



EPCOR Water Services  
Response to City of Edmonton PBR Review Reports  
2025-2027 Wastewater Services PBR Application

October 11, 2024

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## 1.0 INTRODUCTION

EPCOR Water Services (EWS) filed its Wastewater Services Performance Based Regulation (PBR) Application (the “Application”) on May 31, 2024 through which approval is being sought for its wastewater collection and wastewater treatment rates, terms and conditions of service and updated performance measures for the 2025-2027 PBR term. Subsequently, EWS responded to all Information Requests (IR) it received from City Council, City Administration, the Utility Advisor and the Public. EWS’ IR responses were submitted to City Administration on August 02, 2024.

On behalf of City Council and City Administration, Mooreview Management Consulting Inc. (“Mooreview”) and the Utility Advisor conducted an independent review of EWS’ PBR application and IR responses and provided their report dated September 04, 2024.

This report provides EWS’ response to the following two reasonableness review reports (the “Reports”) for the October 11, 2024 Utility Committee meeting:

- Mooreview report titled “EPCOR Wastewater Services Performance Based Regulation (PBR) Application Analysis (April 2025 to December 2027)”; and
- Utility Advisor’s report titled “Utilities Advisor Review EPCOR Water Services 2025-2027 Performance Based Regulation Application Wastewater Services”.

EWS appreciates the efforts undertaken by City Council, City Administration, the Utility Advisor and the City’s consultant to review EWS’ PBR application and to provide their respective reports. In its report, Mooreview provides recommendations pertaining to the 2025-2027 Application and also provides recommendations for consideration in future PBR applications. In this report, EWS provides its responses to recommendations applicable to the 2025-2027 Application. See Appendix A for a table summarizing the recommendations applicable to the 2025-2027 Application. In due course, EWS will evaluate the recommendations applicable to future applications and incorporate them into future submissions.

EWS accepts some of the recommendations, but respectfully disagrees with other recommendations and the rationale for those recommendations in the Mooreview and the Utility Advisor reports. The following sections provide EWS’ response respecting the recommendations.

## 2.0 RECOMMENDATIONS EWS ACCEPTS

### 2.1 Efficiency Factor

Reference: Mooreview Report, Page 11 and Section 5.2

Report Recommendation: *Consider doubling the proposed efficiency factor from 0.25% to 0.50% for Wastewater Collection and direct EWSI to recalculate 2025-2027 rates.*

EWS Response:

Since the transfer of Wastewater Collection (“Drainage Services”) from the City of Edmonton in 2017, considerable actions have been taken by EWS to integrate and realize operational efficiencies. Wastewater Collection is now transitioning into its second PBR term during the 2025-2027 period and it is reasonable to expect a reduction in Wastewater Collection’s efficiency factor to align with Water and Wastewater Treatment. However, additional integration efforts are planned for Wastewater Collection during the 2025-2027 PBR term with the goal of achieving further efficiencies. As a result, EWS is not opposed to reflecting the rate impact of this increase in its compliance filing.

In the event EWS is directed to increase Wastewater Collection’s efficiency factor to 0.50% for the 2025-2027 PBR term, it can be expected that the efficiency factor for Wastewater Collection will be aligned with the Water and Wastewater Treatment operations for the 2028 consolidated PBR application.

### 2.2 Consumption Forecast

Reference: Mooreview Report, Page 8

Report Recommendation:

*i. Direct EWSI to detail the specific analysis that leads to their proposal to base 2025-2027 rates on the assumption that the average residential account consumption will decline by 1.3% annually, with specific responses to why this is reasonable given average consumption per account results since 2019.*

*ii. If the 1.3% annual decline is not supported in a satisfactory manner from (i) above, direct EWSI to calculate a revised and reasonable trend estimate for 2025-2027.*

*iii. Direct EWSI to calculate a revised and reasonable estimate for 2024 (upon which 2025-2027 forecasts are based).*

*iv. Direct EWSI to calculate updated rates for the 2025-2027 PBR term using updated projected average consumption per residential account based on the above steps.*

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**EWS Response:**

EWS provides further details below on the specific analysis that leads to the assumption that the average residential consumption per customer would decline by 1.3% annually.

