	2024		2022-2024	
	PBR Forecast	Actual	PBR Forecast	Actual
1 Gross depreciation expense	27.4	28.4	76.3	78.7
2 Amortization of contributions	(0.9)	(0.9)	(2.8)	(2.8)
3 Loss on disposal and other write offs		0.6		2.5
4 **Depreciation, net**	**26.4**	**28.1**	**73.5**	**78.4**

In 2024, depreciation expense was greater than forecast primarily due to:

- The completion of a number of capital projects with shorter expected useful lives, resulting in higher effective depreciation; and
- Write-off of the work in progress on the Clover Bar Cell 3W Redevelopment project as this project is not expected to be completed in the next 10 years due to related infrastructure repairs required ahead of this work.

2.2.5 Return on Rate Base

In 2024, Wastewater Treatment's return on equity, shown in Table 2.2.5-1, was $4.1 million lower than forecast ($0.9 million lower than forecast for 2022-2024) resulting in a return on equity of 8.20% in 2024. The decrease in return on equity was primarily attributed to higher than forecast operating costs and depreciation expense incurred in 2024.

Table 2.2.5-1
Wastewater Treatment Return on Rate Base
($ millions)

	A	B	C	D
Return on Rate Base	2024		2022-2024	
	PBR Forecast	Actual	PBR Forecast	Actual
1 Mid-year Rate Base	600.8	538.4		
2 Deemed Capital Structure				
3 Debt (%)	60.00%	60.00%		
4 Equity (%)	40.00%	40.00%		
5 Cost of Capital				
6 Cost of Debt	3.77%	4.05%	3.75%	4.07%
7 Cost of Equity	9.07%	8.20%	9.72%	10.34%

8	Weighted Average Cost of Capital (WACC)	5.89%	5.71%	6.14%	6.58%
9	Return on Mid-Year Rate Base				
10	Return on Rate Base Financed by Debt	13.6	13.1	38.2	38.5
11	Return on Rate Base Financed by Equity	21.8	17.7	66.0	65.1
12	**Return on Mid-year Rate Base**	**35.4**	**30.7**	**104.2**	**103.5**

Wastewater Treatment's weighted average cost of debt is shown in Table 2.2.5-2. The embedded cost of debt was higher in 2024 due to higher than forecast interest rates on new debt issues related to the Bank of Canada's rate hikes during 2022 and 2023 to curb inflation. Under the PBR Plan, EWS bears interest rate risk and therefore, higher than forecast debt costs are not borne by ratepayers.

Table 2.2.5-2
Wastewater Treatment Interest Expense and Cost of Debt
($ millions)

		A	B
	Interest Expense and Cost of Debt	**2024**	
		PBR Forecast	**Actual**
1	Interest Expense		
2	Interest on short-term debt	0.8	0.1
3	Interest on intercompany debentures	13.9	14.2
4	Total Interest expense	14.7	14.3
5	Mid-year debt and other long-term liabilities		
6	Mid-Year Short-term debt	33.2	8.9
7	Mid-Year Long-term debt	355.8	344.9
8	Total Mid-year debt and other long-term liabilities	389.0	353.9
9	**Embedded cost of Debt**	**3.77%**	**4.05%**

2.3 Wastewater Collection

EWS provides wastewater collection services, including both sanitary utility and stormwater utility services within the boundaries of the City of Edmonton. These services are regulated by the City of Edmonton pursuant to the PBR Plan for 2022-2024 prescribed in Drainage Services and Wastewater Treatment Bylaw 19627.

Wastewater Collection's regulated rate revenue and revenue requirements for 2024 and for 2022-2024 are summarized in Table 2.3-1 below.

Table 2.3-1
Wastewater Collection
Revenue and Revenue Requirement
($ millions)

		A	B	C	D
		2024		2022-2024	
		PBR Forecast	Actual	PBR Forecast	Actual
	Rate revenue				
1	Billed revenue	273.6	278.2	761.2	768.5
2	Less: consumption deferral	-	(14.5)	-	(31.1)
3	Regulated rate revenue	273.6	278.2	761.2	768.5
	Revenue requirement				
4	Operations and maintenance expenses	121.0	128.8	360.9	381.3
5	Less: revenue offsets	(5.3)	(6.6)	(16.9)	(19.2)
6	Depreciation and amortization	51.1	46.8	139.1	128.4
7	Return on rate base financed by debt	40.6	48.9	111.4	125.6
8	Return on rate base financed by equity	66.3	60.3	166.7	152.3
9	Revenue requirement	273.6	278.2	761.2	768.5
10	**Rate of return on rate base financed by equity***	**7.77%**	**7.32%**	**7.19%**	**6.74%**

* In the PBR forecast, the special rate adjustment for rebasing is smoothed over the PBR term to mitigate "rate shock" at the beginning of the PBR term. Therefore, although EWS' PBR forecast for the 2022-2024 PBR term is based on achieving a fair rate of return of 9.95% by 2026, PBR forecast rates of return for individual years of the PBR will differ from awarded ROE.

In 2024, Wastewater Collection achieved a rate of return on equity of 7.32%, less than the forecast rate of return of 7.77% (2022-2024 actual return of 6.74% compared to its forecast return of 7.19%). The factors contributing to the forecast to actual differences are explained in Sections 2.3.1 to 2.3.5.

2.3.1 Revenue

Wastewater Collection's regulated revenues are derived from the provision of sanitary utility and stormwater utility services. Sanitary utility rates include flat monthly charges that vary with meter size and variable monthly charges per cubic metre of monthly metered water consumption. Monthly stormwater charges for each customer are calculated as the product of the stormwater utility rate, the area of the premises measured in square metres, its

development intensity factor, and its runoff coefficient based on zoning. Wastewater Collection's forecast and actual revenues for 2024 and 2022-2024 are summarized in Table 2.3.1-1.

Table 2.3.1-1
Wastewater Collection
Revenue
($ millions)

		A	B	C	D
		2024		2022-2024	
	Description	PBR Forecast	Actual	PBR Forecast	Actual
	Sanitary Utility				
	Flat monthly charges				
1	Residential	39.2	40.9	112.9	115.5
2	Multi-residential:	2.5	2.7	7.3	7.6
3	Commercial	6.4	6.8	18.6	19.1
4	Flat monthly charges	48.1	50.5	138.7	142.2
	Variable monthly charges billed				
5	Residential	60.9	71.9	172.2	191.6
6	Multi-residential	23.9	28.1	67.7	75.6
7	Commercial	26.7	29.2	72.6	82.9
8	Variable monthly charges billed	111.5	129.1	312.5	350.1
	Consumption deferral				
9	Residential	-	(9.1)	-	(14.8)
10	Multi-residential	-	(3.3)	-	(6.0)
11	Commercial	-	(2.1)	-	(10.3)
12	Consumption deferral	-	(14.5)	-	(31.1)
	Variable monthly charge revenue				
13	Residential	60.9	62.8	172.2	176.8
14	Multi-residential	23.9	24.8	67.7	69.5
15	Commercial	26.7	27.1	72.6	72.7
16	Variable monthly charge revenue	111.5	114.6	312.5	319.0
	Total				
17	Residential	100.0	103.7	285.1	292.3
18	Multi-Residential	26.4	27.5	75.0	77.1
19	Commercial	33.1	33.9	91.1	91.8
20	**Sanitary Utility regulated revenue**	**159.5**	**165.1**	**451.2**	**461.2**
	Stormwater Utility				
21	Residential	60.5	59.7	164.3	162.9
22	Multi-residential	6.2	6.6	17.0	18.1
23	Commercial	47.4	46.9	128.7	126.3
24	**Stormwater Utility regulated revenue**	114.1	113.1	310.0	307.3
25	**Wastewater Collection Regulated Revenue**	**273.6**	**278.2**	**761.2**	**768.5**
26	Other revenue ("revenue offsets")	5.3	6.6	16.9	19.2
27	**Wastewater Collection Revenue**	**278.9**	**284.8**	**778.1**	**787.7**

In 2024, Wastewater Collection's regulated revenue (line 25) was $4.6 million greater than forecast ($7.3 million greater than forecast for 2022-2024). Since the consumption deferral account balance (lines 9-12) offsets the effects of higher than forecast consumption during the PBR term, higher regulated revenue was entirely due to higher than forecast inflation and higher customer counts.

In 2024, other revenue was $1.3 million greater than forecast ($2.3 million greater than forecast for 2022-2024), primarily due to higher than forecast monitoring and compliance revenues related to processing waste from transfer stations.

The consumption deferral account balance is included in the determination of regulated revenue for the 2022-2024 PBR term at the direction of City Council. Pursuant to this direction, the amounts accumulated during the 2022-2024 PBR term will be refunded to customers through a special rate adjustment during the 2025-2027 PBR term. The effects of the consumption deferral on Wastewater Collection for 2022 to 2024 are summarized in Table 2.3.1-2 below. This table shows that actual consumption was 4,958 ML greater than forecast in 2022, 8,100 ML greater than forecast in 2023, and 10,315 ML greater in 2024, resulting in an accumulated deferral account balance, including carrying costs of $33.1 million. For Wastewater Collection, EWS commenced the refund of the accumulated consumption deferral balances to ratepayers effective April 1, 2025.

Table 2.3.1-2
Wastewater Collection
Consumption Deferral

		A	B	C
		2022	**2023**	**2024**
	PBR Forecast Consumption (ML)			
1	Residential	34,378	44,766	44,694
2	Multi-Residential	13,351	17,627	17,595
3	Commercial	14,590	19,825	20,423
4	PBR Forecast Consumption	62,319	82,218	82,713
	Actual Consumption (ML)			
5	Residential	35,865	47,699	51,109
6	Multi-Residential	14,085	19,020	19,913
7	Commercial	17,327	23,599	22,006
8	Actual Consumption	67,277	90,318	93,028
	Actual Consumption greater than forecast (ML)			
9	Residential	1,487	2,933	6,415
10	Multi-Residential	734	1,393	2,318
11	Commercial	2,736	3,774	1,583
12	Consumption Deferral	4,958	8,100	10,315
	Annual Consumption Deferral ($ millions)			
13	Residential	1.9	3.8	9.1
14	Multi-Residential	0.9	1.8	3.3
15	Commercial	3.3	4.8	2.1
16	**Annual Consumption Deferral**	**6.1**	**10.4**	**14.5**
	Cumulative Deferral ($ millions)			
17	Consumption Deferral, beginning of year	-	6.3	17.4
18	Annual Consumption Deferral	6.1	10.4	14.5
19	Carrying charges	0.2	0.7	1.2
20	**Consumption Deferral, end of year**	**6.3**	**17.4**	**33.1**

2.3.2 Operating Expenses by Function

Table 2.3.2-1 provides a comparison of Wastewater Collection's operating expenses for 2024 and for 2022-2024. As noted in Section 2, the PBR forecast and actual amounts for 2022 to 2024 have been restated to reflect the new functional organizational structure described in Section 1.

