Appendix K-1

EPCOR WATER SERVICES

HDR Cost of Service Studies

May 31, 2024

Final Report

2023 Sanitary and Stormwater Drainage Cost of Service Study

April 2024

April 29, 2024

Mr. Santosh Appukuttan
EPCOR Water Services, Inc.
9496 Rossdale Road NW
Edmonton, Alberta T5K 0A5

Subject: Sanitary and Stormwater Drainage Cost of Service Study Final Report

Dear Mr. Appukuttan:

HDR Engineering, Inc. (HDR) was retained by EPCOR Water Services, Inc. (EPCOR) to provide technical assistance in the update of EPCOR's sanitary and stormwater drainage cost of service analyses (Study) to support EPCOR's development of cost-based drainage rates for its customers. The Study was completed in conjunction with HDR's wastewater treatment cost of service analysis which is found in a separate report. EPCOR's drainage utility provides two key services: wastewater collection and stormwater management.

For the sanitary and stormwater drainage study, EPCOR was responsible for the development of the revenue requirement analysis and HDR was responsible for the development of the cost of service analysis. The objective of the cost of service analysis is to proportionally distribute EPCOR's sanitary and stormwater drainage costs to the customer classes of service. This is accomplished by using industry accepted cost of service principles and methodologies and tailoring them to the specific and unique characteristics and operations of EPCOR's drainage system.

In developing these analyses, HDR has relied on EPCOR's accounting, operating and management records. From our analyses, HDR has provided our findings, conclusions, and recommendations. This report details our approach and methodology for the sanitary and stormwater drainage utilities. The model and technical analyses are intended to provide cost-based, defensible, and proportional sanitary and stormwater drainage rates.

We appreciate the opportunity to provide technical assistance to EPCOR. We also appreciate the assistance provided by EPCOR management and staff in the development of the Study.

Sincerely yours,
HDR Engineering, Inc.

Shawn Koorn
Associate Vice President

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1 Introduction and Overview

EPCOR Water Services, Inc. (EPCOR) provides drainage utility services related to the collection of wastewater (sanitary drainage) and the management of stormwater runoff (stormwater drainage). These services are provided under a combined drainage utility. While they appear to be two separate and distinct utility services, which they are, they do share certain facilities and resources. Given that, the Study will examine each service, sanitary drainage, and stormwater drainage, on a separate stand-alone basis.

HDR Engineering, Inc. (HDR) was retained by EPCOR to provide technical assistance in the development of a sanitary and stormwater drainage cost of service analysis to support EPCOR's historical practice of establishing cost-based drainage rates. This report outlines the approach, methodology, findings, and conclusions of the sanitary and stormwater cost of service analyses.

This report was developed utilizing EPCOR's accounting, operating and management records. HDR has relied on this information to develop our analyses, from which we draw our findings, conclusions, and recommendations. The sanitary and stormwater cost of service analyses were developed utilizing generally accepted utility rate setting and cost of service principles and methodologies. This report provides EPCOR with the basis for developing and implementing sanitary and stormwater drainage rates which are cost-based and defensible to its customers.

1.1 Study Goals and Objectives

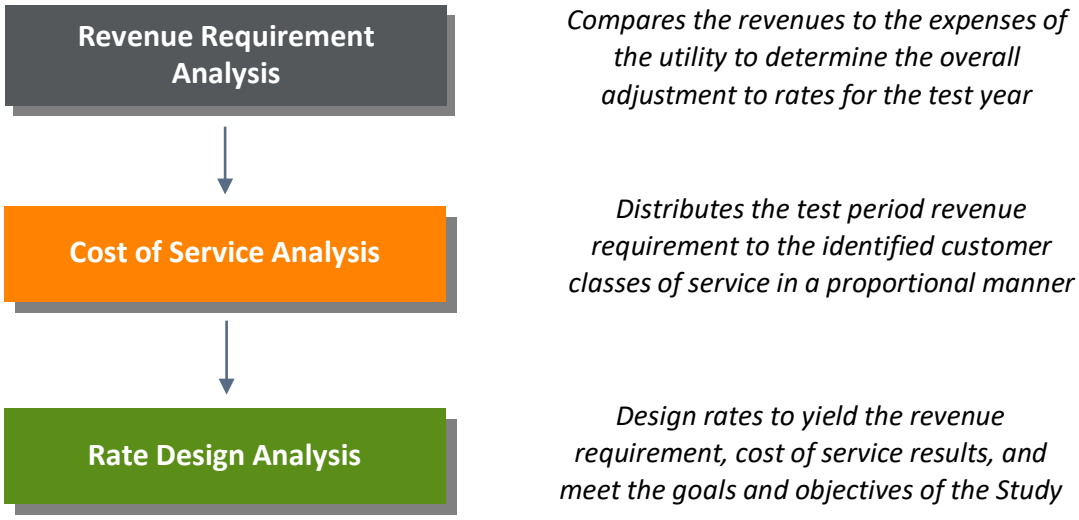
The development of the Study was based on several key rate study goals and objectives. In general, these were as follows:

- Develop a sanitary drainage (wastewater collection) cost of service analysis that is consistent with the principles and methodologies established by the Water Environment Federation Manual of Practice No. 27, Financing and Charges for Wastewater Systems
- Develop a stormwater drainage cost of service analysis that is consistent with industry best-practices and cost of service principles and methodologies for stormwater utilities
- Develop sanitary and stormwater cost of service methodologies to proportionally distribute the cost of providing these services to the customer classes served
- Review the current sanitary and stormwater drainage rate structures
- Provide EPCOR with a sanitary and stormwater cost of service model to use and evaluate the distribution of future sanitary and stormwater drainage costs and rate impacts

1.2 Overview of the Comprehensive Rate Study Process

Provided in Figure 1 – 1 is an overview of the steps required to conduct a comprehensive rate study.

Figure 1 – 1
Overview of the Comprehensive Rate Study Process



These generally accepted methodologies are based on rate-setting principles and practices described in the Water Environment Federation Manual of Practice #27 (WEF MOP). The framework or methodology shown in Figure 1 – 1 provides an overview of the typical components of a comprehensive rate study, regardless of the utility being analyzed. An important aspect of the Study is incorporating and "tailoring" those analytical elements to reflect the specific circumstances of EPCOR's sanitary and stormwater drainage system.

1.3 Report Organization

This report is designed to discuss and document the technical analyses undertaken within this study. To that end, this report is organized as follows:

- Section 2 provides an overview, discussion, and summary of the sanitary and stormwater drainage revenue requirement analyses, which was developed by EPCOR
- Section 3 reviews the development of the sanitary drainage cost of service analysis
- Section 4 reviews and discusses the development of the stormwater cost of service analysis
- Section 5 provides a discussion of the current sanitary and stormwater drainage rates
- Technical Appendix A is the sanitary drainage detailed technical exhibits
- Technical Appendix B is the stormwater drainage detailed technical exhibits

1.4 Summary

This report provides a summary of the technical analyses undertaken to develop the sanitary and stormwater drainage cost of service analysis based on generally accepted methodologies which will provide EPCOR with the information necessary to continue to develop cost-based and proportional rates applicable to its sanitary and stormwater utility. The approach used to split

the combined assets between sanitary and stormwater drainage appears reasonable and HDR did not encounter any evidence that would suggest a different approach should be used.

2 Drainage Utility Revenue Requirement

This section of the report discusses the development of the revenue requirement for EPCOR's sanitary and stormwater drainage utility. A revenue requirement analysis provides a technical framework around which to evaluate the overall adequacy of EPCOR's current drainage rates, both sanitary and stormwater.

It is important to note that EPCOR's drainage utility is operated and accounted for on a combined utility basis. For purposes of the comprehensive rate study - and the cost of service analyses in particular - the revenue requirement will be segregated between sanitary drainage and stormwater drainage. EPCOR management and staff developed the revenues and expenses (i.e., costs) included in the drainage revenue requirement analyses and provided them to HDR. In addition, EPCOR was responsible for the final segregation of drainage costs between the sanitary and stormwater utility functions/services.

Provided below is a detailed discussion of the drainage utility revenue requirement analysis. The segregated revenue requirement analyses for the sanitary and stormwater drainage ultimately becomes the initial input into the sanitary and stormwater drainage cost of service analyses developed for EPCOR by HDR.

2.1 Revenue Requirement Framework

By virtue of the differences between a public utility and a private utility, the revenue requirement is often based upon different elements or methodologies. Most private or regulated utilities utilize what is known as a "utility or accrual" basis of determining revenue requirement for setting rate levels. This convention calculates a utility's annual revenue requirement by aggregating a test period's operation and maintenance (O&M) expenses, taxes, annual depreciation expense and a return on investment.

In contrast to the utility or accrual method of developing the revenue requirement for privately-owned public utilities, a different method of determining the revenue requirement is often used for governmentally-owned public utilities. The convention used by most governmental or public utilities is called the "cash basis" methodology of setting revenue requirement. As the name implies, a public utility aggregates its cash expenditures to determine its total revenue requirement for a specified period of time.

Table 2 - 1 summarizes and compares the cash and utility/accrual basis methodologies.

Table 2 – 1
Cash versus Utility Basis Comparison

	Cash Basis		Utility Basis (Accrual)
+	O&M Expenses	+	O&M Expenses
+	Taxes/Transfer Payments	+	Taxes/Transfer Payments
+	Capital Improv. Funded From Rates (≥ Depreciation Expense)	+	Depreciation Expense
+	Debt Service (Principal + Interest)	+	Return on Investment
=	**Total Revenue Requirement**	=	**Total Revenue Requirement**

For this particular study, given that EPCOR is a regulated utility, the utility/accrual basis approach was utilized. This methodology is consistent with EPCOR's past rate setting methodologies and practices.

2.2 Development of the Drainage Revenue Requirement

The first step of the comprehensive rate study process is the development of the revenue requirement analysis. The drainage utility revenue requirement used for this study was developed by EPCOR management and staff. This section of the report will discuss and summarize EPCOR's drainage utility revenue requirement analysis.

The initial step in calculating the drainage utility revenue requirement was to establish a test period or time frame around which the revenue requirement would be reviewed. For this particular analysis, the drainage utility revenue requirement analysis has been developed based on EPCOR's revenue requirement for 2024 though 2027 and then projected from 2028 through 2033.

2.3 Summary of the Drainage Revenue Requirement

Summarized below in Table 2 - 2 is a summary of the sanitary drainage revenue requirement for years 2023 – 2033. Table 2 - 3 on the following page is the stormwater drainage revenue requirement.

Table 2 – 2
Summary of the Sanitary Drainage Revenue Requirement ($000)

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Revenues										
Rate Revenues	$171,409	$184,562	$198,221	$212,749	$216,153	$219,612	$223,125	$226,695	$230,322	$234,008
Other Revenues	3,589	3,658	3,722	3,782	3,842	3,904	3,966	4,030	4,094	4,160
Total Revenues	**$174,998**	**$188,221**	**$201,944**	**$216,531**	**$219,996**	**$223,515**	**$227,092**	**$230,725**	**$234,417**	**$238,167**
Expenses										
O&M Expenses	$69,213	$70,011	$71,586	$73,118	$74,654	$76,221	$77,822	$79,456	$81,125	$82,828
Property Tax	469	480	494	503	429	437	446	454	463	471
Depreciation	20,725	26,210	28,166	29,972	31,874	33,886	36,011	38,258	40,632	43,140
Return on Rate Base - Debt	23,325	25,828	28,713	31,576	34,733	38,207	42,027	46,230	50,853	55,938
Return on Rate Base - Equity	33,740	40,529	47,624	50,551	53,634	56,906	60,377	64,060	67,968	72,114
Total Expenses	**$147,473**	**$163,058**	**$176,583**	**$185,719**	**$195,325**	**$205,657**	**$216,684**	**$228,459**	**$241,040**	**$254,492**
Bal. / (Def.) of Funds	$27,525	$25,162	$25,360	$30,812	$24,671	$17,859	$10,408	$2,267	($6,623)	($16,325)

Table 2 – 3
Summary of the Stormwater Drainage Revenue Requirement ($000)

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Revenues										
Rate Revenues	$120,545	$130,959	$143,287	$155,241	$157,880	$160,564	$163,294	$166,070	$168,893	$171,764
Other Revenues	658	662	674	685	697	709	721	733	745	758
Total Revenues	**$121,203**	**$131,622**	**$143,960**	**$155,926**	**$158,577**	**$161,273**	**$164,015**	**$166,803**	**$169,638**	**$172,522**
Expenses										
O&M Expenses	$55,183	$53,116	$54,229	$55,289	$56,450	$57,635	$58,846	$60,081	$61,343	$62,631
Property Tax	751	760	768	779	791	803	815	827	840	852
Depreciation	26,486	26,425	28,627	30,974	33,418	36,022	38,796	41,751	44,897	48,245
Return on Rate Base - Debt	24,593	27,191	29,667	32,734	35,844	39,249	42,978	47,061	51,532	56,427
Return on Rate Base - Equity	35,357	42,668	49,206	52,406	55,812	59,440	63,303	67,418	71,800	76,467
Total Expenses	**$142,370**	**$150,161**	**$162,498**	**$172,182**	**$182,315**	**$193,149**	**$204,738**	**$217,138**	**$230,411**	**$244,623**
Bal. / (Def.) of Funds	($21,167)	($18,539)	($18,537)	($16,256)	($23,738)	($31,877)	($40,724)	($50,336)	($60,773)	($72,101)

As noted previously, both the sanitary and stormwater drainage revenue requirement analyses summarized above were developed by EPCOR and provided to HDR. This revenue and cost information provides the basis for the cost of service analysis for each utility.

2.4 Summary

This section of the report has provided a summary of the sanitary and stormwater drainage revenue requirement as developed by EPCOR. The revenue requirement results for test year 2024 were used by HDR as the starting point for the sanitary and stormwater drainage cost of service analyses. The next section of the report will discuss the development of the sanitary drainage cost of service analysis.

3 Sanitary Drainage Cost of Service Analysis

This section of the report details the development of the sanitary drainage cost of service analysis. Sanitary drainage is related to the collection of wastewater for treatment at EPCOR's wastewater treatment facilities. The sanitary drainage cost of service analysis proportionally distributes the sanitary drainage revenue requirement previously summarized in Table 2 - 2. Provided below is a more detailed discussion of the key technical steps of the sanitary drainage cost of service analysis conducted by HDR, along with our findings, conclusions, and recommendations.

3.1 Overview and Purpose of the Cost of Service Analysis

The objective of a cost of service analysis is to proportionally distribute the utility's revenue requirement to the various customer classes of service. Following generally accepted cost of service guidelines, principles and methodologies will inherently lead to sanitary drainage rates which are cost-based and proportional.

There are two primary objectives in conducting a cost of service analysis:

1. Proportionally distribute the revenue requirement among the customer classes of service
2. Derive average unit costs for subsequent reference/use in designing final rates

The objectives of a cost of service analysis are different than determining a revenue requirement. As noted in the previous section, a revenue requirement analysis determines the utility's overall financial needs, while the cost of service analysis provides a methodology to determine the proportional manner in which to apportion or collect the revenue requirement across the various customer classes of service (e.g., residential, commercial).

The second rationale for conducting a cost of service analysis is to design a rate such that it properly reflects the costs incurred by the utility. For example, a sanitary drainage (or collection) system primarily incurs costs related to the total flow of wastewater. Given that, those customers impacting the system and total flows should be assigned a proportional share of the costs based upon their contribution to total wastewater flow. Wastewater flow is one type of cost incurred on a wastewater system. Each type of cost may be collected in a slightly different manner as to allow for the development of rates that collect costs in roughly the same manner as they are incurred.

3.2 Establishing Sanitary Drainage Customer Classes of Service

The first step in a cost of service study is to determine the customer classes of service which costs will be proportionally distributed to. To establish the classes of service, the utility must segregate individual customers into groups of customers (i.e., classes of service) that have similar usage patterns and facility requirements. For EPCOR's sanitary drainage cost of service analysis, the following customer classes of service were utilized.

- Residential
- Multi-Residential
- Commercial
- University of Alberta (U of A)

During the development of the sanitary drainage cost of service, a review of the classes of service for this analysis was conducted. After discussions with EPCOR staff, it was concluded that the current sanitary drainage customer classes of service appear to be reasonable and follow industry practices. The establishment of customer classes of service allows for the development of cost-based rates and the ability to establish sanitary drainage rate structures, by customer class of service, reflective of their cost of service.