EWS has experienced a declining trend of water consumption per residential customer over the past four decades. This is primarily due to the installation of water efficient appliances and fixtures (i.e., toilets, washing machines, dishwashers) that require no behavioral changes to reduce water consumption (DeOreo, B. & Mayer, P., 2016)<sup>1</sup>. As customers continue to replace appliances and fixtures and new residential developments are equipped with more efficient appliances and fixtures, this declining trend of water consumption per residential customer is anticipated to continue.

In addition, the installation of Advanced Metering Infrastructure (AMI) across Edmonton will further enable declining trends by reducing customer-side water leakage. AMI provides continuous, real-time data on water usage and is a proven technology to reduce customer-side water leakage by enabling utilities to more quickly notify customers when a leak is detected. Leaks are estimated to account for 12% of residential indoor water use in North America (DeOreo, B. & Mayer, P., 2016)<sup>1</sup>. As of September 2024, 109,972 AMI meters have been installed, and the remainder will be installed in 2024 and 2025.

EWS utilizes a formalized statistical method to estimate projected average residential consumption per customer for base (indoor) and seasonal usage based on historical data to predict future trends that is further explained below. AMI, in conjunction with water conservation and efficiency programs EWS has in place, will continue to contribute to lower consumption per customer, further validating the projected forecast decline.

For the current 2022-2024 Wastewater PBR Application, the average residential consumption was forecast to decline by 1.7% in 2023 and by 1.8% in 2024. The consumption forecast was updated in 2024 for the 2025-2027 Wastewater PBR Application, resulting in an adjusted forecast decline of 1.3% per year for 2025, 2026 and 2027.

When examining the residential customer category, the average rate of decline varies based on the time scale investigated. The average rate of decline over 3 years is 2.1% (0.8% over 5 years, and 1.1% over 10 years).

The methodology for forecasting residential consumption per customer is outlined below. The forecast accuracy of this methodology has been demonstrated to warrant its use for the 2025-2027 PBR term. Average accuracy in the 2017-2021 PBR Application (excluding 2020 and 2021 COVID years) was -0.9% (average actual consumption per customer was lower than PBR forecast).

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<sup>1</sup> DeOreo, B., & Mayer, P. (2016). Residential End .Uses of Water Study Update. Denver, CO: Water Research Foundation

## Residential Forecast Methodology

EWS utilizes a formalized statistical method to estimate projected average residential consumption per customer for base (indoor) and seasonal usage, which is based on a disaggregated geographic-based forecasting approach based on the City's core, mature, established and developing neighbourhoods that correlate to average year of construction for each area of the City. The table below describes the five disaggregated groupings of residential customers analyzed and their percentage of the total residential accounts.

Classification	Description	% of accounts
Developing	Current developing neighbourhoods where lot registration is not complete	32
Established	Neighbourhoods generally within the Anthony Henday TUC and completed between 1970 and 1990	31
Mature	Neighbourhoods outside the core, generally completed prior to 1970	30
Core	Downtown and adjacent neighbourhoods, generally the oldest neighbourhoods in the city	2
Planned	Newest housing stock constructed 2020+	5

Base consumption (indoor) and seasonal consumption (outdoor) are forecast separately for each group based on the mix of housing vintage and lot characteristics in each geographic area. Declining base trends are unique for each neighbourhood classification based on household occupancy and renovation rates (i.e. changing fixtures and appliances to water efficient models). While seasonal trends have shown a long-term reduction, the seasonal trend is largely dependent on the rainfall and weather conditions experienced during the summer.

Trendlines are established for each disaggregated neighbourhood classification base consumption and determined based on the R-squared ( $R^2$ ) value of the trend as well as professional judgement to determine the scenarios to assess.  $R^2$  (defined as the coefficient of determination) is a number that indicates how well the line of best fit predicts the future outcome. For example, an  $R^2$  of 1 indicates that the trend perfectly fits the data (knowing x predicts y); while a value of 0 indicates that the trend does not fit the data at all (data is random).

Given the impacts of COVID-19 on water consumption in 2020, 2021 and 2022 (base residential water consumption increased due to school, business and mobility disruptions), these datapoints were excluded from the base forecast.