Table 2.3.2-1
Wastewater Collection
Operating Expenses by Function
($ millions)

		A	B	C	D
		2024		2022-2024	
	Function / Sub-function	Forecast	Actual	Forecast	Actual
	Core Operations				
1	Operations	5.7	5.7	20.7	24.8
2	Operations Support	3.9	7.6	11.4	18.0
3	Flow Control	16.7	12.3	49.0	38.3
4	Maintenance	20.7	20.1	61.6	60.4
5	Construction	0.8	3.6	2.3	7.6
6	Capital Overhead	(4.1)	(5.8)	(12.0)	(18.0)
7	**Core Operations**	**43.6**	**43.5**	**133.1**	**131.1**
8	Integrated Operations	16.6	17.8	49.5	54.3
9	Billing & Meter Services	7.5	9.0	22.9	26.3
10	EWS Shared Services	23.3	24.3	68.7	72.4
11	Corporate Shared Services	17.0	19.9	49.8	57.5
12	Franchise Fees and Property Taxes	13.1	14.3	36.9	39.7
13	**Operating Expenses**	**121.0**	**128.8**	**360.9**	**381.3**

Total operating expenses in 2024 were $7.8 million greater than forecast ($20.4 million greater than forecast for 2022-2024). Explanations for significant variances at the functional level include the following:

Operations

$4.1 million greater than forecast for 2022-2024 primarily due to:

- $3.7 million increase in staff costs primarily due to the reallocation of resources between Operations, Operations Support, Flow Control, Maintenance and Construction as part of the functional reorganization in 2023;
- $3.6 million increase in contractor and consultant costs due to higher than forecast trunk cleaning work; and
- $0.7 million increase in fleet and equipment costs primarily due to higher than forecast vehicle maintenance costs, partially offset by
- $2.1 million decrease in chemical costs primarily due to lower chemical usage related to the Corrosion and Odour Reduction (CORe) program;
- $1.0 million decrease in biosolid program costs due to the transfer of the program to Wastewater Treatment in 2022; and

- $1.0 million decrease in materials and supply costs related to the CORe program.

Operations Support

$3.7 million greater than forecast for 2024 ($6.6 million greater than forecast for 2022- 2024) primarily due to:

- $3.2 million increase in contractor costs related to trunk cleaning, culvert and ditch work ($3.1 million increase for 2022-2024); and
- $1.0 million increase in staff costs primarily due to the reallocation of resources between Operations, Operations Support, Flow Control, Maintenance and Construction as part of the functional reorganization in 2023 ($4.4 million increase for 2022-2024), partially offset by
- $0.3 million increase in higher than forecast capitalization of staff costs ($0.9 million increase for 2022-2024).

Flow Control

$4.4 million lower than forecast for 2024 ($10.7 million lower than forecast for 2022-2024) primarily due to:

- $3.4 million decrease in staff costs primarily due to the reallocation of resources between Operations, Operations Support, Flow Control, Maintenance and Construction as part of the functional reorganization in 2023 ($8.8 million decrease for 2022-2024); and
- $1.9 million decrease in the backwater valve subsidy program costs due to lower than forecasted participation ($5.4 million decrease for 2022-2024), partially offset by
- $0.5 million increase due to higher materials and supplies costs for pumpstation rebuilds ($1.1 million increase for 2022-2024); and
- $0.5 million increase in fleet and equipment costs primarily due to higher than forecast vehicle maintenance costs ($1.7 increase for 2022-2024).

Maintenance

$0.5 million lower than forecast for 2024 ($1.2 million lower than forecast for 2022-2024) primarily due to:

- $1.4 million decrease in contractor costs due to lower line locates charged to Maintenance. Line locate costs were recorded under the Construction group ($4.7 million lower than forecast for 2022-2024);
- $0.6 million decrease primarily due to call centre support costs transferred from Maintenance and recorded under the Billings and Meter Services category as part of the functional reorganization in 2023; and
- $0.4 million decrease in staff costs primarily due to the reallocation of resources between Operations, Operations Support, Flow Control, Maintenance and

Construction as part of the functional reorganization in 2023 ($1.9 million decrease for 2022-2024), partially offset by

- $1.3 million increase in fleet and vehicle utilization ($2.0 million increase for 2022-2024).

Construction

$2.8 million greater than forecast for 2024 ($5.3 million greater than forecast for 2022-2024) primarily due to:

- $2.3 million increase in fleet and equipment costs primarily due to higher than forecast work completed by internal staff and higher vehicle maintenance costs ($3.3 million increase for 2022-2024); and
- $1.4 million increase in contractor costs due to line locates ($4.8 million increase for 2022-2024). Line locate costs were originally forecasted in the PBR Application under the Maintenance group, partially offset by
- $0.9 million decrease in staff costs primarily due to the reallocation of resources between Operations, Operations Support, Flow Control, Maintenance and Construction as part of the functional reorganization in 2023 ($2.2 million for 2022-2024).

Capital Overhead

$1.7 million greater than forecast for 2024 ($6.0 million greater than forecast for 2022-2024) primarily due to actuals being recorded based on actual activity levels of Wastewater Collection. The capital overhead pool for the 2024 forecast was based on a high-level approach due to the limited availability of historical information at the time of preparing the 2022-2024 PBR Application. As the Wastewater Collection utility was transferred from the City to EPCOR at the end of 2017, and the forecast for the 2022-2024 PBR was prepared during mid-2020, the forecast reflected the use of a high-level approach for determining capital overhead.

Integrated Operations

$1.2 million greater than forecast for 2024 ($4.9 million greater than forecast for 2022-2024) primarily due to:

- $4.5 million increase primarily due to costs associated with Controls & Automation, Customer Service and Development and Infill groups being allocated to Wastewater Collection as part of the functional reorganization in 2023. Previously, costs for these functions were embedded within Water Services ($5.6 million increase for 2022-2024);
- $0.3 million increase in contractor costs supporting the integrated engineering function, partially offset by

- $3.7 million decrease in costs associated with the One Water Planning function, with costs for One Water Planning allocated to Water and Wastewater Treatment Services as part of the functional reorganization ($1.0 million decrease for 2022-2024).

Billings and Meter Services

$1.5 million greater than forecast for 2024 ($3.4 million greater than forecast for 2022-2024) primarily due to higher than forecast provisions for bad debts due to economic conditions and higher customer billing and collection charges. Customer billing and collection services are provided by EPCOR Energy Alberta LP “EEA” through a service level agreement. Customer billing and collection charges reflect costs approved in EEA’s 2023-2025 Non-Energy application approved by the Alberta Utilities Commission (AUC).

EWS Shared Services

$1.0 million greater than forecast for 2024 primarily due to a $3.1 million increase in salaries, wages and other compensation; partially offset by a $1.8 million decrease due to lower than forecast staff costs in Communications & Public Engagement, Health, Safety & Environment and Technical Training groups.

$3.7 million greater than forecast for 2022-2024 primarily due to:

- Higher salaries, wages and other compensation of $5.6 million; and
- Higher IT costs relating to increase in infrastructure and licensing fees of $1.0 million, partially offset by
- Lower contractor costs of $1.2 million related to safety and medical testing in the Health, Safety and Environment group;
- Lower contractor costs of $1.3 million within the Public and Government Affairs group related to deferred advertising projects and changes in stakeholder support requirements; and
- Minor other items amounting to $0.4 million.

Corporate Shared Services

$2.9 million greater than forecast for 2024 ($7.6 million greater than forecast for 2022-2024) primarily due to higher corporate information service costs related to initiatives such as Service Management, Service Desk Transition and the Corporate website, higher corporate asset usage fees (i.e., Oracle, servers, etc.), higher communications and public engagement costs and higher at-risk compensation.

Franchise Fees and Property Taxes

$1.2 million greater than forecast for 2024 primarily due to higher franchise fees resulting from higher billed revenue ($2.8 million higher than forecast for 2022-2024).

2.3.3 Capital Expenditures by Major Project and Category

Table 2.3.3-1 provides a comparison of forecast to actual capital expenditures for 2024 and 2022-2024 PBR term for each project or program with capital expenditures in excess of $10.0 million.

Table 2.3.3-1
Wastewater Collection
Capital Expenditures and Contributions
($ millions)

		A	B	C	D	E	F	
		2024			2022-2024			
	Major Category and Project	PBR Forecast	Actual	Variance	PBR Forecast	Actual	Variance	Note
1	Drainage Neighbourhood Renewal Program	27.3	17.8	(9.5)	76.5	52.5	(24.0)	1
	Drainage System Expansion							
2	Private Development Construction Coordination	3.8	5.0	1.2	11.6	14.2	2.6	
3	Service Connections Program	6.0	6.9	0.9	18.5	22.7	4.2	
4	Projects < $10 million	9.7	7.9	(1.8)	27.5	27.8	0.3	
5	Sub-total	19.6	19.8	0.2	57.6	64.7	7.0	
	Drainage System Rehabilitation							
6	Proactive Service Renewal	5.3	5.1	(0.2)	10.3	7.7	(2.6)	
7	Drill Drop Manholes Program	4.3	7.1	2.8	13.1	22.7	9.6	2
8	Pump Station Rehabilitation Program	6.6	8.2	1.6	15.5	14.4	(1.1)	
9	Fleet & Vehicles Program	5.1	3.4	(1.7)	13.2	10.2	(3.0)	
10	Small Trunk Rehabilitation Program	13.4	8.0	(5.4)	18.8	12.4	(6.3)	
11	High Priority Replacement Program	17.7	19.9	2.2	52.1	68.5	16.3	3
12	Outfall Rehabilitation	2.2	4.1	1.9	8.2	13.4	5.2	
13	Local Sewer Rehabilitation	1.8	2.3	0.5	5.4	7.6	2.2	
14	Arterial Roadway	3.1	2.8	(0.3)	8.6	9.4	0.8	
15	Projects < $10 million	4.6	11.5	6.9	20.8	30.4	9.7	4
16	Sub-total	64.1	72.4	8.3	166.0	196.8	30.8	
	Flood Mitigation							
17	Dry Pond Program	9.7	0.2	(9.5)	46.3	27.3	(19.0)	5
18	Projects < $10 million	-	-	-	1.4	1.0	(0.4)	
19	Sub-total	9.7	0.2	(9.5)	47.7	28.3	(19.4)	
20	Real Estate	-	-	-	-	26.8	26.8	6
	SIRP							
21	Dry Pond Program	33.0	19.4	(13.6)	81.5	28.3	(53.2)	5
22	Low Impact Development (LID) Program	29.5	17.8	(11.7)	53.1	48.1	(5.0)	
23	Proactive Manhole Relining Program	6.4	7.3	0.9	18.7	19.1	0.4	
24	Proactive Pipe Relining Program	7.8	10.4	2.6	22.9	18.0	(4.9)	
25	Projects < $10 million	17.0	9.5	(7.5)	57.2	34.1	(23.1)	7
26	Sub-total	93.6	64.4	(29.2)	233.3	147.6	(85.8)	
	SSSF							

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		A	B	C	D	E	F	
		2024			2022-2024			
	Major Category and Project	PBR Forecast	Actual	Variance	PBR Forecast	Actual	Variance	Note
27	SW5	16.3	-	(16.3)	32.8	(0.4)	(33.2)	8
28	Projects < $10 million	0.2	0.1	(0.1)	5.8	11.4	5.6	
29	Sub-total	16.5	0.1	(16.4)	38.6	11.0	(27.6)	
	CORe							
30	Large Trunk Renewal Program	25.3	21.8	(3.5)	79.0	64.8	(14.1)	9
31	CORe Duggan Tunnel Project	25.4	29.9	4.5	56.3	62.1	5.9	
32	CORe Drop Structure Modification Program	7.0	7.1	0.1	22.0	22.2	0.2	
33	CORe Access Manhole Program	6.7	6.6	(0.1)	17.9	22.8	4.9	
34	Projects < $10 million	0.8	0.7	(0.1)	5.3	4.4	(0.9)	
35	Sub-total	65.2	66.1	0.9	180.4	176.3	(4.1)	
36	LRT Relocates Program	13.8	8.2	(5.6)	48.5	59.6	11.1	10
37	**Capital Expenditures**	309.7	249.0	(60.7)	848.7	763.6	(85.1)	
	Contributions							
	Drainage System Expansion							
38	Service Connections Program	(6.0)	(6.0)	0.0	(18.5)	(13.6)	4.9	
39	Private Development Construction Coordination	-	(0.4)	(0.4)	(0.3)	(1.6)	(1.3)	
40	Projects < $10 million	-	-	-	-	0.1	0.1	
41	Sub-total	(6.0)	(6.4)	(0.4)	(18.8)	(15.1)	3.7	
	Flood Mitigation							
42	Dry Pond Program	(2.6)	-	2.6	(13.6)	(10.2)	3.4	5
	SIRP							
43	Dry Pond Program	(6.4)	(26.0)	(19.6)	(21.0)	(29.0)	(8.0)	5
44	Projects < $10 million	(0.5)	(2.6)	(2.1)	(6.7)	(3.8)	2.9	
45	Sub-total	(6.9)	(28.6)	(21.7)	(27.8)	(32.8)	(5.0)	
	SSSF							
46	SW5	(16.3)	-	16.3	(32.8)	0.4	33.2	8
47	Projects < $10 million	1.3	(0.1)	(1.4)	(1.3)	(8.3)	(6.9)	
48	Sub-total	(15.0)	(0.1)	14.9	(34.1)	(7.9)	26.3	
49	**Contributions**	(30.5)	(35.1)	(4.6)	(94.3)	(65.9)	28.4	
50	**Capital Expenditures, net of Contributions**	**279.3**	**213.9**	**(65.4)**	**754.3**	**697.7**	**(56.7)**	

In 2024, capital expenditures, net of contributions, were $65.4 million lower than forecast. Since weather-related delays, scope and design changes, supply chain disruptions and other factors can affect capital expenditures in any single year of the PBR term, capital expenditures are more appropriately assessed over the entire 2022-2024 PBR term.