3.3 Sanitary Drainage Key Cost of Service Assumptions

A number of key assumptions were used within the EPCOR sanitary drainage cost of service study. Listed below is a brief summary of the key assumptions used.

- The test year used for the sanitary drainage cost of service analyses was the 2024 forecasted revenue requirement.
- The revenue and expense data utilized by HDR within this study was provided by EPCOR
- A "utility basis" approach was utilized for the revenue requirement and cost of service analysis. This is a generally accepted cost of service methodology.
- The allocation and distribution of plant in service and the revenue requirement was based on EPCOR specific data and information. Where key assumptions or estimates were required, HDR relied on EPCOR's staff understanding of the system and customers and HDR's direct industry experience in similar cost of service studies.
- The distribution factors developed as a part of the sanitary drainage cost of service analysis used EPCOR specific customer data. In particular, the data and information used to develop the volume distribution factor was provided by EPCOR.

3.4 General Cost of Service Procedures

A cost of service analysis utilizes a three-step approach to review costs and these analytical steps take the form of ***functionalization***, ***allocation***, and ***distribution***. Provided below is a more detailed discussion of the sanitary drainage cost of service analysis, and the specific steps taken within the analysis.

3.4.1 Functionalization of Sanitary Drainage Costs

The first analytical step of the sanitary drainage cost of service analysis is called ***functionalization***. Functionalization is the arrangement of asset (plant/infrastructure) data and expenses (costs) by major operating functions within the utility (e.g., collection, pumping). Within this study, the functionalization of the sanitary drainage cost data was accomplished through EPCOR's sanitary drainage system of accounts. EPCOR's plant accounts are segregated between the major categories of sanitary, stormwater, and common. The sanitary plant assets were included within the sanitary cost of service analysis. The common (shared) plant assets were proportionally

assigned between the sanitary and stormwater drainage utilities based upon the relative plant assets of each utility.

3.4.2 Allocation of Sanitary Drainage Costs

The second analytical task performed in the sanitary drainage cost of service analysis is the ***allocation*** of the costs. The allocation of sanitary drainage costs is a process which reviews each cost and determines why the expense was incurred or what type of need (e.g., volume/flow-, customer-related) is being met. The sanitary drainage utility's plant accounts and revenue requirement were reviewed and allocated using generally accepted cost of service principles and methodologies. Provided below is an overview of the various types of allocated costs used in the sanitary drainage cost of service analysis.

- **Volume-Related Costs:** Volume-related costs are those costs which tend to vary with the total quantity of wastewater collected and conveyed.
- **Capacity/Demand-Related Costs:** Capacity/demand costs are costs which are related to the capacity requirements of the system. This allocation method is used to reflect that the sanitary collection system is a function of both the number of customers on the system (i.e., a network of pipes and pumps), and a function of the maximum flows that customers place on the system.
- **Customer-Related Costs:** Customer-related costs are those costs which vary with the addition or deletion of a customer or a cost which is a function of the number of customers served. Customer-related costs typically include the costs of accounting, billing, and collecting, and accounting. Customer costs can also be segregated between *actual* and *weighted*. An actual customer cost does not vary on a per customer basis, regardless of the size or usage of the customer (e.g., postage on a bill). In contrast, certain customer-related costs may vary by customer, on a per customer cost basis. For example, the cost of metering can vary given a customer with a larger sized meter.
- **Revenue-Related Costs:** Revenue-related costs are those costs which vary with the amount of revenue received by the utility. An example of a revenue-related cost would be a utility tax which is based (i.e., assessed) on gross utility revenue.

The basis, or methodology, for the allocation of EPCOR's sanitary drainage plant assets and costs is based on generally accepted wastewater cost of service principles and methodologies. These wastewater cost of service principles and methodologies are discussed and outlined in the Water Environment Federation, Manual of Practice #27, Financing and Charges for Wastewater Systems. The principles and methodologies discussed and outlined in this wastewater rate setting manual were adapted and tailored to be reflective of EPCOR's specific and unique facilities, customers, costs, and operations.

3.4.3 Development of the Sanitary Drainage Distribution Factors

Once the allocation of sanitary drainage assets and costs is complete - and the customer groups defined - the third analytical task is the proportional ***distribution*** of allocated costs to each customer class of service using distribution factors. EPCOR's sanitary drainage allocated assets and costs were distributed to the various customer classes of service using the following sanitary drainage distribution factors.

- **Volume Distribution Factor:** Volume-related costs are generally distributed on the basis of estimated contributions to wastewater flows. Wastewater flows are not typically metered and must be estimated using a reasonable surrogate for a customer class's contribution. In wastewater cost of service analyses, metered water consumption, adjusted for outdoor irrigation usage, is often used as a reasonable surrogate for wastewater volume contributions. As part of the data and information provided by EPCOR to HDR, estimates of volume contributions of each class of service was provided. These volumetric estimates by sanitary drainage customer class of service were used as the basis for the volume distribution factor. The development and calculation of the volume distribution factor is shown in Exhibit 3 of the Sanitary Drainage Technical Appendix.
- **Capacity/Demand Distribution Factor:** Capacity/demand-related costs, and the distribution factor developed for them, considers both the number of customers served by the system, but also the capacity use or maximum volumes a customer can place upon the system. This distribution factor is based on an equivalent meter analysis which takes into consideration the number of meters by customer class of service (i.e., number of customers), but also the size of each individual meter and the capacity flow from that meter. This capacity/demand concept was used to allocate and proportionally distribute a portion of the sanitary drainage systems collection lines. The development and calculation of the capacity/demand distribution factor is shown in Exhibit 4 of the Sanitary Drainage Technical Appendix.
- **Customer Distribution Factors:** Customer costs within the sanitary drainage cost of service analysis are distributed to the various customer classes of service based upon their respective number of customer accounts. For EPCOR's sanitary drainage cost of service analysis, two basic types of customer distribution factors were developed – actual and weighted. The actual customer distribution factor reflects that there is no disproportionate cost associated with serving a customer and distributes costs on the basis of the number of customers/accounts. In contrast, a weighted customer distribution factor typically assumes that there is some disproportionality associated with serving different types of customers and attempts to estimate the level of difference in serving the customers. For EPCOR's weighted distribution factor for customer service and accounting, it was based on the number of equivalent meters for each customer class of service. Exhibit 5 of the Sanitary Drainage Technical Appendix provides the development and calculation of the actual and weighted customer distribution factors.
- **Revenue Related Distribution Factor:** The revenue related allocation factor was developed from the projected rate revenues for 2024 for each customer class of service, as developed in EPCOR's revenue requirement analysis. A summary of the revenue distribution factor is provided in Exhibit 6 of the Sanitary Drainage Technical Appendix.

The development of the distribution factors is based on generally accepted principles and methodologies. Given the development of the distribution factors, the final step in the cost of service analysis is to distribute the allocated costs to the customer classes of service and summarize the results.

3.5 Functionalization and Allocation of Net Plant in Service

A necessary step of the cost of service is the functionalization and allocation of the sanitary drainage net plant in service. Net plant in service is defined as the original cost (OC) of plant in service, less the accumulated depreciation. The net plant in service balances were provided by EPCOR and were reflective as of December 31, 2022.

In performing the functionalization of net plant in service, HDR utilized EPCOR's historical plant records. The drainage utility's total assets were then split into three categories: sanitary, stormwater, and common. The shared or common plant assets are related to sections of EPCOR's system where there are legacy "combined" sanitary and stormwater drainage system components. For the shared or common assets, a determination was made on how to proportionally divide or split the costs. In general, the costs of common plant assets were split based on the percentage of the sanitary and stormwater drainage assets as a percent of the total assets less the common assets. HDR reviewed with EPCOR staff the assignment of the common plant assets to confirm the appropriateness of their assignment between sanitary and stormwater drainage net plant assets.

Provided below in Table 3 – 1 is a summary of the allocation of the common net plant in service to the sanitary and stormwater drainage plant in service.

Table 3 – 1
Summary of the Assignment of Net Plant in Service [1]
Between Sanitary and Stormwater Drainage ($000)

Plant Components	Total	Sanitary	Stormwater
Common Plant			
Collection	$209,141	$95,557	$113,584
General Plant	80,974	30,698	50,275
Pumping	2,532	2,257	275
Storage	1,918	175	1,743
Total Common Plant	**$294,565**	**$128,688**	**$165,877**
Sanitary Plant	$1,894,260	$1,894,260	$0
Stormwater Plant	2,695,256	0	2,695,256
Total Net Plant in Service	**$4,884,081**	**$2,022,948**	**$2,861,133**

[1] – Net plant as of December 31, 2022

Given the assignment of the common plant in service and the functionalization of net plant in service, HDR then allocated each plant asset category (i.e., collection, pumping, and storage) to the appropriate cost allocation components previously described.

The allocation process included reviewing each plant line item and determining which cost components the assets were related to. The proposed allocations are based on HDR's understanding of EPCOR's current sanitary drainage facilities, their current operations, and generally accepted allocation methodologies for sanitary/wastewater utilities. HDR's proposed allocations of net plant in service to the various cost components were reviewed with EPCOR's

staff to confirm that the allocated plant components reasonably reflect the facilities and operations of EPCOR's sanitary drainage plant. Table 3 - 2 provides a summary of the allocated net plant in service for the sanitary drainage utility.

Table 3 – 2
Summary of the Allocation of Sanitary Drainage Plant in Service ($000)

	Total Net Plant	Volume	Capacity Demand
Collection	$1,743,515	$1,394,812	$348,703
Collection - Common	95,557	76,446	19,111
Pumping Stations	88,092	88,092	0
Pumping - Common	2,257	2,257	0
Storage	61,253	49,002	12,251
Storage - Common	175	140	35
Biosolids	0	0	0
Total before General	**$1,990,850**	**$1,610,750**	**$380,100**
General Plant	$1,400	$1,132	$267
General Plant - Common	30,698	24,837	5,861
Grand Total	**$2,022,948**	**$1,636,720**	**$386,228**

A detailed exhibit of the functionalization and allocation of plant investment can be found in the Sanitary Drainage Technical Appendix A, Exhibit 7.

3.6 Functionalization and Allocation of the Revenue Requirement

Operating expenses are generally functionalized and allocated in a manner similar to the corresponding plant account. This approach to allocation of operating expenses was used for this analysis. For the cost of service study, the 2024 revenue requirement for the sanitary drainage utility prepared by EPCOR was functionalized, allocated, and distributed. As noted previously, the revenue requirement was developed utilizing the utility/accrual basis methodology which was comprised of operation and maintenance expenses, depreciation, revenue tax, and a return on rate base. Provided in Table 3 – 3 is a summary of the allocated revenue requirement for EPCOR's sanitary drainage.

Table 3 – 3
Summary of the Allocation of the Sanitary Drainage
2024 Revenue Requirement ($000)

	Total	Volume	Actual Customer	Capacity Demand	Revenue Related
Total O&M	$69,213	$39,178	$7,291	$9,245	$13,500
Property Taxes	469	0	0	0	469
Depreciation	20,725	11,731	2,183	2,768	4,042
Return on Rate Base - Debt	23,325	13,203	2,457	3,116	4,550
Return on Rate Base - Equity	33,740	19,098	3,554	4,507	6,581
Total Rev. Require.	**$147,473**	**$83,211**	**$15,485**	**$19,636**	**$29,141**

Table 3 – 3
Summary of the Allocation of the Sanitary Drainage
2024 Revenue Requirement ($000)

	Total	Volume	Actual Customer	Capacity Demand	Revenue Related
Less: Non-Op Rev.	($3,589)	($2,025)	($377)	($478)	($709)
Net Rev. Require.	**$143,884**	**$81,186**	**$15,108**	**$19,158**	**$28,432**

A more detailed exhibit of the functionalization and allocation of the sanitary drainage revenue requirements can be found on Exhibit 8 of the Sanitary Drainage Technical Appendix.

3.7 Summary of the Sanitary Drainage Cost of Service Analysis

In summary form, the sanitary drainage cost of service analysis began by functionalizing the sanitary drainage net plant asset records and revenue requirements. The functionalized net plant and expense accounts were then allocated into their various cost components. The individual allocation totals were then distributed to the various customer classes of service based upon the use of proportional and equitable distribution factors. The distributed revenue requirement (i.e., expenses) for each customer class of service were then aggregated to determine each customer group's overall revenue responsibility. A summary of the detailed cost responsibility developed for each sanitary drainage class of service for 2024 is shown below in Table 3 - 4.

Table 3 – 4
Summary of the Sanitary Drainage Cost of Service Analysis ($000)

	Present Revenue	Allocated Costs	$ Difference	% Difference
Residential	$106,582	$91,149	$15,433	-14.5%
Multi-Residential	28,349	23,269	5,080	-17.9%
Commercial	34,899	28,161	6,738	-19.3%
University of Alberta [1]	1,579	1,305	274	-17.3%
Total	**$171,409**	**$143,884**	**$27,525**	**-16.1%**

[1] – Distributed cost for U of A include a collection system discount of 44% which U of A owns and operates

The distribution of costs reflects the facilities and costs proportionally distributed to each customer class based on their implied benefit. The cost of service results indicated that some cost differences exist between the customer classes of service, however, the differences are very minor. A cost of service analysis is a dynamic analysis, and the results can change from year to year as changes in costs and customer usage occurs. Given this variability, HDR typically reviews the summary of a cost of service analysis to determine whether a class of service is within a reasonable range of the cost to provide service. The metric that HDR utilizes is a class of service is assumed to be within a "reasonable range" if the class is within ± 5% of the overall required adjustment. In other words, given EPCOR's –16.1% overall adjustment in this analysis, a class of

service would be considered within a reasonable range if they are within the range of -21.1% to –11.1%.

The results above indicate that the classes of service are within a reasonable range of covering their respective costs. It is important to note that the above results are based upon a specific time period (i.e., one year) and a specific time period's costs and usage characteristics. As a result, "cost of service" for a class of service is often best determined over an extended number of studies. It is recommended that EPCOR continues to review and update the sanitary drainage cost of service before making interclass adjustments. As can be seen in Table 3 - 4, the current sanitary drainage revenues exceed the current sanitary drainage expenses. However, overall the drainage revenues, combined sanitary and stormwater, approximately equal the drainage expenses. As EPCOR continues to evaluate costs associated with each service, the revenues and expenses should become closer with further analysis and assumptions of the split of costs between the services.

The detailed summary of the sanitary drainage cost of service analysis can be found in the Sanitary Drainage Technical Appendix A, Exhibits 9 through 11.

3.8 Sanitary Drainage Average Unit Costs

Average unit costs are essentially cost-based rates. In this case, the distributed sanitary drainage costs are converted from dollars to per unit costs. The per unit costs take the form of a fixed and variable (volumetric) average cost. Provided in Table 3 - 5 is a summary of the calculated average unit cost for the sanitary drainage utility.

Table 3 – 5
Summary of the Sanitary Drainage Average Unit Costs

	System Average	Residential	Multi-Residential	Commercial	Univ. of Alberta [1]
Variable Costs – Volume-Related $/m³	**$0.82**	**$0.83**	**$0.83**	**$0.83**	**$0.46**
Fixed Costs – $/Eq. Mtr./Mth					
Actual Customer	$3.76	$4.32	$0.85	$1.57	$0.02
Weighted Customer	0.00	0.00	0.00	0.00	0.00
Capacity/Demand	4.77	4.77	4.77	4.77	4.77
RR/Dir. Assign.	7.07	5.43	21.69	10.68	102.48
Total Fixed Costs	**$15.60**	**$14.52**	**$27.31**	**$17.02**	**$107.27**

[1] – Calculated average unit costs has included the discount for U of A

The calculated average unit costs for the sanitary drainage utility have placed the distributed "variable" costs in the context of $/m³ and the "fixed" costs in a $/equivalent meter/month. It is important to understand that these average unit costs are the starting point for proposed sanitary drainage rate designs. Final rate designs, as discussed in Section 5 can consider other rate design attributes other than strictly cost of service. In addition, the average unit costs are also impacted by those costs which are considered "fixed" versus "variable." For example, in this

calculation of the average unit costs, the capacity/demand-related costs have entirely been included in the fixed (meter charge) costs. There certainly could be a perspective that these specific costs could be semi-fixed/semi-variable which, in that case, would shift some costs to the variable average unit cost and increase that component, while decreasing the fixed average unit cost.