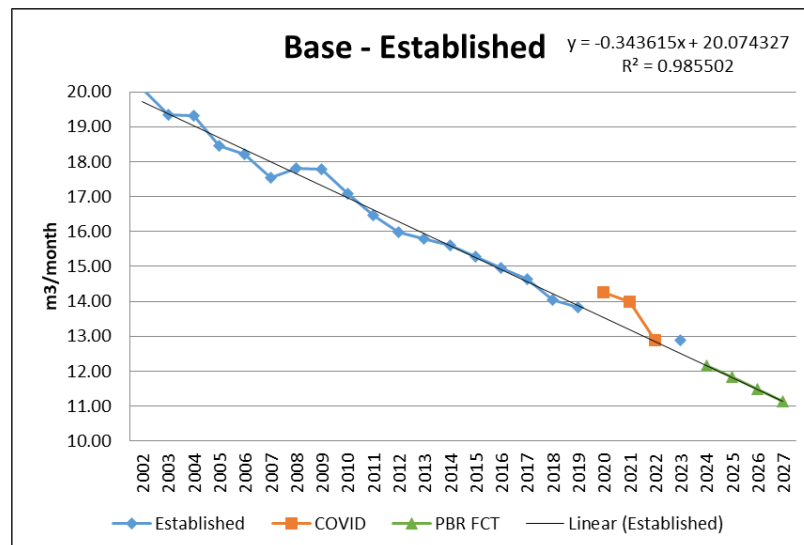
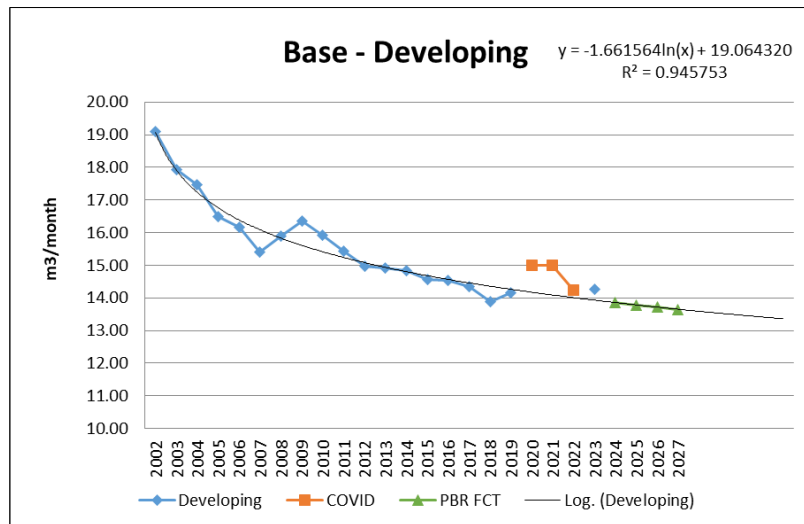
Two scenarios were assessed for the 2025-2027 Wastewater PBR Application. Scenario 1, as illustrated below, was selected for the application and forecasts a total reduction of 1.3% per year. Scenario 2 (not selected), was developed to include a slowing trend in residential efficiencies for established and mature neighbourhoods, representing a total forecast reduction of 1.1% per year. Scenario 2 was not selected as EWS continues to promote water efficient practices and with the implementation of AMI with more detailed and timely information to assist customers managing on premise water leaks we expect the reduction in consumption to

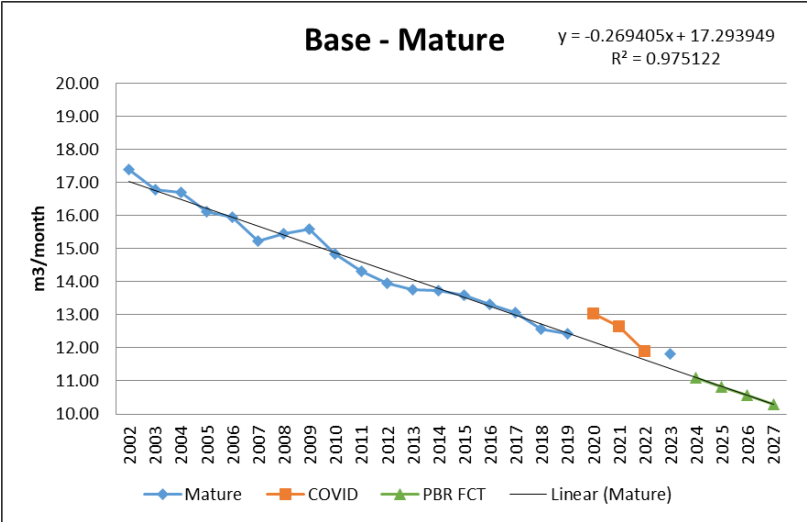
continue. The continued focus on green infrastructure for storm water management also funded in this filing will reduce the usage of potable water for seasonal water use.