Over the 2022-2024 PBR term, net capital expenditures were $56.7 million lower than the PBR forecast. Explanations for projects and programs with actual costs that were $10.0 million greater or lower than the PBR forecast are provided below:

1. **Drainage Neighbourhood Renewal** – $24.0 million lower than forecast due to neighbourhood inspections showing fewer replacements required than anticipated. A risk-based approach is used to plan and complete neighbourhood renewal and local sewer rehabilitation work. The Drainage neighbourhood renewal program was also expanded to include renewal of higher risk local sewer mains in locations without planned neighbourhood renewal. This program is being combined with the Local Sewer Rehabilitation Program and consists of several annual programs focusing on the renewal and replacement of aging local sanitary, storm and combined sewers around the city of Edmonton.

2. **Drill Drop Manholes Program** – $9.6 million greater than forecast due to supply chain delays and utility conflicts requiring scope adjustments during construction.

3. **High Priority Replacement Program** – $16.3 million greater than forecast due to the need to rehabilitate certain locations earlier than anticipated based on ongoing condition assessments.

4. **Drainage System Rehabilitation Projects < $10 million** – $9.7 million greater than forecast mainly due to the need to advance various projects to complete rehabilitation work to mitigate system interruptions.

5. **Flood Mitigation and SIRP Dry Pond Program** – $72.2 million lower than forecast mainly due to both lower than expected contractor costs and efficiencies in project delivery for the Dry Pond programs. In addition, delays in land assembly involving the City of Edmonton, School Boards and public consultation have pushed some of the expenditures to future PBR terms.

6. **Real Estate (Water/Drainage Shared Facility)** – $26.8 million greater than forecast. This project was expected to be completed during the 2017-2021 PBR term but was delayed due to changes in scope and the need to address higher than expected construction bid costs. This project, now known as the Water/Drainage Shared Facility (Aurum facility), was completed in December 2022.

7. **SIRP projects < $10 million** – $23.1 million lower than forecast, primarily due to:

- $13.6 million decrease due to design delays for the Outfall and Automatic Gates Program that shifts construction expenditures into future PBR terms, lower than anticipated number of gates based on updated river flooding maps and a detailed review of each outfall configuration, and lower than anticipated requirement to reconfigure EPCOR infrastructure to match private side reconfigurations identified through the flood inspection program;
- $7.2 million decrease due to lower than anticipated requirement for the Home Flood Proof Project based on risk assessment; and
- $2.3 million decrease attributed to several smaller projects, none individually significant.

8. **Sanitary Servicing Strategy Fund (SSSF) SW5** – $33.2 million lower than forecast. This fully contributed project to construct SW5 has been cancelled in response to updated capacity and demand forecasts and design standard modernization showing that the existing infrastructure is sufficient to meet anticipated customer demand in southwest Edmonton.

9. **Large Trunk Renewal Program** - $14.1 million lower than forecast, primarily due to:

    - $5.0 million lower than anticipated construction costs to complete the 151 Street - 99 Avenue Sanitary Trunk project;
    - $4.8 million lower than forecast costs for the Mill Creek Combined Trunk Rehabilitation project due to delays in receiving utility right of way agreement with the school board; and
    - $3.8 million lower than forecast costs for the Sanitary 11 Double Barrel Rehabilitation project due to site access delays related to the LRT construction project.

10. **LRT Relocates Program** – $11.1 million greater than forecast. The PBR forecast was approved before the final approval and funding for the Metro/Capital Line LRT was secured. The City's approved track alignments require EWS to complete more infrastructure relocations than anticipated in the PBR forecast.

2.3.4 Depreciation and Amortization

Depreciation expense and amortization of contributions are shown in Table 2.3.4-1 below:

Table 2.3.4-1
Wastewater Collection
Depreciation and Amortization
($ millions)

		A	B	C	D
		2024		2022-2024	
		PBR Forecast	Actual	PBR Forecast	Actual
1	Gross depreciation provision	101.6	97.8	284.5	275.0
2	Amortization of contributions	(50.4)	(50.9)	(145.2)	(146.5)
3	Depreciation, expense	51.2	46.8	139.2	128.4
4	Gains, losses and adjustments		0.2		0.3
5	**Depreciation, net**	**51.2**	**47.1**	**139.2**	**128.7**

Depreciation expense and amortization of contributions in 2024 were $4.1 million lower than forecast ($10.5 million lower than forecast for 2022-2024) mainly due to lower than forecast assets placed in service, as shown in line 6 of Table 5.3.4-1.

2.3.5 Return on Rate Base

In the 2022-2024 PBR plan, Wastewater Collection's rate base is deemed to be financed by a ratio of 60% debt and 40% equity. In the PBR plan, return on the debt-financed portion of the rate base is calculated at EWS' forecast average cost of debt, with return on the equity-financed portion calculated at EWS' approved rate of return on equity of 9.95% on the rate base allocated to SIRP and CORe and a "ramped up" return on equity on the remaining portion of the rate base. To provide for stable, predictable rate increases, as part of Wastewater Collection's rate design, the special rate adjustment has been "smoothed" over the PBR term. Therefore, although rates are designed to provide EWS with the opportunity to earn its approved ROE over the 2022-2024 PBR term, forecast rates of return for individual years of the PBR term will differ from the awarded ROE.

Table 2.3.5-1 provides a comparison of Wastewater Collection's PBR forecast and actual return on rate base for 2024.

Table 2.3.5-1
Wastewater Collection
Return on Mid-Year Rate Base

		A	B	C	D
		2024		2022-2024	
	Description	PBR Forecast	Actual	PBR Forecast	Actual
	Mid-year Rate Base				
1	Sanitary utility	1,065.1	1,029.9		
2	Stormwater utility	1,068.0	1,029.1		
3	Mid-year Rate Base	2,133.1	2,059.0		
	Deemed Capital Structure				
4	Debt	60.00%	60.00%		
5	Equity	40.00%	40.00%		
	Cost of Capital				
6	Debt	3.17%	3.96%	3.20%	3.70%
7	Equity	7.77%	7.32%	7.19%	6.74%
8	Weighted Average Cost of Capital (WACC)	5.01%	5.30%	4.80%	4.92%
	Return on rate base financed by debt				
9	Sanitary	20.3	24.5	56.6	62.8
10	Stormwater	20.3	24.4	54.9	62.9
11	Return on rate base financed by debt	40.6	48.9	111.4	125.6
	Return on rate base financed by equity				
12	Sanitary	33.1	30.2	84.6	76.4
13	Stormwater	33.2	30.1	82.1	75.9
14	Combined return on equity	66.3	60.3	166.7	152.3
15	**Return on Mid-Year Rate Base**	**106.9**	**109.2**	**278.1**	**277.9**

In 2024, EWS achieved an ROE of 7.32% (6.74% for 2022-2024), compared to PBR forecast ROE of 7.77% (7.19% for 2022-2024). Lower than forecast rates of return reflect operating cost increases that exceeded increases in revenue and reflect higher interest expense discussed below.

The return on the debt-financed portion of the rate base (i.e. regulated interest expense, Table 2.3.5-1 line 11) was $8.3 million greater than forecast in 2024 ($14.2 million greater for 2022-2024), as the actual average cost of debt (see Table 2.3.5-2) was 0.79% greater than forecast due to higher borrowing costs and new debt issues. The cost of debt was higher in 2024 due to higher than forecast interest rates on new debt issues related to the Bank of Canada's rate hikes during 2022 and 2023 to curb inflation. Under the PBR Plan, EWS bears interest rate risk and therefore, higher than forecast debt costs are not borne by ratepayers.

Table 2.3.5-2
Wastewater Collection
Interest Expense and Cost of Debt
($ millions)

		A	B
		2024	
	Interest Expense and Cost of Debt	PBR Forecast	Actual
	Interest expense		
1	Interest on long-term debt	41.4	43.4
2	Interest on short-term debt	0.8	5.9
3	Total interest expense	42.3	49.3
	Mid-year debt		
4	Mid-year long-term debt	1,298.6	1,231.1
5	Mid-year short-term debt	34.7	14.7
6	Mid-year debt	1,333.3	1,245.8
7	**Average cost of debt**	**3.17%**	**3.96%**

3 Operational Performance

3.1 Water Services

Table 3.1-1 summarizes the 2024 operational performance for Water Services.

Table 3.1-1
Water Services 2024 Operational Performance

Index and Performance Measure	Benchmark	Performance		Base Points	Points Earned	Maximum Bonus Points	Total Points Earned
		Target	Actual				
1.0 Water Quality Index	Non-suspect test results	99.70	99.65	**30.0**	**29.98**	**-**	**29.98**
2.0 Customer Service Index							
2.1 Post Service Audit Measure	% satisfied	75.0	91.0		4.55		
2.2 Home Sniffing Measure	% satisfaction	94.4	95.0		3.77		
2.3 Response Time Measure	min to confirm breaks	25.0	15.1		5.24		
2.4 Planned Construction Impact Measure	% compliance	95.8	100.0		3.91		
2.0 Customer Service Index				**15.0**	**17.47**	**2.25**	**17.25**
3.0 **System Reliability & Optimization Index**							
3.1 Water Main Break Measure	# of breaks	365	242		8.36		
3.2 Repair Duration Measure	% fixed within 24 hrs	95.4	97.3		6.37		
3.3 Water Loss Measure	leakage index (ILI)	1.23	1.27		6.05		
3.4 System Energy Efficiency Measure	kWh / ML treated	281	238		7.36		
3.0 System Reliability & Optimization Index				**25.0**	**28.14**	**3.25**	**28.14**
4.0 Environmental Index							
4.1 Water Conservation (Residential) Measure	m^3/month/household	16.8	14.6		5.77		
4.2 Environmental Incident Management Measure	# of incidents	5	1		25.00		
4.3 Solids Residual Management Measure	# days	120	91.0		3.79		
4.0 Environmental Index				**15.0**	**24.41**	**2.25**	**17.25**
5.0 Safety Index							
5.1 Near Miss Reporting Measure	# completed	550	625		4.26		
5.2 Work Site Inspections/Observations Measure	# conducted	1,032	3,405		12.37		
5.3 Lost Time Frequency Rate	frequency rate	0.40	0.07		21.43		
5.4 All Injury Frequency Rate	frequency rate	1.00	0.49		7.65		
5.0 Safety Index				**15.0**	**45.72**	**2.25**	**17.25**
Aggregate Points Earned (sum of all the above indices)				**100.0**	**155.87**	**10.00**	**109.9**
Points Required at Performance Standard							**100.0**
Points Above / (Below) Performance Standard							**9.9**

Water Services' operational performance is measured by the results of five indices shown in Table 3.1-1 above. Performance under each index is measured independently on a point basis with 100 base points available if the standards in all five areas are achieved. In total, up to 10 additional bonus points for performance above the standard are available. In 2024, Water Services exceeded performance standards on three out of five indices and earned a total of 9.9 bonus points. Highlights for each index are provided below.