EPCOR uses a performance-based-ratemaking (PBR) in the development of their utility rates. In short, PBR attempts to link rate adjustments (price) to performance. In contrast, traditional ratemaking simply links price to cost. Regardless of the ratemaking method utilized, including PBR, the starting point for establishing the rates is the cost of service analysis. The following notes this cost of service perspective:

> *"The starting point for utility rates generally is a cost of service study. The subsequent years' rates are determined by applying the PBR formula to adjust the previous rates for the effects of inflation and for productivity improvements."* [1]

As noted above, the starting point for establishing the sanitary drainage rates is the cost of service analysis. In particular, the sanitary drainage cost of service analysis provides two important items of information which may be used to establish the sanitary drainage rates. These items are as follows:

- Target revenue levels by customer class of service
- Average Unit Costs

The target revenue levels or allocated costs from the cost of service analysis (Table 3 - 4) establish the level of revenue to be derived from each customer class of service. In comparison, the average unit costs (Table 3 - 5), as developed in the cost of service analysis, provide the cost basis for the fixed and variable charges associated with each customer class of service. The detailed exhibit of the development of the sanitary drainage average unit costs can be found in the sanitary drainage technical appendix A, Exhibit 12.

3.9 Summary

This section of the report has reviewed the sanitary drainage cost of service analysis. This analysis was developed using EPCOR specific asset and expense records and information. The overall cost of service methodology for the sanitary drainage utility was based upon generally accepted cost of service principles and methodologies, tailored to reflect EPCOR's specific and unique system.

[1] Performance-Based Ratemaking: Theory and Practice, Dr. Michael R. Schmidt, Public Utilities Reports, Inc., Vienna, Virginia, 2000, p. 2.

4 Stormwater Drainage Cost of Service Analysis

This section of the report details the development of the stormwater drainage cost of service analysis. Stormwater drainage is related to the management of stormwater runoff. The stormwater drainage cost of service analysis proportionally distributes the stormwater drainage revenue requirement summarized in Table 2 - 3. Provided below is a more detailed discussion of the key technical steps of the stormwater drainage cost of service analysis, conducted by HDR, along with our findings, conclusions, and recommendations.

4.1 Overview and Purpose of the Cost of Service Analysis

The objective of a cost of service analysis is to proportionally distribute a utility's revenue requirement to the various customer classes of service. Following generally accepted cost of service guidelines, principles and methodologies will inherently lead to stormwater drainage rates which are equitable, cost-based, and not viewed as arbitrary or capricious in nature.

There are two primary objectives in conducting a cost of service analysis:

1. Proportionally distribute the revenue requirement among the customer classes of service
2. Derive average unit costs for subsequent reference/use in designing final rates

The objectives of a cost of service analysis are different than determining a revenue requirement. As noted previously, a revenue requirement analysis determines the utility's overall financial needs, while the cost of service analysis provides a methodology to proportionally collect the revenue requirement from the various customer groups (e.g., residential, commercial).

The second rationale for conducting a cost of service analysis is so that the proposed stormwater drainage rate is designed such that it properly reflects the costs incurred by the utility. For example, stormwater runoff and costs are a function of a parcel's impervious area and intensity of development/runoff coefficient. Given that, those customers with larger areas and higher intensity development should have rates reflective of those parcel characteristics and relative stormwater runoff contributions.

4.2 Establishing Stormwater Drainage Customer Classes of Service

The first step in a cost of service study is to determine the customer classes of service which costs will be proportionally distributed to. To establish the classes of service, the utility must segregate customers into groups of customers (i.e., classes of service) that have similar stormwater characteristics, parcels and/or facility requirements. For EPCOR's stormwater drainage cost of service analysis, the following customer classes of service were utilized.

- Residential
- Multi-Residential
- Commercial

During the development of the stormwater drainage cost of service, a review of the classes of service for this analysis was conducted. After discussions with EPCOR staff, it was concluded that

these stormwater drainage customer classes of service appear to be reasonable and are reflective of industry practices. The establishment of customer classes of service allows for the development of cost-based rates and, if desired, the ability to establish stormwater drainage rate structures, by customer class of service, reflective of their cost of service.

4.3 Stormwater Drainage Key Cost of Service Assumptions

A number of key assumptions were used within the EPCOR stormwater drainage cost of service analysis. Listed below is a brief summary of the key assumptions used.

- The test year used for the stormwater drainage cost of service analyses was the 2024 forecasted revenue requirement
- The revenue and expense data utilized by HDR within the Study was provided by EPCOR
- A "utility basis" approach was utilized for the revenue requirement and cost of service analysis. This is a generally accepted cost of service methodology
- The allocation and distribution of plant in service and the revenue requirement was based upon EPCOR specific data and information. Where key assumptions or estimates were required, HDR relied upon our direct industry experience in similar cost of service studies and EPCOR staff's understanding of the stormwater drainage system and facilities.
- The equivalent stormwater unit distribution factor developed as a part of the stormwater drainage cost of service analysis used EPCOR specific customer data and billing information. These ESUs by customer class of service were provided by EPCOR to HDR.

4.4 General Cost of Service Procedures

A cost of service analysis utilizes a three-step approach to review costs and these analytical steps take the form of ***functionalization***, ***allocation***, and ***distribution***. Provided below is a more detailed discussion of the stormwater drainage cost of service analysis, and the specific steps taken within the analysis.

4.4.1 Functionalization of Stormwater Drainage Costs

The first analytical step of the stormwater drainage cost of service analysis is called ***functionalization***. Functionalization is the arrangement of asset (plant) data and expenses (costs) by major operating functions within the utility (e.g., collection, pumping, storage). Within the Study, the functionalization of the stormwater cost data was accomplished through EPCOR's existing stormwater drainage system of accounts. EPCOR's plant accounts are segregated between the major categories of sanitary, stormwater and common. In this case, the stormwater plant assets were included within the stormwater cost of service analysis. The common (shared) plant assets were proportionally assigned between the sanitary and stormwater drainage utilities based upon the relative plant assets of each utility.

4.4.2 Allocation of Stormwater Drainage Costs

The second analytical task performed in the stormwater drainage cost of service analysis is the ***allocation*** of the costs. The allocation of stormwater drainage costs is a process which reviews each cost and determines why the expense was incurred or what type of need (e.g., volume/flow, customer-related) is being met. The stormwater drainage utility's plant accounts and revenue

requirement were reviewed and allocated using generally accepted cost of service principles and methodologies. Provided below is an overview of the various types of allocated costs used in the stormwater drainage cost of service analysis.

- **Equivalent Stormwater Unit (ESU)-Related Costs:** An equivalent stormwater unit (ESU) is an equivalency measure of run-off contributions (i.e., volume) and typically this approach, or similar approaches, are used for billing stormwater customers. An ESU considers a parcel's area, development intensity, and runoff coefficient.
- **Customer-Related Costs:** Customer-related costs are those costs which vary with the addition or deletion of a customer or a cost which is a function of the number of customers served. Customer-related costs typically include the costs of accounting, billing, collection, and accounting. Similar to the sanitary drainage cost of service analysis, a weighted customer cost may reflect a disproportionate customer-related cost.
- **Revenue-Related Costs:** Revenue-related costs are those costs which vary with the amount of revenue received by the utility. An example of a revenue-related cost would be a utility tax which is based (i.e., assessed) on gross utility revenue.

The basis, or methodology for the allocation of EPCOR's stormwater drainage plant assets and costs is based upon generally accepted cost of service principles and methodologies. These generally accepted cost of service principles and methodologies were adapted and tailored to be reflective of EPCOR's specific and unique facilities, customers, costs, and operations.

4.4.3 Development of the Stormwater Drainage Distribution Factors

Once the allocation of stormwater drainage assets and costs is complete, and the customer groups have been defined, the allocated costs are proportionally distributed to each customer group using distribution factors. EPCOR's stormwater drainage allocated assets and costs were distributed to the customer classes of service using the following stormwater drainage distribution factor.

- **Equivalent Stormwater Unit (ESU) Distribution Factor:** Equivalent stormwater units are an equivalency measure for estimating surface water runoff from a parcel. EPCOR's existing stormwater rates develop billing units reflective of a parcel's area, stated in m^2, along with a development intensity factor and a runoff coefficient which is based upon the zoning of the premises. The intensity factor is assumed to be 1.0, except for properties where the parcel owners have demonstrated that they contribute less stormwater per m^2 (e.g., retention/detention) during rainfall than similarly zoned parcels. This distribution factor was based upon EPCOR's current billing units which take these factors into account and are reflective of the relative runoff contributions. Exhibit 3 of the stormwater drainage technical appendix provides the calculation of the ESU distribution factor.

The development of the distribution factor is based on generally accepted principles and methodologies. Given the development of the distribution factors, the final step in the cost of service analysis is to distribute the allocated costs to the various customer classes of service and summarize the results.

Given the general overview above of the procedures used in EPCOR's stormwater drainage cost of service analysis, the focus shifts to a more specific discussion of the key assumptions and details used in this analysis.

4.5 Functionalization and Allocation of Net Plant in Service

A necessary step of the cost of service is the functionalization and allocation of the stormwater drainage net plant in service. Net plant in service is defined as the original cost (OC) of plant in service, less the accumulated depreciation. The net plant in service balances were provided by EPCOR and were reflective of December 31, 2022.

Section 3.5 provided a detailed discussion of the process used to assign net plant in service for sanitary and stormwater drainage. Provided below in Table 4 – 1 is a summary of the allocation of the common net plant in service to the sanitary and stormwater drainage plant in service.

Table 4 – 1
Summary of the Assignment of Net Plant in Service
Between Sanitary and Stormwater Drainage ($000)

Plant Components	Total	Sanitary	Stormwater
Common Plant			
Collection	$209,141	$95,557	$113,584
General Plant	80,974	30,698	50,275
Pumping Stations	2,532	2,257	275
Storage	1,918	175	1,743
Subtotal Common Plant	**$294,565**	**$128,688**	**$165,877**
Sanitary Plant	$1,894,260	$1,894,260	$0
Stormwater Plant	2,695,256	0	2,695,256
Total Net Plant in Service	**$4,884,081**	**$2,022,948**	**$2,861,133**

Given the assignment of the common plant in service and the functionalization of net plant in service, HDR then allocated each stormwater plant asset category (i.e., collection, pumping, and storage) to the various cost allocation components previously described.

The allocation process included reviewing each plant line item and determining which cost components the assets were related to. The proposed allocations are based on HDR's understanding of EPCOR's current stormwater drainage facilities, their current operations, and "generally accepted" allocation methodologies for stormwater utilities. HDR's proposed allocations of net plant in service to the various cost components were reviewed with EPCOR's staff to confirm that the allocated stormwater plant components reasonably reflect the facilities and operations of EPCOR's stormwater drainage plant. In this case, the allocation of the plant in service was entirely based on ESU's, which reflect the billing unit used by EPCOR for stormwater drainage rates. Table 4 - 2 provides a summary of the allocated net plant in service for the stormwater drainage utility.

Table 4 – 2
Summary of the Allocation of Stormwater Drainage Plant in Service ($000)

	Total Net Plant	Eqv. Storm Unit
Collection	$2,072,424	$2,072,424
Collection - Common	113,584	113,584
Pumping Stations	10,741	10,741
Pumping - Common	275	275
Storage	609,799	609,799
Storage - Common	1,743	1,743
Total before General	**$2,808,566**	**$2,808,566**
General Plant	$2,292	$2,292
General Plant – Common	50,275	50,275
Grand Total	**$2,861,133**	**$2,861,133**

Tables 4 - 2 provides a summary of the basic functionalization and allocation of EPCOR's stormwater drainage net plant in service. A detailed exhibit of the functionalization and allocation of plant investment can be found in the Stormwater Drainage Technical Appendix, Exhibit 6.

4.6 Functionalization and Allocation of the Revenue Requirement

Operating expenses are generally functionalized and allocated in a manner similar to the corresponding plant account. This approach to allocation of operating expenses was used for this analysis. For the cost of service study, the 2024 revenue requirement for the stormwater drainage utility prepared by EPCOR was functionalized, allocated, and distributed. As noted previously, the revenue requirement was developed utilizing the utility/accrual basis methodology which was comprised of operation and maintenance expenses, depreciation, revenue tax, and a return on rate base. Shown below in Table 4 – 3 is a summary of the allocated revenue requirement for EPCOR's stormwater drainage utility.

Table 4 – 3
Summary of the Allocation of the Stormwater Drainage
2024 Revenue Requirement ($000)

	Total Rev. Req.	Eqv. Storm Unit
Total O&M	$55,183	$55,183
Property Taxes	751	751
Depreciation	26,486	26,486
Return on Rate Base - Debt	24,593	24,593
Return on Rate Base - Equity	35,357	35,357
Total	**$142,370**	**$142,370**
Less: Non-Op Rev.	($658)	($658)
Net Total	**$141,712**	**$141,712**

Similar to the allocation of plant in service, the revenue requirement was allocated 100% on the basis of ESUs. This reflects the allocation and distribution of costs based on the definition of an equivalent unit, which is applied to all customers. A more detailed review of the allocation of EPCOR's stormwater drainage revenue requirement can be found in the Technical Appendix B in Exhibit 7.

4.7 Summary of the Stormwater Drainage Cost of Service Analysis

In summary form, the stormwater drainage cost of service analysis began by functionalizing the stormwater drainage net plant asset records and revenue requirements. The functionalized net plant and expense accounts were then allocated into their appropriate cost component. The individual allocation totals were then distributed to the customer classes of service based upon the use of proportional and equitable distribution factors. The distributed revenue requirement (i.e., expenses) for each customer class of service were then aggregated to determine each customer group's overall revenue responsibility. A summary of the detailed cost responsibility developed for each stormwater drainage class of service for 2024 is shown below in Table 4 - 4.

Table 4 – 4
Summary of the Stormwater Drainage Cost of Service Analysis ($000)

	Present Revenue	Allocated Costs	$ Difference	% Difference
Residential	$63,582	$74,694	($11,112)	17.5%
Multi-Residential	6,757	8,113	(1,355)	20.1%
Commercial	51,406	58,906	(7,499)	14.6%
Total	**$121,745**	**$141,712**	**($19,967)**	**16.4%**

The distribution of costs reflects the facilities and costs proportionally distributed to each customer class, reflective of their respective benefit. The cost of service results indicated no cost differences between the customer classes of service, primarily as a result of allocating and distributing costs based on an equivalent billing unit. A cost of service analysis is a dynamic analysis, and the results may change over time as costs and development impacts change. Given that dynamic, HDR typically reviews the summary of a cost of service analysis to determine whether a class of service is within a reasonable range of the cost to provide service. The metric that HDR utilizes is a class of service is assumed to be within a "reasonable range" if the class is within ± 5% of the overall required adjustment. In other words, given EPCOR's 16.4% overall adjustment in this analysis, a class of service would be considered within a reasonable range if they are within the range of 11.4% to 21.4%.

The results above indicate that all classes of service are within a reasonable range of covering their respective costs. As noted above, a cost of service analysis is a dynamic analysis and as such, the "cost of service" for a class of service is often best determined over an extended number of studies. It is recommended that EPCOR continue to review and update the stormwater drainage cost of service. This will provide a sound basis for any future interclass adjustments that may be

proposed by EPCOR. Similar to the sanitary drainage analysis, as shown in Table 4 - 4, the current sanitary drainage revenues are less than the current sanitary drainage expenses. However, overall the drainage revenues, combined sanitary and stormwater, approximately equal the drainage expenses. As EPCOR continues to evaluate costs associated with each service, the revenues and expenses should become closer with further analysis and assumptions of the split of costs between the services.

The detailed summary of the stormwater drainage cost of service analysis can be found in the Wastewater Treatment Technical Appendix B, Exhibits 7 through 9.