The trends for the three main neighbourhood classifications of Developing, Established and Mature, which represent 93% of EWS' residential accounts are outlined below.

Base Forecast

Scenario 1 historical data, 2020/2021/2022 COVID-19 consumption, and the forecast trend are illustrated in the charts below.



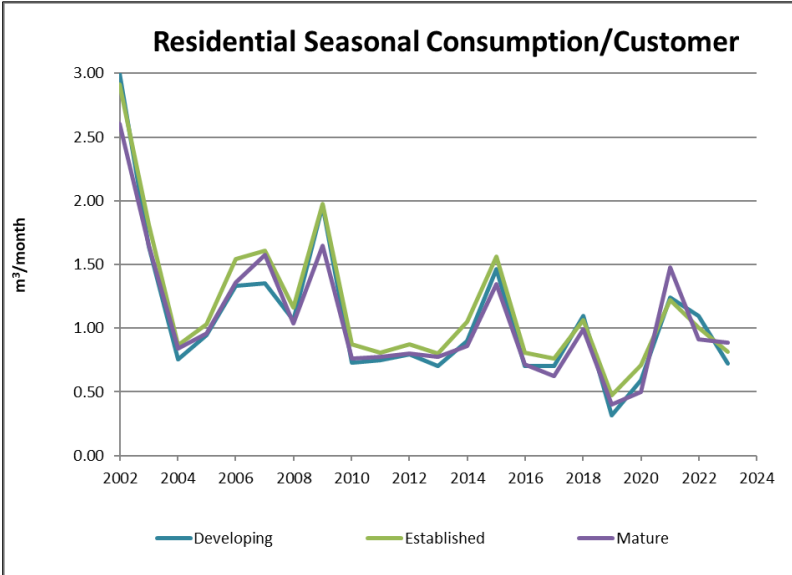


Seasonal Forecast

Across water utilities, seasonal consumption is more variable than base use. Seasonal consumption is largely dependent on the summer months’ temperature and precipitation as this affects outdoor water usage (primarily for irrigation) and is therefore more difficult to forecast. In the years 2002, 2009, 2015 and 2021 high consumption peaks due to hot, dry years are evident. Similarly, low seasonal consumption valleys due to cool, wet years are evident in 2004, 2010, and 2019.

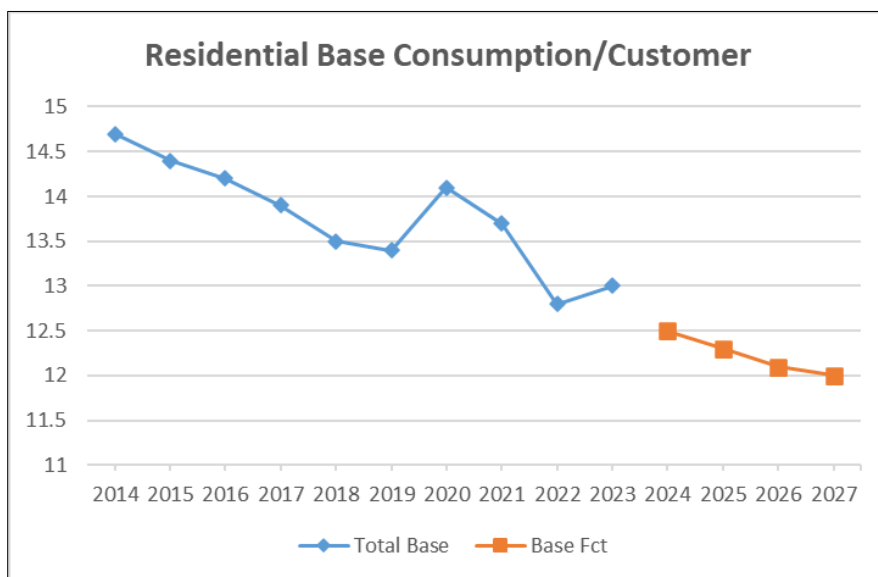
As illustrated in the figure below, the established, mature, and developing areas’ seasonal consumption follow a similar trend and are similar in magnitude.