3.1.1 Water Quality Index

The water quality index measures the overall quality of water that is delivered to the customer and provides reassurance that water quality consistently meets or exceeds the federal and provincial water quality standards. This index consists of a single performance measure:

- **Water Quality Measure** (actual 99.65% vs standard 99.70%), is calculated as the percentage of water quality test results that meet or exceed all regulatory requirements and EWS' stricter water standards. Both Health Canada guidelines and provincial water quality standards set by Alberta Environment and Protected Areas (AEPA) are incorporated into EWS' Approval to Operate. EWS' water standards have stricter limits for critical parameters to provide early warnings of potential water quality problems.

- In 2024, EWS collected and tested 68,948 samples of treated drinking water and all but four water quality test results met regulatory requirements. It was later determined that the four failures were due to sample collection issues, not water quality issues. These were included in the 239 samples that did not meet EWS' internal water quality targets or a federal/provincial guideline and approximately 62% of those samples related to elevated turbidity in specific areas of the distribution system. Increased flushing of those areas restored customer water quality back to acceptable levels.

3.1.2 Customer Service Index

The customer service index is a measure of customers' perception and satisfaction with EWS' service, the aesthetic quality of water, and speed of response to customer issues. This index includes the following performance measures:

- **Post Service Audit Measure** (actual 91.0% vs standard 75.0%), is calculated as the percentage of customers who respond by survey indicating they are satisfied with the level of service received from the EWS Emergency group. In 2024, EWS consistently received very favourable customer service responses indicating that customers felt they received satisfactory service.

- **Home Sniffing Measure** (actual 95.0% vs standard 94.4%), is calculated as the percentage of participants in the home sniffing survey responding "completely" or "very satisfied." A moderate spring runoff season in 2024 with a quick and robust response

from EWS resulted in few concerns related to taste and odour. The Home Sniffing program has also been rebranded as the Spring Home Analysis Runoff Program (SHARP).

- **Response Time Measure** (actual 15.1 minutes vs standard 25 minutes), is calculated as the average number of minutes needed to confirm a water main break from the time EWS Dispatch receives a call. EWS exceeded the standard in 2024 by assigning responding crews to quadrants throughout the city, decreasing the amount of time necessary for crews to travel to main breaks locations.

- **Planned Construction Impact Measure** (actual 100.0% vs standard 95.8%), is calculated as the percentage of the total planned construction events where EWS provides a minimum of five days' advanced notice of large-scale planned construction projects and ensures construction is completed within the timeframe noted in the notification letter. In 2024, performance exceeded the PBR standard, reaching 100.0%. This was attained through refining routine processes, ongoing training, and focusing on communications.

3.1.3 System Reliability and Optimization Index ☑

The System Reliability Index is a measure of customer confidence in the reliability of the waterworks system. This index includes the following performance measures:

- **Water Main Break Measure** (actual 242 main breaks vs standard 365) is calculated as the frequency of unplanned interruptions caused by water main breaks that occurred in the year. Main break numbers can fluctuate year over year due to variations in weather conditions and temperature. In 2024, the number of main breaks continued to decrease, following the downward trend of recent years. The reduction in the number of main breaks can also be attributed to replacement of cast iron mains with PVC mains.

- **Water Main Break Repair Duration Measure** (actual 97.3% vs standard 95.4%) is calculated as the percentage of time that water main breaks were repaired within 24 hours from the time that the flow of water is shut off (i.e. the time of customer interruption). Main breaks on arterial or collector roads or where there was no customer outage were excluded. EWS provided temporary water supply via water tanks, hose hookups, or delivery of water jugs to affected customers during many service disruptions. Impacts to customers were also reduced by continuing repair activities overnight when possible.

- **Water Loss Measure** (actual 1.27 vs standard 1.23) is calculated using the Infrastructure Leakage Index (ILI), an industry-standard performance indicator quantifying how well a water distribution system is managed for the control of water losses. The 2024 result were slightly below the PBR standard due to a 193ML loss from a 300mm distribution main

break in Blatchford. Edmonton continues to have a low level of leakage and remains lower than the median ILI of 2.05 for combined utilities (AWWA 2022).

- **System Energy Efficiency Measure** (actual 238 kWh/ML vs standard 281 kWh/ML) is calculated as the energy used at all water facilities in kWh per 100,000 customer accounts and is impacted by three factors: power used, ML water pumped into the transmission lines, and number of residential accounts. In 2024, all three factors increased. The newly implemented energy management information system dashboard was used to monitor energy usage trends for each major water zone and the performance efficiency of several reservoir pumps in key stations. In addition, ongoing upgrades and increased maintenance of the pumping systems was key in achieving higher energy efficiency.

3.1.4 Environment Index ☑

The environmental index measures the success of programs and policies designed to mitigate and report adverse environmental impacts. This index includes the following performance measures:

- **Water Conservation Measure** (actual 14.6 m^3/customer vs standard 16.8 m^3/customer) is calculated as the average monthly consumption per residential customer over the past 10 years. In 2024, continued work-from-home arrangements, increases in residential densification and warmer weather continued to impact residential consumption, however, ongoing improvements in water usage habits and technology, including the use of more efficient appliances and toilets, also contributed to the favourable result.

- **Environmental Incident Management Measure** (actual 1 vs standard 5) is calculated as the number of incidents reportable to municipal, provincial or federal regulators that were considered preventable. In 2024, there was one reportable event, an internal reporting error that led to a missed requirement to complete flushing and re-sampling of a portion of the water distribution system following a positive bacteriological sample collected from a hydrant. Subsequent field samples collected at and downstream of the hydrant were within an acceptable range, indicating the risk was very low. Following this event, escalation and reporting of positive bacteriological sample results have been automated.

- **Solids Residual Management Measure** (actual 91.0 vs standard 120) is calculated as the number of days that the water treatment plants operate in direct filtration mode. Direct filtration, which is common during winter months, reduces the solids load of water returned to the North Saskatchewan River relative to baseline conventional treatment. In 2024, direct filtration was limited early in the year due to high raw water colour in the North Saskatchewan River resulting from dam operations upstream. EWS is also continuing with the Wastestream Monitoring Program for quantifying residuals and impacts of

residuals discharged to the river. This is expected to help inform future residual management strategies.

3.1.5 Safety Index ☑

The safety index is a measure of the success of programs and policies that maximize the safety of EWS employees and the public. The performance measures comprising this index include:

- **Near Miss Reporting Measure** (actual 625 vs standard 550) is calculated as the number of near miss and hazard identification reports completed each year. In 2024, mind on task initiatives were aligned between former Water and Drainage.

- **Work Site Inspections and Observations Measure** (actual 3,405 vs standard 1,032) is calculated as the number of Work Site Inspections and Observations completed each year. In 2024 EWS continued to analyze trends from near miss reporting to direct focus on inspections and observations that would further reduce and eliminate injuries.

- **Lost Time Injury Frequency Measure** (actual 0.07 vs standard 0.40) is calculated as the frequency of disability injuries and illnesses. The **All Injury Frequency Measure** (actual 0.49 vs standard 1.00) is calculated as the frequency of disability injuries and medical aid injuries. These factors were key measures for assessing the effectiveness of EPCOR's safety programs. In 2024, EWS identified two new technologies to reduce safety risk for high-risk activities and has introduced causal investigations to identify learnings from significant events.

3.2 Wastewater Treatment Services

Table 3.2-1 summarizes Wastewater Treatment Services 2024 operational performance.

Table 3.2-1
Wastewater Treatment Services 2024 Operational Performance

A	B	C	D	E	F	G	H
		Performance					
Description	Benchmark	Standard	Actual	Base Points	Points Earned	Maximum Bonus Points	Points with Maximum Bonus Points
1.0 Water Quality & Environment Index							
1.1 Wastewater Quality Measure	WELP	26.0	23.9		24.5		
1.2 Environmental Incident Measure	# of incidents	5	1		112.5		
1.0 Water Quality & Environment Index				**45.0**	**137.0**	**4.5**	**49.5**
2.0 Customer Service Index							
2.1 H_2S - 1-hour Exceedance Measure	exceedance std	4	0.0		10.0		
2.2 H_2S - 24-hour Exceedance Measure	exceedance std	1	0.0		10.0		
2.3 Scrubber Uptime Measure	% on-line	96.0	68.1		3.5		
2.0 Customer Service Index				**15.0**	**23.5**	**1.5**	**16.5**
3.0 System Reliability and Optimization Index							
3.1 Enhanced Primary Treatment Measure	% in use	94.0	100.0		8.9		
3.2 Biosolids Inventory Reduction Measure	relative reduction	1.05	0.86		6.8		
3.3 Energy Efficiency Measure	kWh / ML treated	508	492		8.6		
3.0 System Reliability and Optimization Index				**25.0**	**24.3**	**2.5**	**24.3**
4.0 Safety Index							
4.1 Near Miss Reporting Measure	# completed	220	457		7.8		
4.2 Work Site Inspection/Observation Measure	# conducted	919	1,955		8.0		
4.3 Lost Time Frequency Rate	frequency rate	0.75	0.10		28.1		
4.4 All Injury Frequency Rate	frequency rate	1.00	0.42		8.9		
4.0 Safety Index				**15.0**	**52.8**	**1.5**	**16.5**
Aggregate Points Earned (sum of all the above indices)				**100.0**	**237.7**	**10.0**	**106.8**
Points Required at Performance Standard							**100.0**
Points Above / (Below) Performance Standard							**6.8**

Wastewater Treatment Services' operational performance is measured by the results of four indices. Similar to Water Services, performance under each index is measured independently on a point basis with 100 base points available if the standards in all four areas are achieved. In total, up to 10 additional bonus points for performance above the standard are available. In 2024, Wastewater Treatment exceeded performance standards on three out of the four indices, earning 6.8 bonus points. Highlights for each index are provided below.

3.2.1 Wastewater Quality and Environmental Index ☑

The Wastewater Quality and Environmental index measures the success of operational processes and procedures designed to manage the quality of effluent and adverse environmental impacts of effluent returned to the North Saskatchewan River. The performance measures comprising this index include:

- **Wastewater Quality Measure** (actual 23.9 vs standard 26.0) is determined by the Wastewater Effluent Limit Performance (WELP), which is an aggregate measure of the percentage of discharge limits for five parameters in the Gold Bar Wastewater Treatment Plant's final effluent. At Gold Bar Wastewater Treatment Plant, 10 out of the 11 bioreactors are required to treat 420ML of wastewater per day. In 2024, there were 23 days during which two bioreactors were out of service to accommodate maintenance and capital upgrades prior to the onset of cold weather. As a result, the 2024 result was slightly higher than 2023 but was within the PBR standard.