4.8 Stormwater Drainage Average Unit Costs

Average unit costs are essentially cost-based rates. In this case, the distributed stormwater drainage costs are converted from dollars to per unit costs, stated as $/square metre ($m^2$). Provided below in Table 4 - 5 is a summary of the calculated average unit cost for the sanitary drainage utility.

Table 4 – 5
Summary of the Stormwater Drainage Average Unit Costs

	System Average	Residential	Multi-Residential	Commercial
Unit Costs – $/square metre				
Equiv. Storm Unit (ESU)	$0.0834	$0.0834	$0.0834	$0.0834
Total $/square metre ($m^2$)	**$0.0834**	**$0.0834**	**$0.0834**	**$0.0834**

The calculated average unit costs for the stormwater drainage utility are very straight-forward. The total stormwater drainage costs were allocated to the equivalent stormwater unit (ESU) cost component. Thus, all costs are placed in the context of a $ / ESU.

Similar to EPCOR's other utility rates, performance-based-ratemaking (PBR) is a component of the development of stormwater drainage utility rates. Like the sanitary drainage cost of service analysis, the stormwater drainage cost of service analysis provides two important items of information which may be used to establish the stormwater drainage rates. These items are as follows:

- Target revenue levels by customer class of service
- Average Unit Costs

The target revenue levels or allocated costs from the cost of service analysis (Table 4 - 4) establish the level of revenue to be derived from each customer class of service. In comparison, the average unit costs, as developed in the cost of service analysis, provide the cost basis for any fixed and variable charges associated with each customer class of service. At the present time, and as a point of reference, EPCOR does not have stormwater rates by class of service, and the utility assesses a flat rate per m^2. The average unit costs from the stormwater drainage cost of service analysis are shown in Exhibit 10 of the Stormwater Drainage Technical Appendix.

4.9 Summary

This section of the report has reviewed the stormwater drainage cost of service analysis. This analysis was developed using EPCOR specific asset and expense records and information. The overall cost of service methodology for the stormwater drainage utility was based upon generally accepted cost of service principles and methodologies, tailored to reflect EPCOR's specific and unique stormwater system.

5 Drainage Rate Design

The final step of a comprehensive sanitary and stormwater drainage rate study is the review of rates for both utilities which meet the overall rate design goals and objectives of EPCOR and collect the appropriate (i.e., cost-based) levels of revenue, based on the results of the revenue requirement and cost of service analyses.

5.1 Rate Design Goals and Objectives

In reviewing utility rate designs, consideration is given to the ***level*** of the rates and the ***structure*** of the rates. *Level* refers to the total revenue to be collected from a rate design; while *structure* refers to how (fixed vs. variable) the revenue is collected, or how the customer is ultimately charged. Provided below is an overview of the rate design considerations for EPCOR's sanitary and stormwater drainage utilities.

5.1.1 Rate Design Criteria and Considerations

The key to developing a successful rate design is to gain an understanding of the utility's goals and objectives and how different rate structures and the relationship between the monthly fixed charges and consumption/volumetric charges can help achieve those goals and objectives. Typical rate design goals and objectives include items such as rates being cost-based, easy to understand and administer and that are set at a level that produce sufficient revenues.

Principles of Public Utility Rates[2] by James C. Bonbright's is often cited as an important source or guide on the development of rates. Bonbright developed a list of key attributes (i.e., goals and objectives) that may be considered in the establishment of utility rates. Provided below is a paraphrased list of Bonbright's attributes.

Revenue-Related Attributes:

- Rates should be designed to ***meet the total revenue requirement needs*** under the "utility/accrual basis approach".[3]
- Rates should provide ***revenue stability and predictability***; with a minimum of unexpected changes seriously adverse to the utility (e.g., annual swings in planned revenue should, for example, be no greater than +10% or –10%).
- From the customer's perspective, the rates should result in ***customer bills that are stable and predictable***. The implementation of new rate structures should be consistent with past rate setting philosophy and minimize customer bill impacts during any change in rate

[2] James C. Bonbright; Albert L. Danielsen and David R. Kamerschen, Principles of Public Utility Rates, (Arlington, VA: Public Utilities Report, Inc., Second Edition, 1988), p. 383-384.

[3] The Water Environment Federation, Manual of Practice #27, Financing and Charges for Wastewater Systems, discusses two "generally-accepted" methodologies for establishing revenue requirements; the cash basis and utility/accrual basis. Most private utilities, including EPCOR utilize the "utility/accrual basis" methodology. Under this approach, a utility sums its O&M, taxes, depreciation expense and return on rate base (investment) to equal its revenue requirements.

structure.

Cost-Related Attributes:

- The rate structure should **promote efficient use** of services and discourage or penalize inefficient uses.
- The rate structure should **reflect all traditional internal costs** (direct and indirect) incurred, **and under appropriate situations and conditions** (e.g., rapid growth) may also **include present and future costs and benefits** (i.e., marginal cost and/or value of commodity).
- **Fairness of the rates** in the allocation of total costs of service among the different ratepayers so as to **avoid arbitrariness, capriciousness and to attain equity**. The rates and the rate structure shall be based upon a fair allocation of total cost of service among the customer classes of service by use of a "generally accepted" cost of service methodology such as defined in the Water Environment Federation Manual of Practice #27.
- The rates should be, as practically possible, **non-discriminatory**, between customer groups, and within each customer group. The rate structures should avoid interclass subsidies whenever possible to ensure each class pays its full cost of service.
- The **responsiveness of the rate to respond to changes in demand and supply patterns**. The rate structure should be developed such that it either responds appropriately or alternatively, contains the flexibility to allow the utility to respond to the changing needs as a result of supply, demand, and/or environmental concerns.

Practical-Related Attributes:

- From the customer's perspective, the rate structure should be **simple to understand**, such that the customer can easily understand the bill. From the utility's perspective, the rate structure should be **easy to administer**. Finally, the rate structure should have acceptance by the majority of the customers that the rate structure and resulting bills are "fair and equitable."
- **Freedom from controversies** as to the application of the rate schedule to the customer and calculation of the customer's bill. It should be simple to explain and understand by the average customer to minimize any misinterpretation regarding the customer's bill and the overall goals that the rate structure has been developed to meet.

While the above rate design goals and objectives (i.e., attributes) are intended for all rate designs, certain goals and objectives may be more relevant than others, particularly when comparing the differences between an electric, water, wastewater, or stormwater utility. For that reason alone, EPCOR should review the different rate design goals and objectives and determine those with the highest relevance and priority for the particular utility rates being reviewed.

5.2 Review of the Current Drainage Rates

As noted above, it is important to understand that all of the rate design goals and objectives cannot be achieved in a single rate design, and in some cases, certain goals and objectives may be in conflict with each other. For example, rates which promote conservation may be so complex that they do not achieve the objective of ease of customer understanding and administration. In that respect, EPCOR must consider each of these goals and objectives and attempt to balance them in a way that meets the utility's overall rate goals and objectives. The rate design goals and objectives for the sanitary drainage rates may be different than the goals and objectives for the stormwater utility.

For EPCOR, these rate design goals and objectives can be used as a starting point in considering proposed changes to the sanitary and stormwater drainage rate designs.

5.2.1 Current Sanitary Drainage Rates

The current sanitary drainage rates are designed to collect the costs associated with wastewater collection services. The current sanitary drainage rate design is composed of a flat monthly service charge and a variable charge. Provided below in Table 5 - 1 is a summary of the current sanitary drainage rate design.

Table 5 - 1
Overview of the EPCOR's Present Sanitary Drainage Rates[1]

Rate Component	Present Rates
Flat Monthly Service Charge (Per Meter Size)	
16mm	$11.30
20mm	20.34
25mm	31.62
40mm	60.99
50mm	83.57
75mm	172.68
100mm	321.63
150mm	608.38
200mm	970.66
250mm	2,408.89
300mm	2,408.89
400mm	2,635.90
500mm	2,838.04
Variable Monthly Charge - $/m³	
All Customers	$1.3100
Large Wholesale w/ collection system	0.7366

[1] – Rates shown are effective January 1, 2023

EPCOR's present sanitary drainage rate schedules use the same schedule for fixed charges for all customer classes of service. The flat monthly service charge is based on meter size. In contrast to the fixed monthly service charge, the variable or volumetric charge for sanitary drainage is a

uniform volumetric structure which is the same for all residential, multi-residential and commercial customers. The variable rate is stated in $/cubic metre ($/m^3). There is a separate variable rate for the University of Alberta (U of A). The U of A is a large wholesale customer with it's own sanitary collection system. Given that, the U of A has their own variable rate. U of A is provided with a lower rate since they own and operate their own on-campus collection system and only utilize a portion of EPCORs collection and conveyance system. For billing of variable charges, the volume billing is determined based upon the following:

i. Water consumption for the premises;
ii. Sewer discharge for a premises on which a sewer meter has been installed; or
iii. Water consumption for the premises as discounted by the application of a utility credit as approved in accordance with EPCOR's bylaws (e.g., wholesale w/ collection system).

The current rate design approach used by EPCOR for their sanitary drainage utility rates is contemporary in approach and design. Most wastewater utilities have sewer rates (i.e., treatment and collection) which contain a fixed and variable component. The variable component is typically based upon metered water consumption, similar to EPCOR's approach, but in some cases, the volume billed may be "capped" at a specified volume to try and segregate water consumption between indoor and outdoor uses. In areas with significant outdoor water use, the approach of using average winter water use (AWWU) to cap sewer volumes is common.

5.2.2 Current Stormwater Drainage Rates

Provided below in Table 5 - 2 is EPCOR's current stormwater drainage rate.

Table 5 - 2
Overview of EPCOR's Present Stormwater Drainage Rate [1]

Rate Component	Rate - $ / Sq. Metre
All Parcels (Customers)	$0.064768

[1] – Rates shown are effective January 1, 2023

As can be seen, EPCOR's current stormwater rate appears to be very simple and straight-forward. While that may appear to be the case, in actuality, the basis for the billing of the stormwater rate is more complex. Specifically, EPCOR's stormwater fee is a monthly charge that is calculated using the following formula:

A x **I** x **R** x **Rate**, where:

A: The area of the property in square metres (m^2), and the proportion of the building lot area attributable to each unit for multiple units sharing a single building of property

I: The measure of the portion of lot being used for its intended development. The development intensity factor is 1.0 as default, except for properties where owners demonstrate they contribute significantly less stormwater runoff per property area to the City's land drainage system during rainfalls than other similarly-zone properties.

R: Runoff coefficient—the permeability of your lot's surface (i.e., grass versus concrete), based on land zoning

Rate: The monthly charge of $0.064768 per square metre (m2).

The runoff coefficient has a specific schedule for each land zone. The runoff coefficient ranges from 0.20 (e.g., agricultural zone AG) to 0.95 (e.g., commercial business zone CB2). As point of reference, a single-detached residential home (Zone RF1) has a runoff coefficient of 0.50. EPCOR recently updated the coefficients for their customers which has been reflected in the calculation of this Study.

For each parcel, EPCOR calculates a billable stormwater area stated in square metres (m^2). The determination of this billable area is accomplished by reviewing the area of each parcel and then adjusting for development intensity and runoff coefficient. The use of development intensity (**I**) takes into consideration those parcels which have significantly less runoff than similarly zoned parcels. This lowering of runoff is often accomplished via retention/detention ponds or other stormwater best practices.

EPCOR's approach to stormwater rates contains all of the elements and components that would be expected from a contemporary stormwater rate design. Stormwater utilities may administer these elements in a slightly different manner, but their rate design approach considers area, development intensity and any credits for stormwater management (e.g., retention/detention, etc.). One area where EPCOR may differ from other stormwater utilities is their billing of single-family residential parcels. For administrative and cost reasons, many stormwater utilities charge residential customers on a flat, $/month, basis regardless of the parcel size or intensity. While there are certain inequities with this approach, it eliminates a number of administrative issues and concerns with a large majority of the system's parcels. EPCOR has obviously gone one step further and refined their residential rates to be reflective of the specific residential lot size (area) and development intensity. HDR would not recommend EPCOR going "backwards" on their stormwater rate design, but rather, points this out to highlight the enhanced equity of this approach.

5.3 Future Drainage Rate Structure Considerations

The results of the revenue requirement and cost of service analysis provide the basis for establishing cost-based rates. However, other policy considerations, other than strictly cost of service, may be considered when establishing final proposed sanitary and stormwater drainage rates.

As EPCOR continues forward with the development of alternative sanitary or stormwater drainage rates, a decision will need to be made as to how closely the proposed rates should follow cost of service results, and if so, how best to transition to a cost of service based rate over time. In this transition process, EPCOR will likely want to attempt to minimize overall rate impacts over time. While the cost of service analyses for both drainage utilities did show some minor cost differences, there does not appear to be any huge cost of service or transition issues on the horizon. If changes are proposed, implementing a smooth transition towards the cost of service

results allows for customer outreach, avoids rate shock, and allows the utility to track cost of service results over a number of years and adjust rates accordingly.

5.4 Summary

This section of the report has provided an overview of the rate design process. The results of the sanitary and stormwater drainage revenue requirement and cost of service analysis provide the basis and guidance for establishing and implementing cost-based utility rates. A key objective of a cost of service analysis is to develop rates that are cost-based while, at the same time, providing proportionality between customers.

Sanitary Drainage Technical Appendix A

EPCOR
Drainage COSA
Summary of the Revenue Requirement - Sanitary
Exhibit 1

	Projected									
	2024	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**
Revenues										
Rate Revenues	$171,408,909	$184,562,200	$198,221,432	$212,749,096	$216,153,081	$219,611,530	$223,125,315	$226,695,320	$230,322,445	$234,007,604
Miscellaneous Revenues	3,588,923	3,658,446	3,722,237	3,781,963	3,842,474	3,903,954	3,966,417	4,029,880	4,094,358	4,159,867
Total Revenues	**$174,997,832**	**$188,220,645**	**$201,943,670**	**$216,531,058**	**$219,995,555**	**$223,515,484**	**$227,091,732**	**$230,725,200**	**$234,416,803**	**$238,167,472**
Expenses										
Franchise Fees	$13,499,709	$13,678,837	$14,221,679	$15,000,618	$15,315,631	$15,637,259	$15,965,641	$16,300,920	$16,643,239	$16,992,747
Total Drainage Operations	21,292,333	21,846,264	22,243,512	22,631,362	23,106,620	23,591,859	24,087,289	24,593,122	25,109,577	25,636,878
Total One Water Planning and Project Support	5,968,720	6,135,788	6,227,462	6,321,107	6,453,851	6,589,382	6,727,759	6,869,041	7,013,291	7,160,570
Total Operational Support Services	1,367,453	1,407,347	1,427,433	1,448,189	1,478,600	1,509,651	1,541,354	1,573,722	1,606,770	1,640,513
Total Billing and Meter Reading	5,923,296	5,372,071	5,470,251	5,563,721	5,680,559	5,799,851	5,921,648	6,046,002	6,172,968	6,302,601
Total General and Admin Services	11,576,377	11,799,943	12,034,471	12,008,267	12,260,441	12,517,910	12,780,786	13,049,182	13,323,215	13,603,003
Corporate Allocations	9,585,534	9,770,707	9,961,028	10,144,791	10,357,832	10,575,346	10,797,428	11,024,174	11,255,682	11,492,051
Efficiencies	0	0	0	0	0	0	0	0	0	0
Total O&M Expenses	**$69,213,420**	**$70,010,956**	**$71,585,837**	**$73,118,054**	**$74,653,534**	**$76,221,258**	**$77,821,904**	**$79,456,164**	**$81,124,744**	**$82,828,363**
Property Taxes	$469,089	$480,304	$493,708	$503,147	$429,110	$437,264	$445,572	$454,037	$462,664	$471,455
Depreciation	20,725,092	26,210,464	28,166,409	29,971,644	31,874,294	33,885,576	36,011,391	38,257,948	40,631,790	43,139,800
Total Return on Rate Base - Debt	23,325,438	25,827,833	28,713,366	31,575,749	34,733,323	38,206,656	42,027,321	46,230,053	50,853,059	55,938,365
Total Return on Rate Base - Equity	33,739,722	40,528,944	47,623,924	50,550,762	53,634,359	56,906,055	60,377,324	64,060,341	67,968,022	72,114,071
Total Revenue Requirement	**$147,472,762**	**$163,058,500**	**$176,583,244**	**$185,719,357**	**$195,324,621**	**$205,656,808**	**$216,683,512**	**$228,458,544**	**$241,040,278**	**$254,492,054**
Bal. / (Def.) of Funds	$27,525,070	$25,162,146	$25,360,426	$30,811,701	$24,670,935	$17,858,676	$10,408,220	$2,266,655	($6,623,475)	($16,324,583)
Balance a % of Rate Adj. Req'd	-16.1%	-13.6%	-12.8%	-14.5%	-11.4%	-8.1%	-4.7%	-1.0%	2.9%	7.0%