The seasonal consumption has been estimated based on the average seasonal consumption per disaggregated area for the past five years.





The table and the chart below summarizes ten years of historical residential consumption per customer data, including the forecast for 2024, 2025, 2026 and 2027. Apart from the years significantly impacted by COVID-19 (i.e. 2020 and 2021), the base residential consumption per customer in Edmonton has consistently declined since 2015 and this declining trend is expected to continue during the 2025-2027 period.



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024F	2025F	2026F	2027F
Total	15.6	15.8	14.9	14.6	14.5	13.8	14.7	15.0	13.8	13.8	13.3	13.1	12.9	12.8
Base	14.7	14.4	14.2	13.9	13.5	13.4	14.1	13.7	12.8	13.0	12.5	12.3	12.1	12.0
Seasonal	0.9	1.4	0.7	0.7	1.0	0.4	0.6	1.3	1.0	0.8	0.8	0.8	0.8	0.8

Based on EWS’ disaggregated geographic-based forecasting approach, the ten-year historical consumption pattern and the regression analysis shown above, and EWS programs that continue to focus on water conservation, early on-premise leak detection and green infrastructure, the forecast decline in residential consumption per customer of 1.3% applied for the 2025-2027 PBR term is reasonable.

### 2.3 Cost of Equity

Reference: Mooreview Report, Page 10

Report Recommendation:

*i. Direct EWSI to calculate the cost of equity for Water by removing the ECAPM methodology and to keep the spread above the AUC generic rate consistent with the 2021 PBR. It is concluded that an appropriate cost of equity for EWSI as a starting point is 10.67% to reflect the removal of the ECAPM methodology and to keep the spread above*

*the AUC generic rate consistent with the 2021 PBR as there is no evidence that EWS's risk profile has changed.*

*ii. Direct EWSI to further calculate the cost of equity to be more aligned with the weighted average of the unique risk profile by line of business. Since Water has a higher risk profile, it is recommended the City consider applying a lower cost of equity to Wastewater Treatment and Wastewater Collection in comparison to the cost of equity for Water. For illustrative purposes, three scenarios which reduce the wastewater treatment and wastewater collection by 0.10%, 0.20% and 0.30% have been provided, resulting in a recommended total cost of capital for EWS overall which has been calculated as 10.49% to 10.67%.*

*iii. Direct EWSI to continue with a ROE ramp-up approach for Wastewater Collection across the 2025-2027 PBR term.*

#### EWS Response:

- i. EWS appreciates the in-depth analyses and recommendations of Mooreview/Grant Thornton and the Utility Advisor regarding the ROE. While EWS respectfully disagrees with both parties concerning certain assumptions made in their analyses, Grant Thornton's recommended ROE of 10.67% (consolidated/integrated operations) and the Utility Advisor's recommended ROE of 10.50% falls within the range of ROEs specified by EWS' expert (10.50% - 12.20%), and therefore, would be considered reasonable by EWS. This is consistent with the 'End Result' doctrine expressed by the United States Supreme Court in *Federal Power Commission v. Hope Natural Gas* (1944).

#### The United States Supreme Court states:

Under the statutory standard of "just and reasonable", it is the result reached, not the method employed, which is controlling...It is not theory, but the impact of the rate order which counts. If the total effect of the rate order cannot be said to be unjust and unreasonable, judicial inquiry under the act is at an end. The fact that the method employed to reach that result may contain infirmities is not then important.

- ii. Although EWS considers the ROE recommended by Grant Thornton to be reasonable as it falls within the reasonable range of ROEs and yields a similar outcome, EWS respectfully disagrees with Grant Thornton on applying a lower cost of equity for Wastewater Treatment and Wastewater Collection in comparison to the cost of equity for Water. EWS has made considerable efforts over the years by applying a One Water approach to planning and managing its operations, infrastructure and resources since the transfer of Drainage Services from the City of Edmonton. As a result, the risk and return for EWS

should consider the integrated nature of EWS' operations. The 2023 reorganization of EPCOR further confirms EWS' commitment and actions to deliver unified services to customers as an integrated utility with realignment of various functions reflected in the 2025-2027 PBR Application. Furthermore, the companies that comprise the U.S. Water Utility Proxy Group used by EWS' expert also have consolidated operations, meaning that the various risks of water and wastewater operation would be reflected in market data used to calculate the investor required return.