- **Environmental Incident Measure** (actual 1 vs standard 5) is calculated as the actual number of environmental incidents that were both reportable to the municipal, provincial or federal regulator and that were considered preventable. In 2024, there was one reportable environmental incident related to a construction deficiency of two new scrubbers per the Approval to Operate that required notification to AEPA. The deficiency pertained to stacks being four centimetres short of the minimum required height above grade.

3.2.2 Customer Service Index ☑

Wastewater Treatment's customer service index includes three equally weighted odour related measures, which recognize that Wastewater Treatment's customer interactions are primarily related to odour concerns from customers who live near the Gold Bar Wastewater Treatment Plant. The performance measures comprising this index include:

- **H_2S – 1 Hour Exceedance Measure** (0.0 actual vs 4.0 standard), which is calculated as the number of exceedances of the 1-hour limit averaged between Strathcona Industrial Association (SIA) air quality monitoring stations located at Gold Bar and Beverly, and **H_2S – 24 Hour Exceedance Measure** (0.0 actual vs 1.0 standard) is calculated as the number of exceedances of the 24-hour limit averaged between Gold Bar and Beverly air quality

monitoring stations. In 2024, there were no 1-hour or 24-hour H_2S exceedances recorded at the Gold Bar or Beverly Air Quality Monitoring Stations that were attributed to the Gold Bar WWTP. To enhance future odour control, two new scrubbers were commissioned in mid-2024 and are fully operational.

- **Scrubber Uptime Measure** (actual 68.1% vs standard 96.0%), is calculated as the percentage of the time that the odour control systems at the Gold Bar Wastewater Treatment Plant were operating. In 2024, two new scrubbers were commissioned into service. However, they were not included in the PBR calculation as they were not identified in the bylaw, which explains the low result. Inclusion of the new scrubbers would have seen the 2024 result exceed the scrubber uptime standard. In addition, scrubber 1 was temporarily disconnected as the process area that it served was out of service for capital project work. Disconnection in this circumstance prevents unnecessary wear on equipment while foul air sources are shut down. Absence of this scrubber also contributed the lower result.

3.2.3 System Reliability and Optimization Index ☑

The system reliability and optimization index is a measure of the performance of the Gold Bar Wastewater Treatment Plant. The performance measures comprising this index include:

- **Enhanced Primary Treatment (EPT) Measure** (actual 100.0% vs standard 94.0%), is calculated as the percentage of time that the EPT facility ran during wet weather events when the influent flow rate exceeded the EPT event threshold. All 4 EPT clarifiers underwent cleaning and inspections in 2024 to ensure availability was maximized. The Problem, Cause and Remedy (PCR) maintenance initiative was implemented to track equipment failures and to allow prioritization of work, evaluation of corrective actions and development of strategies to prevent additional breakdowns. This initiative improved the management of shear pin breaks, chain failures and drive issues, which are the most common wear items for EPT.

- **Biosolids Inventory Reduction Measure** (actual 0.86 vs standard 1.05), is a measure of the reduction in the biosolids inventory at the Clover Bar Biosolids Resource Recovery Facility. It is calculated as the three-year average of the total dry tonnes of biosolids removed from the basins relative to the total dry tonnes of biosolids deposited in the basins. In 2024, more dry tonnes of generated biosolids were removed and beneficially re-used. However, lower quantities removed in 2022 and 2023 resulted in a below standard result. Two main factors that led to the low results for 2022 and 2023 included failure of the City of Edmonton dewatering facility in 2022 and unplanned rehabilitation of Cell 3 in 2023, which impacted the availability of biosolids that met the requirements for land application.

- **Energy Efficiency Measure** (actual 492 kWh/ML vs standard 508 kWh/ML), is a measure of the energy consumed in the treatment of wastewater at the Gold Bar Wastewater Treatment Plant. It is calculated as the kWh of energy used divided by the volume of wastewater effluent that either receives ultraviolet (UV) treatment or is membrane plant effluent. Although the standard was met in 2024, results were slightly less than 2023 due to increased wet weather, resulting in higher flows to the plant. Completion of future upgrades of secondary aeration blowers to improve optimization of power usage and the UV treatment systems were initiated in 2024 and can be expected to improve energy efficiency in future years.

3.2.4 Safety Index ☑

The safety index is a measure of the success of programs and the application of policies that maximize the safety of employees and the public. The performance measures comprising this index include:

- **Near Miss Reporting Measure** (actual 457 vs standard 220), is calculated as the number of near miss and hazard identification reports completed each year. In 2024, mind on task initiatives were aligned between former Water and Drainage.

- **Work Site Inspections / Observations Measure** (actual 1,955 vs standard 919), is calculated as the number of Work Site Inspections and Observations completed each year. In 2024, EWS continued to analyze trends from near miss reporting to direct focus on inspections and observations that can further reduce and eliminate injuries.

- **Lost Time Injury Frequency Rate Measure** (actual 0.10 vs standard 0.75) is calculated as the frequency of disability injuries and illnesses. **All Injury Frequency Measure** (actual 0.42 vs standard 1.00), is calculated as the frequency of disability injuries and medical aid injuries. These factors were key measures for assessing the effectiveness of safety programs. In 2024, EWS identified two new technologies to reduce safety risk for high-risk activities and is using causal investigations to identify learnings from significant events.

3.3 Wastewater Collection

Table 3.3-1 summarizes Wastewater Collection 2024 operational performance.

Table 3.3-1
Wastewater Collection 2024 Operational Performance

A	B	C	D	E	F	G	H
Description	Benchmark	Performance Standard	Performance Actual	Base Points	Points Earned	Maximum Bonus Points	Points with Maximum Bonus Points
1.0 Environmental Index							
1.1 Stormwater Flow and Flow Monitoring Measure	% area monitored	63.0	76.3		14.1		
1.2 Environmental Incident Management Measure	% reportable	50	6		97.2		
1.3 Green Hectares Measure	managed area	180.0	182.7		11.8		
1.0 Environmental Index				**35.0**	**123.2**	**3.5**	**38.5**
2.0 Customer Service Index							
2.1 Service Maintenance Calls Measure	% resolved in 24h	80.0	91.9		5.7		
2.2 Emergency Dig-Ups – Service Restored Measure	% restored in 48h	98.0	98.0		5.0		
2.3 Service Connections Measure	% within 6 weeks	85.0	97.8		5.8		
2.4 Sewer Odour Hotspots Measure	% city area	14.5	2.6		26.6		
2.0 Customer Service Index				**20.0**	**43.1**	**2.0**	**22.0**
3.0 System Reliability and Optimization Index							
3.1 Blocked Sewers Measure	# per 100 km	2.10	3.64		4.3		
3.2 Sewer Renewal Measure	km renewed	60.0	44.5		5.6		
3.3 Infrastructure Condition Rating Level Measure	% > minimum	90.0	90.1		7.5		
3.4 Full Property Flood Proofing Inspections	# inspections	750	1,246		12.5		
3.0 System Reliability and Optimization Index				**30.0**	**29.9**	**3.0**	**29.9**
4.0 Safety Index							
4.1 Near Miss Reporting Measure	# completed	750	1,991		10.0		
4.2 Work Site Inspection/Observation Measure	# conducted	1,300	4,076		11.8		
4.3 Lost Time Frequency Rate	frequency rate	0.75	0.08		35.2		
4.4 All Injury Frequency Rate	frequency rate	4.00	0.32		46.9		
4.0 Safety Index				**15.0**	**103.7**	**1.5**	**16.5**
Aggregate Points Earned (sum of all the above indices)				**100.0**	**300.8**	**10.0**	**106.9**
Points Required at Performance Standard							**100.0**
Points Above / (Below) Performance Standard							**6.9**

Wastewater Collection's operational performance is measured by the results of four indices. Performance under each index is measured independently on a point basis with 100 base points available if the standards in all four areas are achieved. In total, up to 10 additional bonus points for performance above standard are available. In 2024, Wastewater Collection exceeded performance standards on three out of four indices, earning 6.9 bonus points. Highlights for each index are provided below:

3.3.1 Environmental Index ☑

The environmental index measures the success of Wastewater Collection programs and policies designed to mitigate and report adverse environmental impacts. The performance measures comprising this index include:

1. **Stormwater Flow Monitoring Measure** (actual 76.3% vs standard 63.0%), is calculated as the percentage of storm drainage area being monitored relative to all qualified hydrologically-effective drainage areas serviced by outfalls. In 2024, 10 new monitoring locations were activated by completing construction and installing sensors.

2. **Environment Incident Management Measure** (actual 6 vs standard 50), is calculated as the number of incidents reportable to the municipal, provincial or federal regulator. Two events occurred during construction activities at collection system outfalls. The remaining events were due to system blockages in the sanitary or combined sewer system. In 2024, a new process was introduced to ensure appropriate environmental planning and protection measures for major projects. In addition, processes and practices related to investigating and identifying cross-connections to the storm collection system were also implemented.

3. **Green Hectares Measure** (actual 182.7 hectares vs standard 180.0 hectares), is calculated as the area where the volume of green infrastructure managed runoff is spread evenly to a 15mm depth. In 2024, a significant number of large Low Impact Development (LID) projects such as Fort Road Active Trails, Montrose, and Michener Park Stage 1 were completed. In addition, the compliance inspection campaign initiated in the latter part of 2023 to reactivate storage on existing multi-family and ICI properties continued in 2024, which resulted in a full year of collaboration with property owners to reactivate storage on their sites.

3.3.2 Customer Service Index ☑

The Customer Service Index measures the success of Wastewater Collection programs and policies pertaining to customer service. This index is comprised of the following performance measures:

- **Service Maintenance Calls Measure** (actual 91.9% vs standard 80.0%), is calculated as the percentage of service maintenance sewer trouble calls resolved within 24 hours. In 2024, the Service Maintenance team prioritized allocation of resources for response to maintenance calls. Employee training is also being reviewed to enable staff to step into alternate responsibilities as required to meet demands. This cross-training initiative aims to enhance flexibility and streamline daily operations.

- **Emergency Dig-ups with Service Restored Measure** (actual 98.0% vs standard 98.0%), is calculated as the percentage of emergency dig-ups restored within 48 hours from the time the call is referred from Operations to Construction as an emergency dig-up. In 2024, 50 of 51 emergencies were resolved within 48 hours. The one event that failed to meet the standard faced delays due to a water main repair, removal of a wood pole and transition of resources. Gains in efficiencies and reduced customer impacts were achieved via utilization of relining and directional drilling methods. Shortening construction response time also resulted in reduced impacts to customers.

- **Service Connections Measure** (actual 97.8% vs standard 85.0%), is calculated as the percentage of new installations of sanitary, storm, and common trench water service connection completed within a six-week timeframe. In 2024, 482 services were installed at 232 locations. Several alternative work methods improved operational efficiency and safety. In addition, utilizing trenchless technologies wherever possible further reduced costs and impacts to the community.

- **Sewer Odour Hotspots Measure** (actual 2.6% vs standard 14.5%), is calculated as the percentage of the city area with odour hotspots relative to the city-wide coverage area. In 2024, one-way flaps were installed at multiple locations in downtown to manage odour nuisance from catch basins. Odour mitigation designs and activities were also integrated into dry pond projects and the Duggan tunnel replacement project. Odour and corrosion improvements continue to be further integrated into other existing asset rehabilitation and expansion projects.

3.3.3 Reliability and Optimization Index ☑

The System Reliability Index measures the reliability of the sanitary and stormwater drainage systems. The performance measures comprising this index include:

- **Blocked Sewers Measure** (actual 3.64 vs standard 2.10), is calculated as the number of blocked sewers per 100 km of sanitary and combined sewer pipe. Approximately 80% of plugged mains in 2024 were first-time blockages, which suggests that past work is reducing the likelihood of repeat blockages. Approximately 26% of plugged mains were due to debris from adjacent construction and development activity entering the system and causing a blockage. This was a significant increase over previous years. It was noted

that grease was a major contributing factor in over 80% of blockages in 2024. In response, a source control initiative was started to identify contributing businesses.