EPCOR
Drainage COSA
Revenue Requirement - Sanitary
Exhibit 2

	Projected										
	2024	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	***Notes***
Revenues											
Rate Revenues											
Residential	$106,581,626	$115,209,927	$124,376,485	$134,174,191	$136,320,978	$138,502,114	$140,718,148	$142,969,638	$145,257,152	$147,581,267	1.6% Inc / Yr 2028-2033
Multi-Residential	28,349,157	30,545,977	32,720,338	35,023,724	35,584,104	36,153,450	36,731,905	37,319,615	37,916,729	38,523,397	1.6% Inc / Yr 2028-2033
Commercial	34,899,000	37,124,290	39,344,176	41,667,999	42,334,687	43,012,042	43,700,235	44,399,439	45,109,830	45,831,587	1.6% Inc / Yr 2028-2033
U of A	1,579,127	1,682,005	1,780,433	1,883,181	1,913,312	1,943,925	1,975,028	2,006,628	2,038,734	2,071,354	1.6% Inc / Yr 2028-2033
Total Rate Revenues	**$171,408,909**	**$184,562,200**	**$198,221,432**	**$212,749,096**	**$216,153,081**	**$219,611,530**	**$223,125,315**	**$226,695,320**	**$230,322,445**	**$234,007,604**	
Other Revenues											
Biosolids	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	1.6% Inc / Yr 2028-2033
Compliance and monitoring	2,986,846	3,052,880	3,106,000	3,156,317	3,206,818	3,258,127	3,310,257	3,363,221	3,417,033	3,471,705	1.6% Inc / Yr 2028-2033
Pipeline Maintenance	255,786	260,492	267,761	272,881	277,247	281,683	286,190	290,769	295,421	300,148	1.6% Inc / Yr 2028-2033
Late payment charges	340,523	339,267	342,507	346,681	352,228	357,864	363,589	369,407	375,317	381,322	1.6% Inc / Yr 2028-2033
Other	5,767	5,808	5,970	6,084	6,181	6,280	6,381	6,483	6,587	6,692	1.6% Inc / Yr 2028-2033
Billing error/bad debts - Sanitary	0	0	0	0	0	0	0	0	0	0	1.6% Inc / Yr 2028-2033
Billing error/bad debts - Stormwater	0	0	0	0	0	0	0	0	0	0	1.6% Inc / Yr 2028-2033
Total Other Revenues	**$3,588,923**	**$3,658,446**	**$3,722,237**	**$3,781,963**	**$3,842,474**	**$3,903,954**	**$3,966,417**	**$4,029,880**	**$4,094,358**	**$4,159,867**	
Total Revenues	**$174,997,832**	**$188,220,645**	**$201,943,670**	**$216,531,058**	**$219,995,555**	**$223,515,484**	**$227,091,732**	**$230,725,200**	**$234,416,803**	**$238,167,472**	
Franchise Fees	**$13,499,709**	**$13,678,837**	**$14,221,679**	**$15,000,618**	$15,315,631	$15,637,259	$15,965,641	$16,300,920	$16,643,239	$16,992,747	2.1% Inc / Yr 2028-2033
Drainage Operations											
Biosolids Management	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	2.1% Inc / Yr 2028-2033
Pipeline Maintenance	1,602,846	1,649,608	1,673,151	1,697,480	1,733,127	1,769,523	1,806,683	1,844,623	1,883,360	1,922,911	2.1% Inc / Yr 2028-2033
Hazardous and Sanitary Waste	724,597	738,581	753,279	767,365	783,480	799,933	816,732	833,883	851,395	869,274	2.1% Inc / Yr 2028-2033
Industrial Monitoring	8,278,493	8,438,268	8,606,189	8,767,125	8,951,235	9,139,211	9,331,134	9,527,088	9,727,157	9,931,427	2.1% Inc / Yr 2028-2033
Compliance	5,893,876	6,007,627	6,127,179	6,241,757	6,372,834	6,506,664	6,643,304	6,782,813	6,925,252	7,070,682	2.1% Inc / Yr 2028-2033
General Maintenance	226,722	313,177	317,647	322,266	329,033	335,943	342,998	350,201	357,555	365,064	2.1% Inc / Yr 2028-2033
Preventative Mtnc - WWC	1,576,957	1,622,964	1,646,127	1,670,063	1,705,134	1,740,942	1,777,502	1,814,829	1,852,940	1,891,852	2.1% Inc / Yr 2028-2033
Inspections and Investigations	1,377,748	1,417,942	1,438,179	1,459,091	1,489,732	1,521,017	1,552,958	1,585,570	1,618,867	1,652,863	2.1% Inc / Yr 2028-2033
Responsive Maintenance and Repair	1,611,094	1,658,096	1,681,761	1,706,214	1,742,045	1,778,628	1,815,979	1,854,115	1,893,051	1,932,805	2.1% Inc / Yr 2028-2033
Total Drainage Operations	**$21,292,333**	**$21,846,264**	**$22,243,512**	**$22,631,362**	**$23,106,620**	**$23,591,859**	**$24,087,289**	**$24,593,122**	**$25,109,577**	**$25,636,878**	
One Water Planning and Project Support											
One Water Planning	$1,121,913	$1,154,644	$1,171,123	$1,188,152	$1,213,103	$1,238,578	$1,264,588	$1,291,144	$1,318,258	$1,345,942	2.1% Inc / Yr 2028-2033
Engineering	1,260,158	1,296,922	1,315,431	1,334,559	1,362,584	1,391,199	1,420,414	1,450,243	1,480,698	1,511,792	2.1% Inc / Yr 2028-2033
Project Management	796,942	820,192	831,898	843,994	861,718	879,814	898,291	917,155	936,415	956,080	2.1% Inc / Yr 2028-2033
Controls and Automation	589,924	607,134	615,799	624,753	637,873	651,269	664,945	678,909	693,166	707,723	2.1% Inc / Yr 2028-2033
Operations Mgmt and Admin	(224,030)	(230,565)	(233,856)	(237,256)	(242,239)	(247,326)	(252,520)	(257,823)	(263,237)	(268,765)	2.1% Inc / Yr 2028-2033
Private Development & Commissioning	(48,755)	(50,177)	(50,894)	(51,634)	(52,718)	(53,825)	(54,955)	(56,109)	(57,288)	(58,491)	2.1% Inc / Yr 2028-2033
Utility Line Assignment (ULA)	379,787	390,867	396,445	402,210	410,656	419,280	428,085	437,074	446,253	455,624	2.1% Inc / Yr 2028-2033
Distribution Maintenance	127,775	131,503	133,380	135,319	138,161	141,062	144,025	147,049	150,137	153,290	2.1% Inc / Yr 2028-2033
Customer Services	208,711	214,800	217,865	221,033	225,675	230,414	235,253	240,193	245,237	250,387	2.1% Inc / Yr 2028-2033
Yards & Buildings	676,681	696,423	706,362	716,633	731,682	747,048	762,736	778,753	795,107	811,804	2.1% Inc / Yr 2028-2033
Facility Operations	364,139	374,763	380,111	385,638	393,737	402,005	410,447	419,067	427,867	436,852	2.1% Inc / Yr 2028-2033
Regulatory and Business Planning	715,475	729,284	743,797	757,706	773,618	789,864	806,451	823,386	840,677	858,332	2.1% Inc / Yr 2028-2033
Total One Water Planning and Project Support	**$5,968,720**	**$6,135,788**	**$6,227,462**	**$6,321,107**	**$6,453,851**	**$6,589,382**	**$6,727,759**	**$6,869,041**	**$7,013,291**	**$7,160,570**	
Operational Support Services											
Operations Mgmt and Admin	$65,671	$67,587	$68,551	$69,548	$71,009	$72,500	$74,022	$75,577	$77,164	$78,784	2.1% Inc / Yr 2028-2033
Survey Operations	262,983	270,656	274,518	278,510	284,359	290,330	296,427	302,652	309,008	315,497	2.1% Inc / Yr 2028-2033
General Maintenance	887,375	913,264	926,298	939,767	959,502	979,652	1,000,224	1,021,229	1,042,675	1,064,571	2.1% Inc / Yr 2028-2033
Open Cut Services	1,341,563	1,380,702	1,400,407	1,420,770	1,450,606	1,481,069	1,512,171	1,543,927	1,576,350	1,609,453	2.1% Inc / Yr 2028-2033
In-house Tunnelling	537,841	553,532	561,432	569,596	581,557	593,770	606,239	618,970	631,969	645,240	2.1% Inc / Yr 2028-2033
Equipment Dispatch	(1,727,981)	(1,778,393)	(1,803,774)	(1,830,002)	(1,868,433)	(1,907,670)	(1,947,731)	(1,988,633)	(2,030,394)	(2,073,033)	2.1% Inc / Yr 2028-2033
Total Operational Support Services	**$1,367,453**	**$1,407,347**	**$1,427,433**	**$1,448,189**	**$1,478,600**	**$1,509,651**	**$1,541,354**	**$1,573,722**	**$1,606,770**	**$1,640,513**	

EPCOR
Drainage COSA
Revenue Requirement - Sanitary
Exhibit 2

	Projected										
	2024	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	***Notes***
Billing and Meter Reading											
CUS Charges (billing and collections)	$3,190,183	$3,241,463	$3,297,244	$3,350,079	$3,420,430	$3,492,259	$3,565,597	$3,640,474	$3,716,924	$3,794,980	2.1% Inc / Yr 2028-2033
Operations Mgmt and Admin	238,049	242,643	247,472	252,100	257,394	262,799	268,318	273,953	279,706	285,579	2.1% Inc / Yr 2028-2033
Meter Reading	1,459,796	832,717	849,288	865,170	883,338	901,888	920,828	940,165	959,909	980,067	2.1% Inc / Yr 2028-2033
Mtce - Meters	158,795	161,859	165,080	168,167	171,699	175,304	178,986	182,745	186,582	190,500	2.1% Inc / Yr 2028-2033
Operations Mgmt and Admin (2)	196,462	200,253	204,239	208,058	212,427	216,888	221,443	226,093	230,841	235,689	2.1% Inc / Yr 2028-2033
Dispatch	484,672	494,026	503,857	513,279	524,058	535,063	546,299	557,772	569,485	581,444	2.1% Inc / Yr 2028-2033
Customer Services	195,339	199,109	203,071	206,869	211,213	215,648	220,177	224,801	229,522	234,342	2.1% Inc / Yr 2028-2033
Total Billing and Meter Reading	**$5,923,296**	**$5,372,071**	**$5,470,251**	**$5,563,721**	**$5,680,559**	**$5,799,851**	**$5,921,648**	**$6,046,002**	**$6,172,968**	**$6,302,601**	
General and Admin Services											
Information Services	$2,177,317	$2,219,339	$2,263,504	$2,305,832	$2,354,254	$2,403,694	$2,454,171	$2,505,709	$2,558,329	$2,612,053	2.1% Inc / Yr 2028-2033
General Admin	3,673,066	3,743,956	3,818,460	3,889,866	3,971,553	4,054,955	4,140,109	4,227,052	4,315,820	4,406,452	2.1% Inc / Yr 2028-2033
Controller	708,343	722,014	736,383	750,153	765,906	781,990	798,412	815,179	832,297	849,776	2.1% Inc / Yr 2028-2033
Marketing and Product Development	890,988	908,184	926,257	943,578	963,393	983,624	1,004,280	1,025,370	1,046,903	1,068,888	2.1% Inc / Yr 2028-2033
Health Safety and Loss Prevention	1,017,776	1,037,419	1,058,064	1,077,850	1,100,484	1,123,595	1,147,190	1,171,281	1,195,878	1,220,991	2.1% Inc / Yr 2028-2033
Training	687,848	701,123	715,075	728,447	743,745	759,363	775,310	791,591	808,215	825,187	2.1% Inc / Yr 2028-2033
Incentive and Other Compensation - STIP/MTIP	829,369	845,376	862,199	878,322	896,766	915,598	934,826	954,457	974,501	994,966	2.1% Inc / Yr 2028-2033
Contract Management	237,385	242,109	246,637	0	0	0	0	0	0	0	2.1% Inc / Yr 2028-2033
Inventory Management	405,097	412,915	421,132	429,007	438,017	447,215	456,606	466,195	475,985	485,981	2.1% Inc / Yr 2028-2033
Physical Security & EMBR	160,864	163,968	167,231	170,358	173,936	177,589	181,318	185,126	189,013	192,983	2.1% Inc / Yr 2028-2033
Incentive and Other Compensation - Other Wages	788,324	803,539	819,530	834,855	852,387	870,287	888,563	907,223	926,274	945,726	2.1% Inc / Yr 2028-2033
Total General and Admin Services	**$11,576,377**	**$11,799,943**	**$12,034,471**	**$12,008,267**	**$12,260,441**	**$12,517,910**	**$12,780,786**	**$13,049,182**	**$13,323,215**	**$13,603,003**	
Corporate Allocations	**$9,585,534**	**$9,770,707**	**$9,961,028**	**$10,144,791**	**$10,357,832**	**$10,575,346**	**$10,797,428**	**$11,024,174**	**$11,255,682**	**$11,492,051**	2.1% Inc / Yr 2028-2033
Efficiencies	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	
Total O&M Expenses	**$69,213,420**	**$70,010,956**	**$71,585,837**	**$73,118,054**	**$74,653,534**	**$76,221,258**	**$77,821,904**	**$79,456,164**	**$81,124,744**	**$82,828,363**	
Property Taxes	**$469,089**	**$480,304**	**$493,708**	**$503,147**	**$429,110**	**$437,264**	**$445,572**	**$454,037**	**$462,664**	**$471,455**	
Depreciation	$37,225,883	$43,780,246	$46,307,259	$48,676,455	$51,158,954	$53,768,060	$56,510,231	$59,392,253	$62,421,258	$65,604,742	5.1% Inc / Yr 2028-2033
Less: Contributions Amortization	(16,500,791)	(17,569,782)	(18,140,851)	(18,704,810)	(19,284,659)	(19,882,484)	(20,498,841)	(21,134,305)	(21,789,468)	(22,464,942)	3.1% Inc / Yr 2028-2033
Total Depreciation	**$20,725,092**	**$26,210,464**	**$28,166,409**	**$29,971,644**	**$31,874,294**	**$33,885,576**	**$36,011,391**	**$38,257,948**	**$40,631,790**	**$43,139,800**	
Return on Rate Base - Debt	$23,325,438	$25,827,833	$28,713,366	$31,575,749	$34,733,323	$38,206,656	$42,027,321	$46,230,053	$50,853,059	$55,938,365	10.0% Inc / Yr 2028-2033
Total Return on Rate Base - Debt	**$23,325,438**	**$25,827,833**	**$28,713,366**	**$31,575,749**	**$34,733,323**	**$38,206,656**	**$42,027,321**	**$46,230,053**	**$50,853,059**	**$55,938,365**	
Return on Rate Base - Equity	$33,739,722	$40,528,944	$47,623,924	$50,550,762	$53,634,359	$56,906,055	$60,377,324	$64,060,341	$67,968,022	$72,114,071	6.1% Inc / Yr 2028-2033
Total Return on Rate Base - Equity	**$33,739,722**	**$40,528,944**	**$47,623,924**	**$50,550,762**	**$53,634,359**	**$56,906,055**	**$60,377,324**	**$64,060,341**	**$67,968,022**	**$72,114,071**	
Total Revenue Requirement	**$147,472,762**	**$163,058,500**	**$176,583,244**	**$185,719,357**	**$195,324,621**	**$205,656,808**	**$216,683,512**	**$228,458,544**	**$241,040,278**	**$254,492,054**	
Bal. / (Def.) of Funds	$27,525,070	$25,162,146	$25,360,426	$30,811,701	$24,670,935	$17,858,676	$10,408,220	$2,266,655	($6,623,475)	($16,324,583)	
Balance a % of Rate Adj. Req'd	-16.1%	-13.6%	-12.8%	-14.5%	-11.4%	-8.1%	-4.7%	-1.0%	2.9%	7.0%	