EWS also respectfully disagrees with Grant Thornton's proposed reductions to Wastewater Treatment and Wastewater Collection's ROE by 0.10%, 0.20% and 0.30% without explaining the quantitative methodology used to arrive at these scenarios, nor have they proven that a risk differential exists between the various operations. For a rate regulated entity such as EWS, establishment of ROE and resulting rates should be based on sound regulatory principles, and measurable analyses, not by applying ad hoc adjustments based on perceived relative risks that have not been verified.

It is also worth noting that Edmonton and the surrounding communities rely on a single source for life sustaining water use (i.e., the North Saskatchewan River (NSR)) and effluent from EWS' Wastewater Collection and Treatment operations are released to the NSR, resulting in a similar risk profile across the three operations. An example of how risks are similar across EWS' operations include the fact that effluent from EWS' Wastewater Collection and Treatment operations are released to the NSR and any potential operational failure would impact all aspects of EWS. As stewards of the NSR, EWS shares similar responsibilities and risk profile across its operations.

- iii. EWS agrees to ramp-up the ROE for Wastewater Collection as originally proposed in its PBR Application.

## 2.4 Performance Measures

Reference: Mooreview Report, Page 12

Report Recommendation:

- i. Direct EWSI to provide a comprehensive description of how the proposed suite of performance measures provides a balanced view of EWSI's overall performance and how the company is progressing towards achieving its strategic objectives; and*
- ii. Direct EWSI to provide a comprehensive description of how the proposed suite of performance measures reflects the customer priorities derived from stakeholder engagement.*

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## EWS Response

- i. Performance standards and penalties are crucial to prevent a decline in service quality due to the presence of cost-saving incentives within the PBR framework. At the time of the original Water PBR in 2002, EWS established a comprehensive framework to define the critical areas of operational performance that EWS must meet to deliver safe and reliable utility services. For EWS' water, wastewater collection and wastewater treatment utilities, operational performance is assessed under five broad categories. Within each category there are a number of performance measures. In this 2025-2027 PBR Application, there are fourteen performance measures for the Wastewater Collection utility and another eleven for the Wastewater Treatment utility. EWS considers that the framework and the measures selected provides a broad and balanced view of EWS' overall performance. EWS has investigated the performance measures used by other utilities as well as by the leading water and wastewater associations. This review indicated that EWS' performance measure framework generally reflected the same five categories of performance as is measured by other utilities. Additionally, the weightings applied to each category reflect the different nature of the operations and reflect stakeholder expectations based on feedback received through stakeholder engagement as explained below.

Although some performance measures have been adjusted over time, there is consistency in the overall framework. The existing framework provides sufficient flexibility to adjust the performance measures and/or standards at the beginning of each PBR term and an appropriate level of transparency on how EWS is performing relative to the approved standards. Changes are reviewed and approved by the regulator at each PBR renewal. At the time of each PBR renewal, EWS gives careful consideration to the following objectives for establishing new metrics: relevant to EWS regulators and customers; sustainable over the long-term; define standard performance rather than aspirational targets; reasonable period of historical data and performance; and able to be reviewed and audited annually.

The PBR measures alone are not intended to provide the regulator with a comprehensive measurement of EWS' progress on meeting its strategic objectives and EWS utilizes other mechanisms to communicate progress on both strategic objectives and specific initiatives to Utility Committee. These mechanisms include, but are not limited to, EWS' annual PBR Progress Report, EWS' Annual Operational Plan, and discussions at Utility Committee meetings. As many of EWS' operational and capital programs and initiatives span multiple years and across PBR terms, deliverables associated with such programs and initiatives may not be suitable for use as a performance measure to demonstrate EWS is meeting a minimum standard.

ii. Performance Measures and Public Engagement

As noted in the Application (Section 1.9 and Appendix H), the objectives for public engagement included informing: policy choices, EPCOR's prioritization of operations and capital programs, performance measures, and rate design. These are similar objectives to those of the 2022-2024/2026 PBR Applications approved in 2021, although narrowed to focus on the wastewater utilities. The Application also reflects the result of public input into the design of specific programs (such as community flood protection, and Corrosion and Odour Reduction) and facilities (such as consultations to inform facility plans or projects).