- **Sewer Renewal Measure** (actual 44.5 km vs standard 60.0 km), is calculated as the km of sewers renewed / relined as part of the Neighbourhood Renewal Program, Local Sewer Rehabilitation Program, Arterial and Collector Roadway Renewal Coordination Program, SIRP Proactive Pipe Relining Program, Proactive Service Renewal Program and CORe Large Trunk Rehabilitation Program. Sewer renewal and relining are proactive maintenance activities. In 2024, the PBR standard was not met because of an increased focus on renewing higher-risk trunk lines, which led to a reduction in the length of sewer renewed. EWS continued prioritizing higher-risk sewer infrastructure renewals to proactively minimize future emergency repairs and rehabilitation.

- **Infrastructure Condition Rating Level Measure** (actual 90.1% vs standard 90.0%), is calculated as the percentage of infrastructure at or above the minimum level of condition rating. In 2024, Wastewater Collection infrastructure condition assessments were repeated with updated data sets and records to reflect the most current system condition ratings.

- **Full Property Flood Proofing Inspections Measure** (actual 1,246 vs standard 750), is calculated as the number of full flood proofing inspections completed that include an inspection report provided to the property owner. Both single family and multi-family residences were included. In 2024, inspections included 517 single family inspections and 729 multi-family inspections across 26 complexes. Focus on awareness continued through in-person and digital marketing events.

3.3.4 Safety Index ☑

The safety index is a measure of the success of programs and the application of policies that maximize the safety of employees and the public. The performance measures comprising this index include:

- **Near Miss Reporting Measure** (actual 1,991 vs standard 750), is calculated as the number of near miss and hazard identification reports completed each year. In 2024, mind on task initiatives were aligned between former Water and Drainage.

- **Work Site Inspections / Observations Measure** (actual 4,076 vs standard 1,300), is calculated as the number of Work Site Inspections and Observations completed each year. In 2024, EWS continued to analyze trends from near miss reporting to focus on inspections and observations to further drive injury elimination and reduction.

- **Lost Time Frequency Rate Measure** (actual 0.08 vs standard 0.75), is calculated as the frequency of disability injuries and illnesses. **All Injury Frequency Measure** (actual 0.32

vs target 4.00) is calculated as the frequency of disability injuries and medical aid injuries. These factors were key measures for assessing the effectiveness of safety programs**.** In 2024, EWS identified two new technologies to reduce safety risk for high-risk activities and grew its use of causal investigations to identify learnings from significant events.

4 Rates and Bill Comparisons

Under EWS' PBR framework, annual adjustments to rates are limited to the PBR inflation factor less an efficiency factor (I – X), plus any Special Rate Adjustments (SRA) approved by City Council as part of the PBR Application. The use of a formulaic approach for calculating and setting utility rates acts as a "price cap," providing ratepayers with stable and predictable rates. In other words, rates are not impacted by annual changes in actual costs incurred by the utility during the PBR term. In 2022 and 2023, inflation (calculated using the Alberta Consumer Price Index and Average Alberta Hourly Earnings) was significantly higher than the PBR forecast, resulting in higher than forecast bill increases.

In 2024, the average residential customer's monthly bill for water (including fire protection) and wastewater services, based on an average monthly consumption of 14.7 m^3, was $128.35 an increase of $9.82 (8.3%) from 2023. Table 4-1 below summarizes the increase by utility.

Table 4-1
Monthly Bill Increase from 2023 to 2024
($)

	A	B	C
	2023 (13.8 m^3)	**2024 (14.7 m^3)**	**Change**
1 Water	47.63	52.29	9.8%
2 Wastewater Treatment	24.52	26.01	6.1%
3 Drainage (includes Stormwater)	46.38	50.04	7.9%
4 **Total Monthly Bill**	**118.53**	**128.35**	**8.3%**

This increase is further explained below.

Water

The primary driver for the increase (9.8%) was due to:

- Higher consumption in 2024 compared to 2023 (4.6%) primarily due to higher than forecast customer growth and the emergence of a new trend in consumption per customer, as discussed in Section 1.5;
- Annual inflation adjustment (1.9%); and
- Inclusion of the SRA and NRA adjustment (3.3%).

Wastewater Treatment

The primary driver for the increase (6.1%) was primarily due to:

- Higher consumption in 2024 compared to 2023 (4.8%);
- Annual inflation adjustment (1.9%); and
- Inclusion of a negative SRA adjustment (-0.6%).

Wastewater Collection

The primary driver for the increase (7.9%) was primarily due to:

- Higher sanitary consumption in 2024 compared to 2023, which was partially offset by changes to stormwater runoff coefficients (0.2%);
- Annual inflation adjustment (1.3%); and
- Inclusion of the SRA adjustment (6.4%). The SRA adjustment included recovery for climate-related flood mitigation programs and corrosion and odour reduction strategies.

EWS undertakes annual bill comparison surveys with various cities and local municipalities. EWS' residential water bills are competitive with most cities and municipalities included in the comparison. Wastewater Collection and Wastewater Treatment bills are more difficult to compare because of variations in the nature and extent of wastewater treatment, the inclusion of certain services in property taxes, and geographic and climatic factors that influence the level of investment and approach to flood mitigation. In addition, EWS has been proactive in addressing the increased risk of flooding related to climate change and is making substantial investments through its Stormwater Integrated Resource Plan (SIRP) program to assess and mitigate these risks. EWS' average wastewater treatment and wastewater collection (drainage) bills are comparable to cities that have started addressing risks related to climate change.

Residential water and wastewater bill comparisons for 2024 are based on the published water, wastewater treatment, sanitary and stormwater rates for Calgary, Vancouver, Saskatoon, Winnipeg and Regina, as well as three surrounding municipalities (St. Albert, Sherwood Park and Leduc). These bill comparisons represent the total charges paid by the customer through the utility bill, and include fixed charges, consumption charges and any other applicable surcharges based on readily available data from cities and municipalities. The comparison does not comprehensively account for additional costs in other municipalities that may be funded through the tax base, although it does account for differences in funding of fire protection costs.

Figure 4-1 provides a comparison of residential water bills with consumption of 14.7 m^3 per month, the average monthly water consumption for a residential customer in Edmonton in 2024. Edmonton is the only city in this comparison where fire protection charges are included in water rates. Therefore, Edmonton's average monthly residential bill of $52.29 which includes fire protection charge of $2.81 has been normalized to $49.48 for this comparison. Figure 4-1 shows that Edmonton's water bills are competitive with most of the cities and local communities surveyed. Vancouver continues to have the lowest rates due to their excellent raw water sources and, therefore, lower needs for water treatment than Edmonton, which has a naturally high variability in the water sourced from the North Saskatchewan River.

Figure 4-1
2024 Average Residential Water Bills
(14.7 m^3/month)

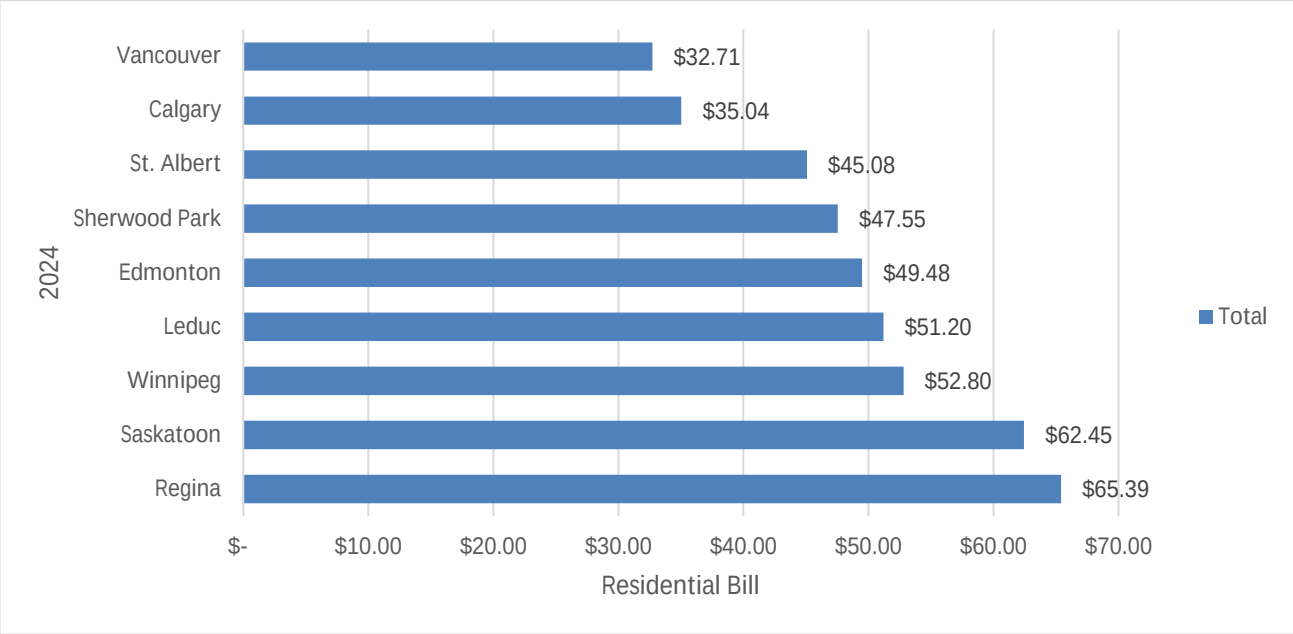


Figure 4-2 provides a comparison of average residential sanitary drainage and wastewater treatment bills with consumption of 14.7 m^3 per month, the average monthly water consumption for a residential customer in Edmonton in 2024. These bill comparisons represent the total charges paid by the customer through their utility bill and include fixed charges, consumption charges and any other applicable surcharges for wastewater treatment.

Although Edmonton's sanitary drainage and wastewater treatment bills appear higher relative to the comparison communities, the comparison does not reflect the impact of historical spending decisions by each community. For example, EWS is expending significant resources on the CORe program to address corrosion issues and to remediate long-running odour issues in its sanitary sewers.