EPCOR
Drainage COSA
Exhibit 3
Volume Distribution Factor - Sanitary

	2024 Annual Flow (ML)	15.5% Inflow and Infiltration [1]	Total Annual Flow at Plant (ML)	Avg. Daily Flow At Plant (ML)	% of Total	% of Total
Residential	46,011	7,132	53,143	53,143	54.7%	53.5%
Multi-Residential	18,197	2,820	21,017	21,017	21.6%	21.2%
Commercial	19,863	3,079	22,942	22,942	23.6%	23.1%
U of A	1,951	302	2,254	2,254	0.0%	2.3%
Total	**86,023**	**13,334**	**99,356**	**99,356**	**100.0%**	**100.0%**
					(VOL w/o)	***(VOL)***

Notes

[1] - Estimated

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Drainage COSA
Exhibit 4
Capacity Demand Distribution Factors - Sanitary

	Capacity Demand	
	Equivalent Meters [3]	**% of Total**
Residential	271,487	81.1%
Multi-Residential	18,066	5.4%
Commercial	45,178	13.5%
U of A	213	0.1%
Total	**334,944**	**100.0%**
		(CD)

Notes

[1] - Based onHistorical Billing Data and meter sizes

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Drainage COSA
Exhibit 5
Customer Distribution Factors - Sanitary

	Actual Customer		*Cust. Serv. & Acntg*		
	Number of Account [1]	**% of Total**	**Weight Factor [2]**	**Wt. Acct.**	**% of Total**
Residential	291,827	93.2%	1.02	296,907	81.9%
Multi-Residential	3,820	1.2%	4.81	18,385	5.1%
Commercial	17,627	5.6%	2.68	47,162	13.0%
U of A	1	0.0%	213.00	213	0.1%
Total	**313,274**	**100.0%**		**362,667**	**100.0%**
		(AC)			***(WCA)***

Notes

[1] - Based on 2023 Billing Data
[2] - Based on Historical Billing Data and meter sizes

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Drainage COSA
Exhibit 6
Revenue Distribution Factor - Sanitary

	Projected 2024	% of Total
Residential	$106,581,626	62.2%
Multi-Residential	28,349,157	16.5%
Commercial	34,899,000	20.4%
U of A	1,579,127	0.9%
Total	**$171,408,909**	**100.0%**

(RR)

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Drainage COSA
Exhibit 7
Net Plant in Service - Sanitary

	As of 12/31/22	Volume (VOL)	Weighted for Actual Customer (AC)	Weighted for Customer Acct/Svcs (ESU)	Weighted for Capacity Demand (CD)	Revenue (RR)	Direct (DA)	Basis of Classification
Collection	$1,743,515,019	$1,394,812,016	$0	$0	$348,703,004	$0	$0	80.0% VOL 20.0% CD
Collection - Common	95,557,274	76,445,819	0	0	19,111,455	0	0	80.0% VOL 20.0% CD
Pumping Stations	88,092,272	88,092,272	0	0	0	0	0	100.0% VOL 0.0% CD
Pumping - Common	2,257,175	2,257,175	0	0	0	0	0	100.0% VOL 0.0% CD
Storage	61,253,067	49,002,453	0	0	12,250,613	0	0	80.0% VOL 20.0% CD
Storage - Common	175,063	140,051	0	0	35,013	0	0	80.0% VOL 20.0% CD
Biosolids	0	0	0	0	0	0	0	100.0% AC
Plant Before General Plant	**$1,990,849,870**	**$1,610,749,785**	**$0**	**$0**	**$380,100,085**	**$0**	**$0**	
% Plant Before General Plant	***100.0%***	***80.9%***	***0.0%***	***0.0%***	***19.1%***	***0.0%***	***0.0%***	*Factor PBGP*
General Plant								
General Plant	$1,399,535	$1,132,331	$0	$0	$267,204	$0	$0	*As Factor PBGP*
General Plant - Common	30,698,489	24,837,425	0	0	5,861,064	0	0	*As Factor PBGP*
Total General Plant	**$32,098,024**	**$25,969,756**	**$0**	**$0**	**$6,128,268**	**$0**	**$0**	
Net Plant in Service	**$2,022,947,895**	**$1,636,719,542**	**$0**	**$0**	**$386,228,353**	**$0**	**$0**	

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Drainage COSA
Exhibit 9
Allocation of the Revenue Requirement - Sanitary

	Test Year 2024	Volume *(VOL)*	Weighted Actual Customer *(AC)*	Weighted Customer Acct/Svcs *(ESU)*	Weighted Capacity Demand *(CD)*	Revenue *(RR)*	Direct *(DA)*	*Basis of Classification*
Franchise Fees	**$13,499,709**	$0	$0	$0	0	$13,499,709	$0	100.0% RR
Drainage Operations								
Biosolids Management	$0	$0	$0	$0	$0	$0	$0	As Net Plant
Pipeline Maintenance	1,602,846	1,296,825	0	0	306,021	0	0	As Net Plant
Flow control Facilities	0	0	0	0	0	0	0	As Net Plant
Hazardous and Sanitary Waste	724,597	586,254	0	0	138,343	0	0	As Net Plant
Industrial Monitoring	8,278,493	6,697,934	0	0	1,580,559	0	0	As Net Plant
Compliance	5,893,876	4,768,596	0	0	1,125,280	0	0	As Net Plant
General Maintenance	226,722	183,436	0	0	43,287	0	0	As Net Plant
Preventative Mtnc - WWC	1,576,957	1,275,879	0	0	301,078	0	0	As Net Plant
Inspections and Investigations	1,377,748	1,114,703	0	0	263,044	0	0	As Net Plant
Responsive Maintenance and Repair	1,611,094	1,303,498	0	0	307,596	0	0	As Net Plant
CORe	0	0	0	0	0	0	0	100.0% VOL
SIRP	0	0	0	0	0	0	0	100.0% VOL
Total Drainage Operations	**$21,292,333**	**$17,227,125**	**$0**	**$0**	**$4,065,207**	**$0**	**$0**	
One Water Planning and Project Support								
One Water Planning	$1,121,913	$907,713	$0	$0	$214,200	$0	$0	As Net Plant
Engineering	1,260,158	1,019,564	0	0	240,594	0	0	As Net Plant
Project Management	796,942	644,787	0	0	152,155	0	0	As Net Plant
Project Management - CORe	0	0	0	0	0	0	0	As Net Plant
Controls and Automation	589,924	477,293	0	0	112,630	0	0	As Net Plant
Operations Mgmt and Admin	(224,030)	(181,257)	0	0	(42,773)	0	0	As Net Plant
Private Development & Commissioning	(48,755)	(39,447)	0	0	(9,308)	0	0	As Net Plant
Utility Line Assignment (ULA)	379,787	307,276	0	0	72,510	0	0	As Net Plant
Distribution Maintenance	127,775	103,380	0	0	24,395	0	0	As Net Plant
Customer Services	208,711	168,863	0	0	39,848	0	0	As Net Plant
Yards & Buildings	676,681	547,487	0	0	129,194	0	0	As Net Plant
Facility Operations	364,139	294,616	0	0	69,523	0	0	As Net Plant
Regulatory and Business Planning	715,475	578,874	0	0	136,601	0	0	As Net Plant
Total One Water Planning and Project Support	**$5,968,720**	**$4,829,151**	**$0**	**$0**	**$1,139,569**	**$0**	**$0**	
Operational Support Services								
Operations Mgmt and Admin	$65,671	$0	$65,671	$0	$0	$0	$0	100.0% AC
Survey Operations	262,983	0	262,983	0	0	0	0	100.0% AC
General Maintenance	887,375	0	887,375	0	0	0	0	100.0% AC
Open Cut Services	1,341,563	0	1,341,563	0	0	0	0	100.0% AC
In-house Tunnelling	537,841	0	537,841	0	0	0	0	100.0% AC
Equipment Dispatch	(1,727,981)	0	(1,727,981)	0	0	0	0	100.0% AC
Total Operational Support Services	**$1,367,453**	**$0**	**$1,367,453**	**$0**	**$0**	**$0**	**$0**	

EPCOR
Drainage COSA
Exhibit 9
Allocation of the Revenue Requirement - Sanitary

	Test Year 2024	Volume (VOL)	Weighted Actual Customer (AC)	Weighted Customer Acct/Svcs (ESU)	Weighted Capacity Demand (CD)	Weighted Revenue (RR)	Weighted Direct (DA)	Basis of Classification
Billing and Meter Reading								
CUS Charges (billing and collections)	$3,190,183	$0	$3,190,183	$0	$0	$0	$0	100.0% AC
Operations Mgmt and Admin	238,049	0	238,049	0	0	0	0	100.0% AC
Meter Reading	1,459,796	0	1,459,796	0	0	0	0	100.0% AC
Mtce - Meters	158,795	0	158,795	0	0	0	0	100.0% AC
Operations Mgmt and Admin (2)	196,462	0	196,462	0	0	0	0	100.0% AC
Dispatch	484,672	0	484,672	0	0	0	0	100.0% AC
Customer Services	195,339	0	195,339	0	0	0	0	100.0% AC
Total Billing and Meter Reading	**$5,923,296**	**$0**	**$5,923,296**	**$0**	**$0**	**$0**	**$0**	
General and Admin Services								
Information Services	$2,177,317	$1,761,616	$0	$0	$415,701	$0	$0	As Net Plant
General Admin	3,673,066	2,971,791	0	0	701,275	0	0	As Net Plant
General & Tax Accounting	0	0	0	0	0	0	0	As Net Plant
Controller	708,343	573,104	0	0	135,239	0	0	As Net Plant
Marketing and Product Development	890,988	720,877	0	0	170,111	0	0	As Net Plant
Health Safety and Loss Prevention	1,017,776	823,459	0	0	194,317	0	0	As Net Plant
Training	687,848	556,521	0	0	131,326	0	0	As Net Plant
Incentive and Other Compensation - STIP/MTIP	829,369	671,023	0	0	158,346	0	0	As Net Plant
Contract Management	237,385	192,063	0	0	45,322	0	0	As Net Plant
Inventory Management	405,097	327,754	0	0	77,343	0	0	As Net Plant
Physical Security & EMBR	160,864	130,151	0	0	30,713	0	0	As Net Plant
Incentive and Other Compensation - Other Wages	788,324	637,815	0	0	150,510	0	0	As Net Plant
Total General and Admin Services	**$11,576,377**	**$9,366,174**	**$0**	**$0**	**$2,210,203**	**$0**	**$0**	
Corporate Allocations	**$9,585,534**	$0	$9,585,534	$0	$0	$0	$0	100.0% AC
Efficiencies	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	As Net Plant
Total O&M Expenses	**$69,213,420**	**$31,422,450**	**$16,876,282**	**$0**	**$7,414,979**	**$13,499,709**	**$0**	

EPCOR
Drainage COSA
Exhibit 9
Allocation of the Revenue Requirement - Sanitary

	Test Year 2024	Volume (VOL)	Weighted Actual Customer (AC)	Weighted Customer Acct/Svcs (ESU)	Weighted Capacity Demand (CD)	Revenue (RR)	Direct (DA)	Basis of Classification
Property Taxes	**$469,089**	**$0**	**$0**	**$0**	**0**	**$469,089**	**$0**	100.0% RR
Depreciation	$37,225,883	$16,900,313	$9,076,773	$0	$3,988,087	$7,260,710	$0	As O&M Expenses
Less: Contributions Amortization	(16,500,791)	(7,491,254)	(4,023,381)	0	(1,767,764)	(3,218,391)	0	As O&M Expenses
Total Depreciation	**$20,725,092**	**$9,409,059**	**$5,053,391**	**$0**	**$2,220,323**	**$4,042,319**	**$0**	
Return on Rate Base - Debt	$23,325,438	$10,589,600	$5,687,433	$0	$2,498,903	$4,549,502	$0	As O&M Expenses
Total Return on Rate Base - Debt	**$23,325,438**	**$10,589,600**	**$5,687,433**	**$0**	**$2,498,903**	**$4,549,502**	**$0**	
Return on Rate Base - Equity	$33,739,722	$15,317,618	$8,226,744	$0	$3,614,607	$6,580,753	$0	As O&M Expenses
Total Return on Rate Base - Equity	**$33,739,722**	**$15,317,618**	**$8,226,744**	**$0**	**$3,614,607**	**$6,580,753**	**$0**	
Total Revenue Requirement	**$147,472,762**	**$66,738,728**	**$35,843,850**	**$0**	**$15,748,812**	**$29,141,372**	**$0**	
Less: Non-Operating Revenue								
Biosolids	$0	$0	$0	$0	$0	$0	$0	As Revenue Requirement
Compliance and monitoring	2,986,846	1,351,696	725,965	0	318,969	590,216	0	As Revenue Requirement
Pipeline Maintenance	255,786	115,756	62,170	0	27,316	50,545	0	As Revenue Requirement
Late payment charges	340,523	154,104	82,766	0	36,365	67,289	0	As Revenue Requirement
Other	5,767	2,610	1,402	0	616	1,140	0	As Revenue Requirement
Billing error/bad debts - Sanitary	0	0	0	0	0	0	0	As Revenue Requirement
Billing error/bad debts - Stormwater	0	0	0	0	0	0	0	As Revenue Requirement
Total Other Revenues	**$3,588,923**	**$1,624,165**	**$872,302**	**$0**	**$383,266**	**$709,189**	**$0**	
Net Revenue Requirement	**$143,883,839**	**$65,114,563**	**$34,971,547**	**$0**	**$15,365,547**	**$28,432,182**	**$0**	

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Drainage COSA
Exhibit 10
Distribution of Total Revenue Requirement - Sanitary

		Residential	Multi-Residential	Commercial	U of A	*Basis*
Volume Related	$65,114,563	$34,828,094	$13,773,961	$15,035,547	$1,476,961	*(VOL)*
*Less: Collection Discount**	0	355,662	140,659	153,542	(649,863)	*(VOL w/o)*
Net Volume Related Costs	**$65,114,563**	**$35,183,756**	**$13,914,620**	**$15,189,089**	**$827,098**	
Customer Related						
Actual Customer	$34,971,547	$32,577,302	$426,380	$1,967,754	$112	*(AC)*
Weighted Customer	0	0	0	0	0	*(ESU)*
Capacity Demand	15,365,547	12,454,458	828,777	2,072,539	9,771	*(CD)*
Total Customer Related	**$50,337,094**	**$45,031,760**	**$1,255,157**	**$4,040,294**	**$9,883**	
Revenue Related	$28,432,182	$17,679,059	$4,702,372	$5,788,817	$261,935	*(RR)*
Direct Assignment	$0	$0	$0	$0	$0	*(DA)*
Total Revenue Requirements	**$143,883,839**	**$97,894,575**	**$19,872,149**	**$25,018,199**	**$1,098,916**	

EPCOR
Drainage COSA
Exhibit 11
Cost of Service Analysis Summary - Sanitary

	2024	Residential	Multi-Residential	Commercial	U of A
Revenues at Present Rates	**$171,408,909**	$106,581,626	$28,349,157	$34,899,000	$1,579,127
Allocated Revenue Requirement	**$143,883,839**	$97,894,575	$19,872,149	$25,018,199	$1,098,916
Balance / (Deficiency) of Funds	**$27,525,070**	**$8,687,051**	**$8,477,008**	**$9,880,801**	**$480,210**
Required % Change in Rates	**-16.1%**	**-8.2%**	**-29.9%**	**-28.3%**	**-30.4%**

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Drainage COSA
Exhibit 12
Unit Costs Summary - Sanitary