The wastewater utility performance measures are in four categories: customer service; system reliability and optimization; wastewater quality and environment; and safety. The primary objectives of this portion of the engagement are to:

- inform the categories in which performance is being measured
- inform the weighting of the categories within the measurement system.

The 2024 public engagement was built upon the changes made to the performance measures for the 2022 – 2024 PBR Application. In the 2022 – 2024 Application, based on input from public engagement, there were modest shifts in the weighting of performance measures to better align with community expectations. In the wastewater treatment utility, system reliability increased in weighting from 15% to 25%, and there was an offsetting decrease in the weighting of the quality-environment measure from 55% to 45%. In the wastewater collection utilities, there was an increase in the weighting of system reliability metrics from 25% to 30%, and an offsetting decrease in the quality-environment measure from 40% to 35%.

The engagement process seeks to ensure there is alignment between customer and regulator expectations of utility performance, and the categories and weightings of performance being measured. It is important to note that performance metrics within the PBR are a penalty regime. The PBR is designed to give the utility incentive to pursue efficiencies and to benefit from those efficiencies during the PBR term. The performance metrics are a balancing incentive to ensure that the pursuit of efficiency does not compromise fundamental elements of utility performance that are important to customers and the regulator.

Pages 19 – 26 of the Stakeholder Engagement Report (Appendix H) summarize the process and results with respect to these public engagement objectives.

For the wastewater treatment utility, the top five priorities for residential customers were:

- Reducing contamination in treated water going back to the river (Tier 1)
- Public and employee safety in operations (Tier 2)
- Odour mitigation (Tier 2)
- Reduce energy use in treatment operations (Tier 2)
- Customer service/support that is easily accessible (Tier 3)

For the wastewater collection utility, the top five priorities for residential customers were:

- Quick response time for blocked sewers/emergencies (Tier 1)
- Reduce contaminants from drainage that could enter the river (Tier 1)
- Reduce the number of blocked main-line sewers (Tier 2)
- Maintain sewer drainage performance (reduce flood risk) (Tier 2)
- Ease of reporting issues (Tier 2)

Following open end and prompted questions, 84% of residential respondents indicated they could think of no other suggestions. Of the 16% who could offer another suggestion, cost mitigation was the strongest theme. There are additional results from commercial customer engagement in Appendix H.

For both wastewater treatment and stormwater management the combined view of unaided concerns and ranked priorities tells us that infrastructure and maintenance are of greatest importance, though when paired with the top of mind concern about cost, efficiency should be factored in. The goal of investment is creating long term efficiencies, sustained reliability, and consistency.

The proposed suite of performance measures reflects this and other input from the public engagement program in the following ways:

1. The existing four categories are continued, with no deletions and no new categories being recommended for addition. The existing categories continue to align with customer priorities, and customers have not suggested other categories of utility performance that are important to them which EPCOR could consider integrating into the measurement system.
2. There are no changes to the weighting of the categories in the performance measures (see Table 22.2-1 at page 186 of the Application), and they continue to reflect the different nature of the operations and stakeholder expectations of the collection and treatment utilities. These weightings were most recently changed in the 2022-2024 PBR Application, and the results from this most recent engagement do not lead EPCOR to recommend a further change.

3. Individual metrics within the categories are recommended for update. Some of these updates are informed by public engagement results, while others stem from changes in utility operations. Changes to specific metrics with strong ties to public input include:
  - a. *New measure*: Stormwater Rebate Projects: Customers expressed support for utilities providing financial support to individual home owners to help them reduce their flood risk (Appendix H, p.44). This informed the inclusion of an expanded stormwater rebate program in the Application, the establishment of a performance measure for its rollout, and the removal of the related Green Hectares measure that was in the previous PBR.
  - b. *New measure*: Stormwater Facility Response Time: This tracks the time taken by a crew to attend a facility once a concern has been reported. Deficient Appurtenance Response Time: This tracks the time taken by a crew to respond to a concern about displaced catch basins and maintenance hole covers. The additions aligns with the high priority customer placed on a quick response time for emergencies and on public safety.
  - c. *New measure*: Sewer Odour Response Time: This tracks the time for a crew to respond to a third-party odour report in the collection system. This addition aligns with the high priority customers place on odour mitigation. While sewer odour is at the lower end of the list of concerns, it had the highest overall 'very concerned' score indicating that for those whom it does concern (or affect) it is more significant.