Figure 4-2
2024 Residential Sanitary Drainage and Wastewater Treatment Bills
(14.7 m^3/month)

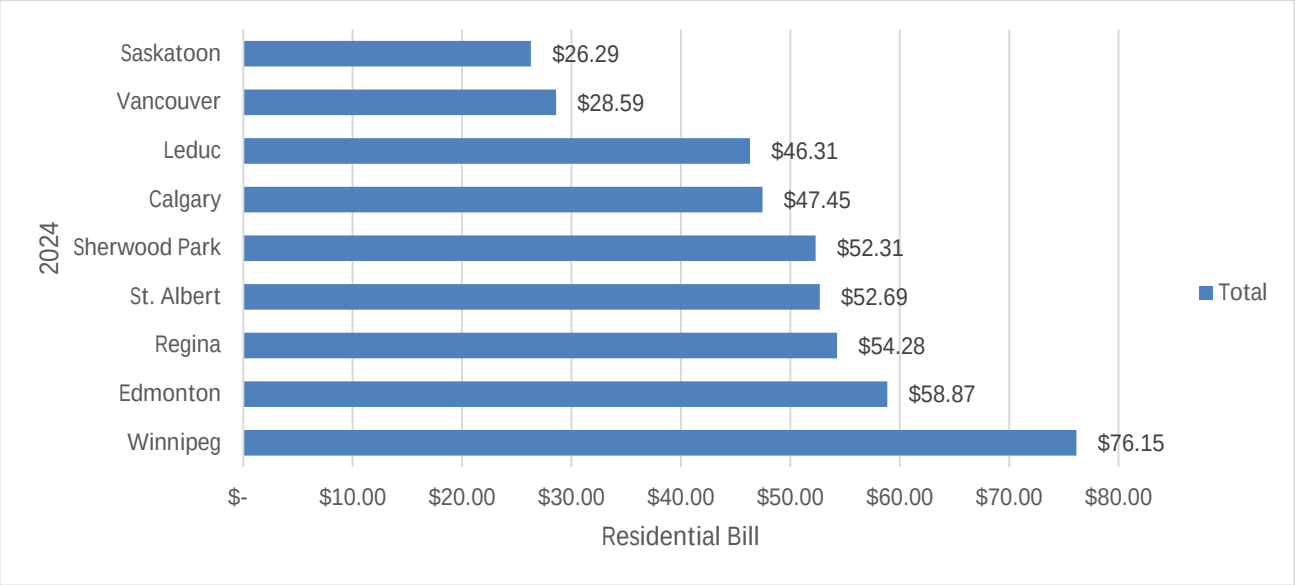
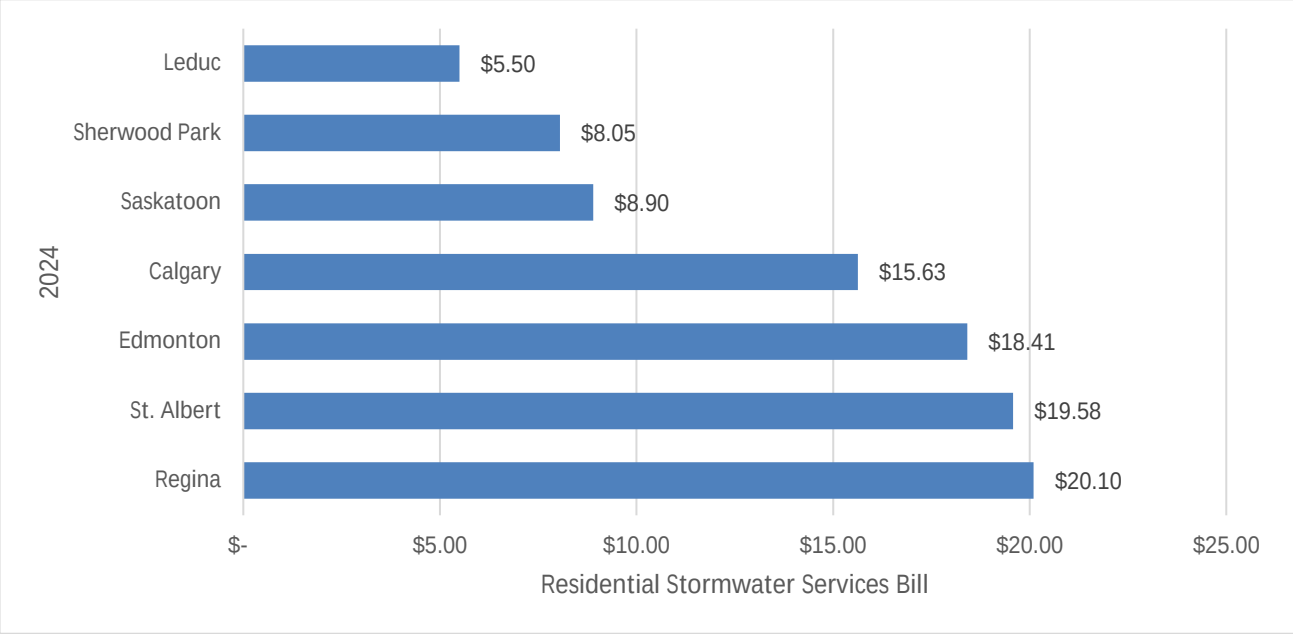


Figure 4-3 provides a comparison of average monthly residential stormwater bills for 2024. The nature and extent of stormwater drainage services varies among municipalities, due to geography and climatic conditions, with different cities facing different risks from storms, overland flooding and sea level. In addition, in some municipalities, flood mitigation and stormwater drainage charges are included in property taxes, which makes this bill comparison challenging. Stormwater charges embedded in property taxes for Vancouver and Winnipeg were not readily accessible and therefore not reflected in the figure below. EWS has been proactive in addressing the increased risk of flooding related to climate change and is making substantial investments through its SIRP program to assess and mitigate these risks. EWS' 2024 average stormwater bills are comparable to cities that have started addressing risks related to climate change such as Calgary, St. Albert and Regina.

Figure 4-3
2024 Average Monthly Residential Stormwater Bills



5 Supplemental Financial Information

Supplemental financial information to satisfy the MFR requirements for each utility is provided in the following sections.

5.1 Water

5.1.1 Operating Expenses by Cost Category

Table 5.1.1-1 provides a breakdown of total operating expenses by cost category for Water. Explanations for forecast to actual differences are provided in Section 2.1.2.

Table 5.1.1-1
Water Services Operating Expenses by Cost Category
($ millions)

		A	B	C	D
		2024		2022-2024	
	Cost Category	PBR Forecast	Actual	PBR Forecast	Actual
	Core Operations				
1	Power and other utilities charges	12.7	10.9	35.5	33.6
2	Chemicals	13.1	9.5	38.4	26.7
3	Staff costs and employee benefit expense	18.5	21.4	54.8	61.4
4	Other raw materials & operating charges	4.8	5.1	14.1	16.2
5	Contractors and consultants	5.8	5.8	17.1	15.8
6	Other administrative expenses	0.4	0.5	1.3	1.6
7	Core Operations	55.2	53.2	161.2	155.2
8	Integrated Operations Allocation	18.9	19.6	56.0	54.7
9	Customer Billing and Meter Services Charges	11.4	11.4	34.6	32.8
10	EWS Shared Services Allocation	18.1	19.0	53.3	59.3
11	Corporate Shared Services Allocation	14.1	14.8	41.6	42.3
12	Franchise fees and property taxes	19.7	22.5	56.0	61.2
13	**Total Operating Expenses**	**137.4**	**140.5**	**402.6**	**405.6**

5.1.2 Construction Work in Progress

In-City Water's rate base consists of plant in service. If a capital project is not completed during the year, the capital expenditures on that project remains under Construction Work in Progress (CWIP) and are excluded from the rate base. In 2024, as shown in Table 5.1.2-1, the balance in Construction Work in Progress (line 13) was $17.3 million greater than forecast, compared to $11.5 million greater than forecast at the beginning of the year, primarily due to completion of carry-over projects.

Table 5.1.2-1
Water Services
Construction Work in Progress
($ millions)

		A	B
		2024	
	CWIP Continuity	PBR Forecast	Actual
1	Construction work in progress, beginning of year	30.1	41.6
	Capital expenditures		
2	Capital expenditures before contributions	130.2	157.1
3	Contributions received	(8.2)	(17.4)
4	Capital expenditures, net of contributions received	122.0	139.7
	Capital additions		
5	EPCOR-constructed assets	(110.2)	(138.3)
6	Developer-constructed assets	(36.0)	(26.9)
7	Total Capital Additions	(146.2)	(165.2)
	Contributions		
8	Contributions recognized	8.1	14.0
9	Developer-constructed assets	36.0	26.9
10	Total Contributions	44.1	40.9
11	Capital additions, net of contributions	(102.1)	(124.3)
12	Write-offs and Adjustments	-	-
13	**Construction work in progress, end of year**	**50.0**	**57.0**

5.1.3 Transactions with Affiliates

In-City Water derives a portion of its revenue and expenses from transactions with affiliates, including EUI and its subsidiaries. Table 5.1.3-1 provides a summary of In-City Water's 2024 actual and forecast transactions with affiliates.

Table 5.1.3-1
Water Services
Transactions with Affiliates
($ millions)

		A	B	C	D
		2024		2022-2024	
	Affiliate and Service	PBR Forecast	Actual	PBR Forecast	Actual
1	**EPCOR Utilities Inc.**				
2	Corporate Shared Service Costs	14.1	14.8	41.5	42.3
3	Interest on Intercompany Loans	36.9	41.2	112.2	118.4
4	Interest on Short-term debt	0.9	2.1	2.5	6.0
5	Other Services	0.4	(0.2)	1.1	0.3
6	Total	**52.3**	**57.9**	**157.4**	**167.0**
7	**Other EPCOR Affiliates**				
8	EPCOR Technologies Inc.	1.7	0.9	5.1	2.7
9	EPCOR Distribution and Transmission Inc.	0.0	0.1	0.1	(0.1)

	Affiliate and Service	A 2024 PBR Forecast	B 2024 Actual	C 2022-2024 PBR Forecast	D 2022-2024 Actual
10	EPCOR Energy Alberta LP	9.1	5.7	26.6	21.0
11	EPCOR Power Development	(0.2)	(0.2)	(0.6)	(0.8)
12	EPCOR Fleet Services	-	2.4	-	6.2
13	EPCOR Commercial Services	-	(0.1)	-	(0.2)
14	Total	**10.6**	**8.7**	**31.2**	**28.8**

5.1.4 Rate Base

In 2024, EWS' total water system mid-year rate base, shown in Table 5.1.4-1 below, was $12.6 million lower than forecast primarily due to retirements and lower than forecast assets placed into service during the year.

Table 5.1.4-1
Water Services
Mid-Year Rate Base
($ millions)

	Description	A 2024 PBR Forecast	B Actual
1	Plant in service, beginning of year	3,207.0	3,154.8
	Capital additions		
2	EPCOR-funded	102.1	124.3
3	Developer-funded	44.1	40.9
4	Capital additions	146.2	165.2
5	Retirements and adjustments	-	(70.3)
6	Plant in service, end of year	3,353.2	3,249.7
7	Accumulated depreciation, beginning of year	859.5	826.6
8	Gross provision	66.6	65.5
9	Retirements and adjustments	-	(70.3)
10	Accumulated depreciation, end of year	926.1	821.8
11	Mid-Year Net Property	2,387.3	2,378.1
	Other Rate Base Items		
12	Working capital	4.2	6.0
13	Materials and supplies	4.5	(33.5)
14	**Gross Mid-Year Rate Base**	2,395.9	2,350.6
15	Contributions, beginning of year	982.9	950.8
	Current year contributions		
16	Developer-constructed assets	36.0	26.9
17	Contributions in aid of construction	8.1	14.0
18	Current year contributions	44.1	40.9
19	Retirements and adjustments	-	(3.2)
20	Contributions, end of year	1,027.0	988.6
21	Accumulated amortization, beginning of year	230.8	230.1
22	Amortization of contributions	14.8	14.7
23	Retirements and adjustments	-	(3.2)
24	Accumulated amortization, end of year	245.7	241.6
25	**Mid-Year Net Contributions**	766.7	733.9
26	**Mid-Year Rate Base**	1,629.3	1,616.7
27	In-City Water share - %	87.1%	86.9%

	Description	A 2024 PBR Forecast	B Actual
28	In-City Water share - $	1,418.8	1,404.6

5.2 Wastewater Treatment

5.2.1 Operating Expenses by Cost Category

Table 5.2.1-1 provides a breakdown of operating expenses by cost category. Explanations for forecast to actual differences are provided in Section 2.2.2 above.