	System Average	Residential	Multi-Residential	Commercial	U of A
Variable					
Volume Related	$0.66	$0.66	$0.66	$0.66	$0.37
Fixed					
Actual Customer	$8.70	$10.00	$1.97	$3.63	$0.04
Weighted Customer	0.00	0.00	0.00	0.00	0.00
Capacity Demand	3.82	3.82	3.82	3.82	3.82
RR / DA	7.07	5.43	21.69	10.68	102.48
Total	**$19.59**	**$19.25**	**$27.48**	**$18.13**	**$106.34**
Basic Data					
Volume / Flow (m^3)	99,356,159	53,143,037	21,017,232	22,942,244	2,253,645
Customers	313,274	291,827	3,820	17,627	1
Wt. Customers	362,667	296,907	18,385	47,162	213
Equiv. Meters	334,944	271,487	18,066	45,178	213

Stormwater Drainage Technical Appendix B

EPCOR
Drainage COSA
Summary of the Revenue Requirement - Stormwater
Exhibit 1

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Revenues										
Rate Revenues	$120,545,319	$130,959,475	$143,286,837	$155,241,289	$157,880,391	$160,564,357	$163,293,951	$166,069,949	$168,893,138	$171,764,321
Miscellaneous Revenues	658,168	662,214	673,602	685,089	696,735	708,580	720,626	732,876	745,335	758,006
Total Revenues	**$121,203,487**	**$131,621,688**	**$143,960,438**	**$155,926,378**	**$158,577,126**	**$161,272,937**	**$164,014,577**	**$166,802,825**	**$169,638,473**	**$172,522,327**
Expenses										
Franchise Fees	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Drainage Operations	$22,949,196	$23,662,669	$24,171,048	$24,651,151	$25,168,825	$25,697,371	$26,237,015	$26,787,993	$27,350,541	$27,924,902
Total One Water Planning and Project Support	9,051,619	9,174,443	9,387,443	9,585,796	9,787,098	9,992,627	10,202,472	10,416,724	10,635,475	10,858,820
Total Operational Support Services	(1,042,061)	(4,423,676)	(4,527,646)	(4,624,260)	(4,721,370)	(4,820,518)	(4,921,749)	(5,025,106)	(5,130,633)	(5,238,376)
Total Billing and Meter Reading	3,067,006	3,136,491	3,207,630	3,276,437	3,345,242	3,415,492	3,487,217	3,560,449	3,635,218	3,711,558
Total General and Admin Services	11,571,882	11,795,219	12,029,944	12,254,904	12,512,257	12,775,014	13,043,290	13,317,199	13,596,860	13,882,394
Corporate Allocations	9,585,534	9,770,707	9,961,028	10,144,791	10,357,832	10,575,346	10,797,428	11,024,174	11,255,682	11,492,051
Efficiencies	0	0	0	0	0	0	0	0	0	0
Total O&M Expenses	**$55,183,175**	**$53,115,852**	**$54,229,447**	**$55,288,819**	**$56,449,884**	**$57,635,332**	**$58,845,674**	**$60,081,433**	**$61,343,143**	**$62,631,349**
Property Taxes	$750,911	$760,192	$768,373	$779,379	$791,070	$802,936	$814,980	$827,205	$839,613	$852,207
Depreciation	26,486,464	26,425,330	28,626,596	30,974,267	33,418,069	36,022,189	38,796,349	41,750,842	44,896,555	48,245,013
Total Return on Rate Base - Debt	24,592,761	27,191,284	29,667,184	32,734,333	35,844,095	39,249,284	42,977,966	47,060,872	51,531,655	56,427,162
Total Return on Rate Base - Equity	35,357,067	42,668,467	49,205,924	52,405,582	55,811,945	59,439,722	63,303,304	67,418,018	71,800,190	76,467,202
Total Revenue Requirement	**$142,370,377**	**$150,161,127**	**$162,497,523**	**$172,182,380**	**$182,315,063**	**$193,149,462**	**$204,738,272**	**$217,138,370**	**$230,411,156**	**$244,622,933**
Bal. / (Def.) of Funds	($21,166,890)	($18,539,438)	($18,537,085)	($16,256,002)	($23,737,937)	($31,876,525)	($40,723,695)	($50,335,545)	($60,772,683)	($72,100,606)

EPCOR
Drainage COSA
Revenue Requirement - Stormwater
Exhibit 2

	Projected										
	2024	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	***Notes***
Revenues											
Rate Revenues											
Residential	$63,581,905	$69,231,807	$75,341,097	$81,930,044	$83,322,854	$84,739,343	$86,179,912	$87,644,970	$89,134,935	$90,650,229	1.7% Inc / Yr 2028-2033
Multi-Residential	6,757,135	7,272,207	7,801,876	8,364,067	8,506,256	8,650,862	8,797,927	8,947,492	9,099,599	9,254,292	1.7% Inc / Yr 2028-2033
Commercial	51,406,279	55,655,460	60,143,863	64,947,179	66,051,281	67,174,152	68,316,113	69,477,487	70,658,604	71,859,800	1.7% Inc / Yr 2028-2033
Commercial - Leakage	(1,200,000)	(1,200,000)	0	0	0	0	0	0	0	0	1.7% Inc / Yr 2028-2033
Total Rate Revenues	**$120,545,319**	**$130,959,475**	**$143,286,837**	**$155,241,289**	**$157,880,391**	**$160,564,357**	**$163,293,951**	**$166,069,949**	**$168,893,138**	**$171,764,321**	
Other Revenues											
Biosolids	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	1.7% Inc / Yr 2028-2033
Pipeline Maintenance	409,459	412,288	416,725	422,694	429,880	437,188	444,620	452,179	459,866	467,684	1.7% Inc / Yr 2028-2033
Late payment charges	239,477	240,733	247,585	252,970	257,271	261,644	266,092	270,616	275,216	279,895	1.7% Inc / Yr 2028-2033
Other	9,233	9,192	9,291	9,424	9,584	9,747	9,913	10,082	10,253	10,427	1.7% Inc / Yr 2028-2033
Total Other Revenues	**$658,168**	**$662,214**	**$673,602**	**$685,089**	**$696,735**	**$708,580**	**$720,626**	**$732,876**	**$745,335**	**$758,006**	
Total Revenues	**$121,203,487**	**$131,621,688**	**$143,960,438**	**$155,926,378**	**$158,577,126**	**$161,272,937**	**$164,014,577**	**$166,802,825**	**$169,638,473**	**$172,522,327**	
Franchise Fees	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	
Drainage Operations											
Biosolids Management	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	2.1% Inc / Yr 2028-2033
Pipeline Maintenance	2,543,486	2,576,749	2,637,310	2,693,587	2,750,152	2,807,905	2,866,871	2,927,076	2,988,544	3,051,304	2.1% Inc / Yr 2028-2033
Flow control Facilities	12,800,668	13,256,710	13,520,518	13,773,352	14,062,592	14,357,907	14,659,423	14,967,270	15,281,583	15,602,496	2.1% Inc / Yr 2028-2033
General Maintenance	359,776	489,195	500,692	511,376	522,115	533,080	544,274	555,704	567,374	579,289	2.1% Inc / Yr 2028-2033
Preventative Mtnc - WWC	2,502,404	2,535,130	2,594,713	2,650,081	2,705,732	2,762,553	2,820,566	2,879,798	2,940,274	3,002,020	2.1% Inc / Yr 2028-2033
Inspections and Investigations	2,186,287	2,214,879	2,266,935	2,315,308	2,363,930	2,413,572	2,464,257	2,516,007	2,568,843	2,622,789	2.1% Inc / Yr 2028-2033
Responsive Maintenance and Repair	2,556,574	2,590,008	2,650,881	2,707,447	2,764,303	2,822,354	2,881,623	2,942,137	3,003,922	3,067,005	2.1% Inc / Yr 2028-2033
Total Drainage Operations	**$22,949,196**	**$23,662,669**	**$24,171,048**	**$24,651,151**	**$25,168,825**	**$25,697,371**	**$26,237,015**	**$26,787,993**	**$27,350,541**	**$27,924,902**	
One Water Planning and Project Support											
One Water Planning	$1,780,314	$1,803,596	$1,845,986	$1,885,377	$1,924,970	$1,965,394	$2,006,668	$2,048,808	$2,091,833	$2,135,761	2.1% Inc / Yr 2028-2033
Engineering	1,999,689	2,025,840	2,073,453	2,117,698	2,162,170	2,207,575	2,253,934	2,301,267	2,349,594	2,398,935	2.1% Inc / Yr 2028-2033
Project Management	1,264,632	1,281,171	1,311,282	1,339,263	1,367,388	1,396,103	1,425,421	1,455,355	1,485,917	1,517,122	2.1% Inc / Yr 2028-2033
Controls and Automation	936,124	948,366	970,656	991,368	1,012,187	1,033,443	1,055,145	1,077,303	1,099,927	1,123,025	2.1% Inc / Yr 2028-2033
Operations Mgmt and Admin	(355,503)	(360,152)	(368,616)	(376,482)	(384,388)	(392,460)	(400,702)	(409,117)	(417,708)	(426,480)	2.1% Inc / Yr 2028-2033
Private Development & Commissioning	(77,367)	(78,379)	(80,221)	(81,933)	(83,654)	(85,410)	(87,204)	(89,035)	(90,905)	(92,814)	2.1% Inc / Yr 2028-2033
Utility Line Assignment (ULA)	602,667	610,548	624,898	638,232	651,635	665,320	679,291	693,556	708,121	722,992	2.1% Inc / Yr 2028-2033
Distribution Maintenance	202,761	205,413	210,240	214,727	219,236	223,840	228,541	233,340	238,240	243,243	2.1% Inc / Yr 2028-2033
Customer Services	331,194	335,525	343,411	350,739	358,104	365,624	373,302	381,142	389,146	397,318	2.1% Inc / Yr 2028-2033
Yards & Buildings	1,073,796	1,087,838	1,113,406	1,137,164	1,161,045	1,185,427	1,210,321	1,235,738	1,261,688	1,288,183	2.1% Inc / Yr 2028-2033
Facility Operations	577,836	585,393	599,151	611,937	624,787	637,908	651,304	664,981	678,946	693,204	2.1% Inc / Yr 2028-2033
Regulatory and Business Planning	715,475	729,284	743,797	757,706	773,618	789,864	806,451	823,386	840,677	858,332	2.1% Inc / Yr 2028-2033
Total One Water Planning and Project Support	**$9,051,619**	**$9,174,443**	**$9,387,443**	**$9,585,796**	**$9,787,098**	**$9,992,627**	**$10,202,472**	**$10,416,724**	**$10,635,475**	**$10,858,820**	
Operational Support Services											
Operations Mgmt and Admin	$104,210	$105,573	$108,054	$110,360	$112,677	$115,044	$117,460	$119,926	$122,445	$125,016	2.1% Inc / Yr 2028-2033
Survey Operations	417,317	422,774	432,711	441,944	451,225	460,701	470,375	480,253	490,338	500,636	2.1% Inc / Yr 2028-2033
General Maintenance	1,408,137	1,426,552	1,460,080	1,491,237	1,522,553	1,554,526	1,587,171	1,620,502	1,654,532	1,689,277	2.1% Inc / Yr 2028-2033
Open Cut Services	2,128,867	2,156,707	2,207,397	2,254,500	2,301,844	2,350,183	2,399,537	2,449,927	2,501,375	2,553,904	2.1% Inc / Yr 2028-2033
In-house Tunnelling	853,476	864,638	884,959	903,843	922,824	942,203	961,990	982,191	1,002,817	1,023,877	2.1% Inc / Yr 2028-2033
Equipment Dispatch	(2,742,057)	(2,777,916)	(2,843,205)	(2,903,876)	(2,964,857)	(3,027,119)	(3,090,689)	(3,155,593)	(3,221,861)	(3,289,520)	2.1% Inc / Yr 2028-2033
Capital OH Clearing	(3,212,011)	(6,622,005)	(6,777,641)	(6,922,268)	(7,067,635)	(7,216,056)	(7,367,593)	(7,522,312)	(7,680,281)	(7,841,567)	2.1% Inc / Yr 2028-2033
Total Operational Support Services	**($1,042,061)**	**($4,423,676)**	**($4,527,646)**	**($4,624,260)**	**($4,721,370)**	**($4,820,518)**	**($4,921,749)**	**($5,025,106)**	**($5,130,633)**	**($5,238,376)**	

EPCOR
Drainage COSA
Revenue Requirement - Stormwater
Exhibit 2

	Projected										
	2024	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	***Notes***
Billing and Meter Reading											
CUS Charges (billing and collections)	$2,190,534	$2,243,102	$2,296,463	$2,348,231	$2,397,544	$2,447,893	$2,499,298	$2,551,784	$2,605,371	$2,660,084	2.1% Inc / Yr 2028-2033
Operations Mgmt and Admin	196,462	200,253	204,239	208,058	212,427	216,888	221,443	226,093	230,841	235,689	2.1% Inc / Yr 2028-2033
Dispatch	484,672	494,026	503,857	513,279	524,058	535,063	546,299	557,772	569,485	581,444	2.1% Inc / Yr 2028-2033
Customer Services	195,339	199,109	203,071	206,869	211,213	215,648	220,177	224,801	229,522	234,342	2.1% Inc / Yr 2028-2033
Total Billing and Meter Reading	**$3,067,006**	**$3,136,491**	**$3,207,630**	**$3,276,437**	**$3,345,242**	**$3,415,492**	**$3,487,217**	**$3,560,449**	**$3,635,218**	**$3,711,558**	
General and Admin Services											
Information Services	$2,177,317	$2,219,339	$2,263,504	$2,305,832	$2,354,254	$2,403,694	$2,454,171	$2,505,709	$2,558,329	$2,612,053	2.1% Inc / Yr 2028-2033
General Admin	3,673,066	3,743,956	3,818,460	3,889,866	3,971,553	4,054,955	4,140,109	4,227,052	4,315,820	4,406,452	2.1% Inc / Yr 2028-2033
Controller	708,343	722,014	736,383	750,153	765,906	781,990	798,412	815,179	832,297	849,776	2.1% Inc / Yr 2028-2033
Marketing and Product Development	890,988	908,184	926,257	943,578	963,393	983,624	1,004,280	1,025,370	1,046,903	1,068,888	2.1% Inc / Yr 2028-2033
Health Safety and Loss Prevention	1,017,776	1,037,419	1,058,064	1,077,850	1,100,484	1,123,595	1,147,190	1,171,281	1,195,878	1,220,991	2.1% Inc / Yr 2028-2033
Training	687,848	701,123	715,075	728,447	743,745	759,363	775,310	791,591	808,215	825,187	2.1% Inc / Yr 2028-2033
Incentive and Other Compensation - STIP/MTII	829,369	845,376	862,199	878,322	896,766	915,598	934,826	954,457	974,501	994,966	2.1% Inc / Yr 2028-2033
Contract Management	232,891	237,385	242,109	246,637	251,816	257,104	262,504	268,016	273,645	279,391	2.1% Inc / Yr 2028-2033
Inventory Management	405,097	412,915	421,132	429,007	438,017	447,215	456,606	466,195	475,985	485,981	2.1% Inc / Yr 2028-2033
Physical Security & EMBR	160,864	163,968	167,231	170,358	173,936	177,589	181,318	185,126	189,013	192,983	2.1% Inc / Yr 2028-2033
Incentive and Other Compensation - Other Wa	788,324	803,539	819,530	834,855	852,387	870,287	888,563	907,223	926,274	945,726	2.1% Inc / Yr 2028-2033
Total General and Admin Services	**$11,571,882**	**$11,795,219**	**$12,029,944**	**$12,254,904**	**$12,512,257**	**$12,775,014**	**$13,043,290**	**$13,317,199**	**$13,596,860**	**$13,882,394**	
Corporate Allocations	**$9,585,534**	**$9,770,707**	**$9,961,028**	**$10,144,791**	**$10,357,832**	**$10,575,346**	**$10,797,428**	**$11,024,174**	**$11,255,682**	**$11,492,051**	2.1% Inc / Yr 2028-2033
Efficiencies	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	
Total O&M Expenses	**$55,183,175**	**$53,115,852**	**$54,229,447**	**$55,288,819**	**$56,449,884**	**$57,635,332**	**$58,845,674**	**$60,081,433**	**$61,343,143**	**$62,631,349**	
Property Taxes	**$750,911**	**$760,192**	**$768,373**	**$779,379**	$791,070	$802,936	$814,980	$827,205	$839,613	$852,207	1.5% Inc / Yr 2028-2033
Depreciation	$60,284,216	$60,955,669	$64,412,549	$67,985,172	$71,724,356	$75,669,196	$79,831,002	$84,221,707	$88,853,901	$93,740,865	5.5% Inc / Yr 2028-2033
Less: Contributions Amortization	(33,797,752)	(34,530,339)	(35,785,953)	(37,010,905)	(38,306,287)	(39,647,007)	(41,034,652)	(42,470,865)	(43,957,345)	(45,495,852)	3.5% Inc / Yr 2028-2033
Total Depreciation	**$26,486,464**	**$26,425,330**	**$28,626,596**	**$30,974,267**	**$33,418,069**	**$36,022,189**	**$38,796,349**	**$41,750,842**	**$44,896,555**	**$48,245,013**	
Return on Rate Base - Debt	$24,592,761	$27,191,284	$29,667,184	$32,734,333	$35,844,095	$39,249,284	$42,977,966	$47,060,872	$51,531,655	$56,427,162	9.5% Inc / Yr 2028-2033
Total Return on Rate Base - Debt	**$24,592,761**	**$27,191,284**	**$29,667,184**	**$32,734,333**	**$35,844,095**	**$39,249,284**	**$42,977,966**	**$47,060,872**	**$51,531,655**	**$56,427,162**	
Return on Rate Base - Equity	$35,357,067	$42,668,467	$49,205,924	$52,405,582	$55,811,945	$59,439,722	$63,303,304	$67,418,018	$71,800,190	$76,467,202	6.5% Inc / Yr 2028-2033
Total Return on Rate Base - Equity	**$35,357,067**	**$42,668,467**	**$49,205,924**	**$52,405,582**	**$55,811,945**	**$59,439,722**	**$63,303,304**	**$67,418,018**	**$71,800,190**	**$76,467,202**	
Total Revenue Requirement	**$142,370,377**	**$150,161,127**	**$162,497,523**	**$172,182,380**	**$182,315,063**	**$193,149,462**	**$204,738,272**	**$217,138,370**	**$230,411,156**	**$244,622,933**	
Bal. / (Def.) of Funds	($21,166,890)	($18,539,438)	($18,537,085)	($16,256,002)	($23,737,937)	($31,876,525)	($40,723,695)	($50,335,545)	($60,772,683)	($72,100,606)	

EPCOR
Drainage COSA
Exhibit 3
Equivalent Unit Distribution Factor - Stormwater

	# of Storm Equivalents [1]	% of Total	
Residential	895,557,570	52.7%	*52.2%*
Multi-Residential	97,267,142	5.7%	*5.6%*
Commercial	706,258,260	41.6%	*42.2%*
Total	**1,699,082,972**	**100.0%**	
		(ESU)	

Notes

[1] - Based on Historical data and 2024 projection

EPCOR
Drainage COSA
Exhibit 4
Customer Distribution Factors - Stormwater

	Acutal Customer		*Cust. Serv. & Acntg*		
	Number of Account [1]	**% of Total**	**Weight Factor [2]**	**Wt. Acct.**	**% of Total**
Residential	293,396	93.1%	1.00	293,396	93.1%
Multi-Residential	3,848	1.2%	1.00	3,848	1.2%
Commercial	18,018	5.7%	1.00	18,018	5.7%
Total	**315,262**	**100.0%**		**315,262**	**100.0%**
		(AC)			***(WCA)***

Notes

[1] - Based on Historical data and 2024 projection
[2] - No Cost Difference Identified

EPCOR
Drainage COSA
Exhibit 5
Revenue Distribution Factor - Stormwater

	Projected 2024	% of Total
Residential	$63,581,905	52.2%
Multi-Residential	6,757,135	5.6%
Commercial	51,406,279	42.2%
Total	**$121,745,319**	**100.0%**

(RR)

EPCOR
Drainage COSA
Exhibit 6
Net Plant in Service - Storm

	As of 12/31/22	Volume (VOL)	Actual Customer (AC)	Customer Acct/Svcs (WCA)	Equivalent SW Unit (ESU)	Revenue (RR)	Direct (DA)	Basis of Classification
		Weighted for						
Collection	$2,072,423,598	$0	$0	$0	$2,072,423,598	$0	$0	100.0% ESU
Collection - Common	113,583,850	0	0	0	113,583,850	0	0	100.0% ESU
Pumping Stations	10,741,371	0	0	0	10,741,371	0	0	100.0% ESU
Pumping - Common	275,224	0	0	0	275,224	0	0	100.0% ESU
Storage	609,799,293	0	0	0	609,799,293	0	0	100.0% ESU
Storage - Common	1,742,827	0	0	0	1,742,827	0	0	100.0% ESU
Plant Before General Plant	**$2,808,566,163**	**$0**	**$0**	**$0**	**$2,808,566,163**	**$0**	**$0**	
% Plant Before General Plant	***100.0%***	***0.0%***	***0.0%***	***0.0%***	***100.0%***	***0.0%***	***0.0%***	*Factor PBGP*
General Plant								
General Plant	$2,292,025	$0	$0	$0	$2,292,025	$0	$0	*As Factor PBGP*
General Plant - Common	50,275,055	0	0	0	50,275,055	0	0	*As Factor PBGP*
Total General Plant	**$52,567,080**	**$0**	**$0**	**$0**	**$52,567,080**	**$0**	**$0**	
Net Plant in Service	**$2,861,133,243**	**$0**	**$0**	**$0**	**$2,861,133,243**	**$0**	**$0**	

EPCOR
Drainage COSA
Exhibit 7
Allocation of the Revenue Requirement - Stormwater

	Test Year 2024	Volume (VOL)	Weighted Actual Customer (AC)	Weighted Customer Acct/Svcs (WCA)	Weighted Equivalent SW Unit (ESU)	Revenue (RR)	Direct (DA)	Basis of Classification
Franchise Fees	**$0**	$0	$0	$0	$0	$0	$0	100.0% RR
Drainage Operations								
Biosolids Management	$0	$0	$0	$0	$0	$0	$0	As Net Plant
Pipeline Maintenance	2,543,486	0	0	0	2,543,486	0	0	As Net Plant
Flow control Facilities	12,800,668	0	0	0	12,800,668	0	0	As Net Plant
Hazardous and Sanitary Waste	0	0	0	0	0	0	0	As Net Plant
Industrial Monitoring	0	0	0	0	0	0	0	As Net Plant
Compliance	0	0	0	0	0	0	0	As Net Plant
General Maintenance	359,776	0	0	0	359,776	0	0	As Net Plant
Preventative Mtnc - WWC	2,502,404	0	0	0	2,502,404	0	0	As Net Plant
Inspections and Investigations	2,186,287	0	0	0	2,186,287	0	0	As Net Plant
Responsive Maintenance and Repair	2,556,574	0	0	0	2,556,574	0	0	As Net Plant
CORe	0	0	0	0	0	0	0	As Net Plant
SIRP	0	0	0	0	0	0	0	As Net Plant
Total Drainage Operations	**$22,949,196**	**$0**	**$0**	**$0**	**$22,949,196**	**$0**	**$0**	
One Water Planning and Project Support								
One Water Planning	$1,780,314	$0	$0	$0	$1,780,314	$0	$0	As Net Plant
Engineering	1,999,689	0	0	0	1,999,689	0	0	As Net Plant
Project Management	1,264,632	0	0	0	1,264,632	0	0	As Net Plant
Project Management - CORe	0	0	0	0	0	0	0	As Net Plant
Controls and Automation	936,124	0	0	0	936,124	0	0	As Net Plant
Operations Mgmt and Admin	(355,503)	0	0	0	(355,503)	0	0	As Net Plant
Private Development & Commissioning	(77,367)	0	0	0	(77,367)	0	0	As Net Plant
Utility Line Assignment (ULA)	602,667	0	0	0	602,667	0	0	As Net Plant
Distribution Maintenance	202,761	0	0	0	202,761	0	0	As Net Plant
Customer Services	331,194	0	0	0	331,194	0	0	As Net Plant
Yards & Buildings	1,073,796	0	0	0	1,073,796	0	0	As Net Plant
Facility Operations	577,836	0	0	0	577,836	0	0	As Net Plant
Regulatory and Business Planning	715,475	0	0	0	715,475	0	0	As Net Plant
Total One Water Planning and Project Support	**$9,051,619**	**$0**	**$0**	**$0**	**$9,051,619**	**$0**	**$0**	
Operational Support Services								
Operations Mgmt and Admin	$104,210	$0	$0	$0	$104,210	$0	$0	As Net Plant
Survey Operations	417,317	0	0	0	417,317	0	0	As Net Plant
General Maintenance	1,408,137	0	0	0	1,408,137	0	0	As Net Plant
Open Cut Services	2,128,867	0	0	0	2,128,867	0	0	As Net Plant
In-house Tunnelling	853,476	0	0	0	853,476	0	0	As Net Plant
Equipment Dispatch	(2,742,057)	0	0	0	(2,742,057)	0	0	As Net Plant
Capital OH Clearing	(3,212,011)	0	0	0	(3,212,011)	0	0	As Net Plant
Total Operational Support Services	**($1,042,061)**	**$0**	**$0**	**$0**	**($1,042,061)**	**$0**	**$0**	

EPCOR
Drainage COSA
Exhibit 7
Allocation of the Revenue Requirement - Stormwater

	Test Year 2024	Volume (VOL)	Weighted Actual Customer (AC)	Weighted Customer Acct/Svcs (WCA)	Weighted Equivalent SW Unit (ESU)	Revenue (RR)	Direct (DA)	Basis of Classification
Billing and Meter Reading								
CUS Charges (billing and collections)	$2,190,534	$0	$0	$0	$2,190,534	$0	$0	As Net Plant
Meter Reading	0	0	0	0	0	0	0	As Net Plant
Mtce - Meters	0	0	0	0	0	0	0	As Net Plant
Operations Mgmt and Admin	196,462	0	0	0	196,462	0	0	As Net Plant
Dispatch	484,672	0	0	0	484,672	0	0	As Net Plant
Customer Services	195,339	0	0	0	195,339	0	0	As Net Plant
Total Billing and Meter Reading	**$3,067,006**	**$0**	**$0**	**$0**	**$3,067,006**	**$0**	**$0**	
General and Admin Services								
Information Services	$2,177,317	$0	$0	$0	$2,177,317	$0	$0	As Net Plant
General Admin	3,673,066	0	0	0	3,673,066	0	0	As Net Plant
General & Tax Accounting	0	0	0	0	0	0	0	As Net Plant
Controller	708,343	0	0	0	708,343	0	0	As Net Plant
Marketing and Product Development	890,988	0	0	0	890,988	0	0	As Net Plant
Health Safety and Loss Prevention	1,017,776	0	0	0	1,017,776	0	0	As Net Plant
Training	687,848	0	0	0	687,848	0	0	As Net Plant
Incentive and Other Compensation - STIP/MTIP	829,369	0	0	0	829,369	0	0	As Net Plant
Contract Management	232,891	0	0	0	232,891	0	0	As Net Plant
Inventory Management	405,097	0	0	0	405,097	0	0	As Net Plant
Physical Security & EMBR	160,864	0	0	0	160,864	0	0	As Net Plant
Incentive and Other Compensation - Other Wages	788,324	0	0	0	788,324	0	0	As Net Plant
Total General and Admin Services	**$11,571,882**	**$0**	**$0**	**$0**	**$11,571,882**	**$0**	**$0**	
Corporate Allocations	**$9,585,534**	**$0**	**$0**	**$0**	**$9,585,534**	**$0**	**$0**	As Net Plant
Efficiencies	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	As Net Plant
Total O&M Expenses	**$55,183,175**	**$0**	**$0**	**$0**	**$55,183,175**	**$0**	**$0**	

EPCOR
Drainage COSA
Exhibit 7
Allocation of the Revenue Requirement - Stormwater

	Test Year 2024	Volume *(VOL)*	*Weighted* Actual Customer *(AC)*	Customer Acct/Svcs *(WCA)*	Equivalent SW Unit *(ESU)*	Revenue *(RR)*	Direct *(DA)*	*Basis of Classification*
Property Taxes	**$750,911**	**$0**	**$0**	**$0**	**$750,911**	**$0**	**$0**	As O&M Expenses
Depreciation	$60,284,216	$0	$0	$0	$60,284,216	$0	$0	As O&M Expenses
Less: Contributions Amortization	(33,797,752)	0	0	0	(33,797,752)	0	0	As O&M Expenses
Total Depreciation	**$26,486,464**	**$0**	**$0**	**$0**	**$26,486,464**	**$0**	**$0**	
Return on Rate Base - Debt	$24,592,761	$0	$0	$0	$24,592,761	$0	$0	As O&M Expenses
Total Return on Rate Base - Debt	**$24,592,761**	**$0**	**$0**	**$0**	**$24,592,761**	**$0**	**$0**	
Return on Rate Base - Equity	$35,357,067	$0	$0	$0	$35,357,067	$0	$0	As O&M Expenses
Total Return on Rate Base - Equity	**$35,357,067**	**$0**	**$0**	**$0**	**$35,357,067**	**$0**	**$0**	
Total Revenue Requirement	**$142,370,377**	**$0**	**$0**	**$0**	**$142,370,377**	**$0**	**$0**	
Less: Non-Operating Revenue								
Biosolids	$0	$0	$0	$0	$0	$0	$0	As Revenue Requirement
Compliance and monitoring	0	0	0	0	0	0	0	As Revenue Requirement
Pipeline Maintenance	409,459	0	0	0	409,459	0	0	As Revenue Requirement
Late payment charges	239,477	0	0	0	239,477	0	0	As Revenue Requirement
Other	9,233	0	0	0	9,233	0	0	As Revenue Requirement
Billing error/bad debts - Sanitary	0	0	0	0	0	0	0	As Revenue Requirement
Billing error/bad debts - Stormwater	0	0	0	0	0	0	0	As Revenue Requirement
Total Other Revenues	**$658,168**	**$0**	**$0**	**$0**	**$658,168**	**$0**	**$0**	
Net Revenue Requirement	**$141,712,209**	**$0**	**$0**	**$0**	**$141,712,209**	**$0**	**$0**	

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Drainage COSA
Exhibit 8
Distribution of Total Revenue Requirement - Stormwater

		Residential	Multi-Residential	Commercial	*Basis*
Volume Related	$0	$0	$0	$0	*(VOL)*
Customer Related					
Actual Customer	$0	$0	$0	$0	*(AC)*
Weighted Customer	0	0	0	0	*(WCA)*
Equivalent Stormwater Unit	141,712,209	74,694,081	8,112,577	58,905,551	*(ESU)*
Total Customer Related	**$141,712,209**	**$74,694,081**	**$8,112,577**	**$58,905,551**	
Revenue Related	$0	$0	$0	$0	*(RR)*
Direct Assignment	$0	$0	$0	$0	*(DA)*
Total Revenue Requirements	**$141,712,209**	**$74,694,081**	**$8,112,577**	**$58,905,551**	

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Exhibit 9
Cost of Service Analysis Summary - Stormwater

	2024	Residential	Multi-Residential	Commercial
Revenues at Present Rates	**$121,745,319**	$63,581,905	$6,757,135	$51,406,279
Distributed Revenue Requirement	**$141,712,209**	$74,694,081	$8,112,577	$58,905,551
Balance / (Deficiency) of Funds	**($19,966,890)**	**($11,112,176)**	**($1,355,442)**	**($7,499,272)**
Required % Change in Rates	**16.4%**	**17.5%**	**20.1%**	**14.6%**

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Drainage COSA
Exhibit 10
Unit Costs Summary - Stormwater

	System Average	Residential	Multi-Residential	Commercial
Unit Cost - $ / Storm Equiv.				
Volume Related	$0.0000	$0.0000	$0.0000	$0.0000
Actual Customer	0.0000	0.0000	0.0000	0.0000
Weighted Customer	0.0000	0.0000	0.0000	0.0000
Equivalent Stormwater Unit	0.0834	0.0834	0.0834	0.0834
RR / DA	0.0000	0.0000	0.0000	0.0000
Total	**$0.0834**	**$0.0834**	**$0.0834**	**$0.0834**
	Current Rates			
Basic Data				
Equivalent Stormwater Units	1,699,082,972	895,557,570	97,267,142	706,258,260