Table 5.2.1-1
Wastewater Treatment
Operating Costs by Cost Category
($ millions)

		A	B	C	D
		2024		2022-2024	
	Cost Category	PBR Forecast	Actual	PBR Forecast	Actual
1	Core Operations				
2	Power and Other Utilities	6.9	5.6	19.3	16.3
3	Chemicals	1.5	1.7	4.5	4.5
4	Staff costs and employee benefits	10.0	10.7	29.5	31.8
5	Contractors and consultants	16.4	21.7	48.2	57.1
6	Other Raw Materials and supplies	4.5	3.0	11.3	6.6
7	Other Admin Expenses	0.4	0.3	2.1	0.9
8	Core Operations	39.7	42.9	115.0	117.2
9	Integrated Operations	10.1	10.4	29.5	28.0
10	Billing, Meters and Customer Service	5.9	6.9	18.3	20.2
11	Corporate Allocations	5.4	6.9	16.0	17.7
12	Franchise Fees & Property Taxes	10.9	12.2	31.6	34.3
13	Shared Services	5.3	9.1	15.6	21.6
14	**Total**	**77.4**	**88.4**	**226.1**	**239.0**

5.2.2 Construction Work in Progress

Wastewater Treatment's rate base consists of plant in service. If a capital project has not been completed (i.e., not placed into service) during the year, the capital expenditures on that project remain under Construction Work in Progress and are excluded from the rate base. As shown in Table 5.2.2-1, Wastewater Treatment's Construction Work in Progress balance at the end of 2024 was $64.9 million higher than forecast.

Table 5.2.2-1
Wastewater Treatment Construction Work in Progress
($ millions)

		A	B
	Construction Work in Progress	2024 PBR Forecast	2024 Actual
1	Balance, beginning of year	97.2	52.4
2	Capital expenditures	43.6	58.8
3	Capital additions	(131.1)	(36.5)
4	**Balance, end of year**	**9.7**	**74.6**

The PBR plan allows EWS to capitalize the costs of financing certain projects remaining in Construction Work in Progress, using AFUDC. In 2024, AFUDC included in capital expenditures on eligible projects amounted to $2.0 million, compared to the PBR forecast amount of $6.9 million.

5.2.3 Transactions with Affiliates

Wastewater Treatment derives a portion of its revenue and expenses from affiliate transactions including EUI, and its subsidiaries. Table 5.2.3-1 summarizes Wastewater Treatment's transactions with affiliates.

Table 5.2.3-1
Wastewater Treatment Transactions with Affiliates
($ millions)

		A	B	C	D
	Affiliate and Service	2024 PBR Forecast	2024 Actual	2022-2024 PBR Forecast	2022-2024 Actual
1	**EPCOR Utilities Inc.**				
2	Corporate Shared Service Costs	5.4	6.9	16.0	17.7
3	Interest on Intercompany Loans	13.9	14.2	38.6	40.2
4	Interest on Short-term debt	0.8	0.1	2.5	2.3
5	Other Services	0.1	0.0	0.3	0.4
6	**Total**	**20.2**	**21.2**	**57.4**	**60.6**
7	**Other EPCOR Affiliates**				
8	EPCOR Technologies Inc.	0.0	0.2	0.1	0.5
9	EPCOR Energy Alberta LP	3.1	4.8	9.1	12.3
10	**Total**	**3.1**	**5.0**	**9.2**	**12.8**

5.2.4 Rate Base

Wastewater Treatment's 2024 mid-year rate base, shown in Table 5.2.4-1 below, was $62.4 million lower than forecast primarily due to lower than forecast opening asset values and lower capital additions during the year resulting from adjustments to the capital program described in Section 2.2.3.

Table 5.2.4-1
Wastewater Treatment Mid-Year Rate Base
($ millions)

		A	B
		2024 PBR Forecast	2024 Actual
1	Plant in Service		
2	Balance, beginning of year	830.4	812.4
3	Capital additions	131.1	36.5
4	Retirements and adjustments	-	(24.6)
5	Balance, end of year	961.4	824.3
6	Mid-Year Plant in service	895.9	818.4
7	Accumulated Depreciation		
8	Balance, beginning of year	267.2	246.2
9	Depreciation expense	27.4	28.4
10	Retirements and adjustments	-	(24.6)
11	Balance, end of year	294.5	250.0
12	Mid-Year Accumulated Depreciation	280.8	248.1
13	Other Rate Base Items		
14	Working Capital	1.5	2.7
15	Materials and Supplies	2.7	(16.2)
16	**Gross Mid-Year Rate Base**	**619.2**	**556.8**
17	Contributions		
18	Balance, beginning of year	41.0	41.0
19	Current year contributions	-	-
20	Balance, end of year	41.0	41.0
21	Mid-Year Contributions	41.0	41.0
22	Accumulated Amortization		
23	Balance, beginning of year	22.1	22.1
24	Amortization of contributions	0.9	0.9
25	Balance, end of year	23.0	23.0
26	Mid-Year Accumulated Amortization	22.6	22.6
27	**Mid-Year Contributions**	**18.4**	**18.4**
28	**Mid-Year Rate Base**	**600.8**	**538.4**

5.3 Wastewater Collection

5.3.1 Operating Expenses by Cost Category

Table 5.3.1-1 below provides a breakdown of operating expenses by cost category. Explanations for forecast to actual differences are provided in Section 2.3.2.

Table 5.3.1-1
Wastewater Collection
Operating Expenses by Cost Category
($ millions)

		A	B	C	D
		2024		2022-2024	
	Cost Category	PBR Forecast	Actual	PBR Forecast	Actual
	Core Operations				
1	Staff Costs and Employee Benefits Expense	35.8	31.0	106.2	93.0
2	Contractor and Consultant Charges	6.1	9.3	21.9	30.5
3	Other Raw Materials and Operating Charges	(0.8)	2.3	(2.2)	5.0
4	Other Administrative Expenses	2.4	0.9	7.2	2.5
5	Core Operations	43.6	43.5	133.1	131.1
6	Integrated Operations Allocation	16.6	17.8	49.5	54.3
7	Customer Billing and Meter Services Charges	7.5	9.0	22.9	26.3
8	EWS Shared Services Allocation	23.3	24.3	68.7	72.4
9	Corporate Shared Services Allocation	17.0	19.9	49.8	57.5
10	Franchise fees and property taxes	13.1	14.3	36.9	39.7
11	**Operating Expenses**	**121.0**	**128.8**	**360.9**	**381.3**

5.3.2 Construction Work in Progress

Wastewater Collection's rate base consists of plant in service. If a capital project is not completed during the year, the capital expenditures on that project remain under Construction Work in Progress and are excluded from the rate base. In 2024, as shown in Table 5.3.2-1, the balance in Construction Work in Progress (line 13) was $28.2 million higher than forecast.

Table 5.3.2-1
Wastewater Collection
Construction Work in Progress
($ millions)

		A	B
		2024	
		PBR Forecast	Actual
1	Construction work in progress, beginning of year	106.5	91.7
	Capital expenditures		
2	Capital expenditures before contributions	309.7	249.0
3	Contributions received	(30.5)	(35.1)
4	Capital expenditures, net of contributions received	279.3	213.9
	Capital additions		
5	EPCOR-constructed assets	(328.8)	(218.0)
6	Developer-constructed assets	(127.6)	(154.0)
7	Total capital additions	(456.3)	(372.0)
	Contributions		
8	Contributions recognized	25.7	22.8
9	Developer-constructed assets	127.6	154.0
10	Total contributions	153.3	176.8
11	Capital additions, net of contributions	(303.1)	(195.3)
12	Write offs		0.6
13	**Construction work in progress, end of year**	**82.7**	**110.9**

The 2022-2024 PBR plan allows EWS to capitalize the costs of financing certain projects remaining in Construction Work in Progress, using an Allowance for Funds Utilized During Construction (AFUDC). In 2024, EWS capitalized $5.1 million of AFUDC, compared to the PBR forecast amount of $11.1 million.

5.3.3 Transactions with Affiliates

Wastewater Collection derives a portion of its revenue and expenses from transactions with EUI and its subsidiaries. Table 5.3.3-1 provides a summary of Wastewater Collection's 2024 forecast and actual transactions with its affiliates.

Table 5.3.3-1
Wastewater Collection
Transactions with Affiliates
($ millions)

		A	B	C	D
		2024		2022-2024	
	Affiliate and Service	PBR Forecast	Actual	PBR Forecast	Actual
1	EPCOR Utilities Inc.				
2	Corporate Shared Service Costs	17.0	19.9	49.8	57.5
3	Interest on Intercompany Loans	41.4	43.4	113.2	116.3
4	Interest on Short-term debt	0.8	5.9	2.6	11.0
5	**Total**	**59.2**	**69.2**	**165.6**	**184.8**
6	Other EPCOR Affiliates				
7	EPCOR Technologies Inc.	(0.2)	0.4	(0.6)	0.9
8	EPCOR Commercial Services Inc.	0.3	(0.0)	1.0	(0.2)
9	EPCOR Distribution and Transmission Inc.	0.1	0.5	0.3	0.2
10	EPCOR Energy Alberta LP	4.3	6.7	12.8	17.4
11	EPCOR Corporate Services - Other Charges	-	1.2	-	7.8
12	EPCOR Fleet Services	-	4.9	-	12.5
13	**Total**	**4.6**	**13.7**	**13.4**	**38.5**

5.3.4 Rate Base

In 2024, Wastewater Collection's mid-year rate base, shown in Table 5.3.4-1 below, was $74.1 million lower than forecast due to lower than forecast opening asset values, lower capital put in service and lower than forecast working capital. Lower than forecast working capital is almost entirely due to the inclusion of the mid-year balance of the consumption deferral account in the calculation of required working capital.

The mid-year rate base is allocated between the sanitary utility excluding CORe, the stormwater utility excluding SIRP, CORe and SIRP capital.

Table 5.3.4-1
Wastewater Collection
Mid-Year Rate Base
($ millions)

		A	B
		2024	
	Description	PBR Forecast	Actual
1	Plant in Service, beginning of year	6,495.7	6,453.1
	Capital additions		
2	EPCOR-funded	328.8	218.0
3	Developer-funded	127.6	154.0
4	Capital additions	456.3	372.0
5	Retirements and adjustments	(14.3)	(30.1)
6	Plant in Service, end of year	6,937.7	6,792.0
7	Accumulated depreciation, beginning of year	1,266.4	1,248.7
8	Gross Provision	101.6	97.8
9	Retirements and adjustments	(14.3)	(30.1)
10	Accumulated depreciation, end of year	1,353.7	1,316.3
11	Mid-Year Net Property	5,406.6	5,340.1
	Other Rate Base Items		
12	Materials and Supplies	1.4	1.3
13	Working Capital	18.6	(10.4)
14	**Gross Mid-Year Rate Base**	5,426.6	5,331.0
15	Contributions, beginning of year	(3,958.9)	(3,930.1)
	Current year contributions		
16	Developer-constructed assets	(25.7)	(22.8)
17	Contributions in aid of construction	(127.6)	(154.0)
18	Current year contributions	(153.3)	(176.8)
19	Retirements and adjustments	-	2.9
20	Contributions, end of year	(4,112.2)	(4,104.0)
21	Accumulated amortization, beginning of year	716.8	719.6
22	Amortization of contributions	50.5	50.9
23	Retirements and adjustments	-	-
24	Accumulated amortization, end of year	767.3	770.5
25	**Mid-Year Net Contributions**	(3,293.5)	(3,272.0)
26	**Mid-Year Rate Base**	**2,133.1**	**2,059.0**
	Allocated to:		
27	Sanitary Utility, excluding CORe	886.8	886.4
28	Stormwater Utility, excluding SIRP	860.3	884.2
29	SIRP	207.7	144.9
30	CORe	178.3	143.5
31	**Mid-Year Rate Base**	**2,133.1**	**2,059.0**

End of Report