When asked about utility performance most important to them (for the wastewater collection and treatment utilities), residential customers identified reducing contamination in treated water going back into the river and quick response times for blocked sewers or emergencies as their top tier priorities. A diverse range of factors were identified as second, third and fourth-tier priorities, including safety, odour reduction, reducing flood risk, and reducing environmental footprint. Beyond influencing the performance measures, the funding allocated to the capital and operating programs in the PBR Application reflects these customer priorities.

## 2.5 Wastewater Treatment – Biosolids Management

Reference: Mooreview Report, Page 13

Report Recommendation: *Direct EWSI to consider adjusting the Biosolids Management measure to one that reflects the ratio of beneficial reuse of biosolids to the total amount of biosolids generated.*

EWS Response:

EWS is amenable to adjusting the Biosolids Management measure to be an annual ratio of beneficial reuse of biosolids to the total amount of biosolids generated or alternatively reporting this measure annually in EWS' PBR Progress Report. EWS notes that the existing PBR measure of

biosolids inventory reduction approved for the 2022-2024 PBR term is a three-year average of the ratio of the total dry tonnes of biosolids removed from the storage basins (beneficial reuse of biosolids) to the total dry tonnes of biosolids deposited in the storage basins (biosolids generated). This measure was put in place at a time when production was outpacing reduction and there were stresses on available storage capacity. As these stresses no longer exist, an alternate measure was proposed for the 2025-2027 PBR term.

The biosolids quality is significantly impacted by settling time in the Clover Bar basins and the ability to harvest the thickened material for disposal by land application. Settling time has been impacted by recent rehabilitation in cell 3E and 3W, which has limited the ability to reuse biosolids. In 2024, a new dredge specifically designed to improve the ability to harvest thickened material is being procured with the intent to reuse more biosolids annually.

A metric of reusing 25,000 dry tonnes of biosolids is recommended as a measure that would indicate whether the expected improvements to biosolids quality related to the new dredge and the effectiveness of utilizing mobile dewatering are being achieved during the 2025-2027 period.

### 3.0 RECOMMENDATIONS EWS DISAGREES WITH

#### 3.1 Public Consultation

Reference: Utility Advisor Report, Page 4

*Report Recommendation: EPCOR continues to resist exploring any de-risking regulatory approaches which might cause the regulator to award a lower Return on Equity than that requested by EWS. As a result, their survey questions did not yield any evidence related to customer willingness to accept the effects of deferral accounts in return for lower rates. The UA is disappointed that EPCOR has not investigated this approach, particularly given the attention the regulator placed on this issue at EPCOR's last PBR application (which resulted in the imposition of a deferral account).*

EWS Response:

EWS' public consultation questions were designed such that they were simple to understand for the average customer by avoiding complex technical and regulatory terminology. EWS respectfully disagrees with the Utility Advisor's assertion regarding EPCOR's intent with the bill stability survey questions. It would be challenging for an average customer to understand the concept of deferral accounts, especially within the context of the survey while also ensuring that the customer remains engaged to complete the entire survey without information overload. Furthermore, deferral accounts by their very nature transfers the burden of risk from the Utility to consumers, thereby creating variability and long-term instability in utility bills from one PBR term to the next. In other words, an over or under collection of a deferral account from prior period(s) would be reflected in customer bills through a rate adjustment in future period(s),



which depending on the size of deferral account balance could lead to significant variability and instability in utility bills, while minimizing the risk for the Utility. As noted in Appendix H, the majority of customers who completed the survey strongly value bill stability.

With regards to the Return on Equity (ROE), EWS' cost of capital expert applied widely used and accepted approaches for assessing the ROE. The methodology used by EWS' cost of capital expert to establish a recommended ROE for EWS relies on US and Canadian proxy groups and these methods do not incorporate any mechanisms to adjust the recommended ROE for specific elements of the regulatory framework such as the deferral accounts. Moreover, some of the utilities within the proxy groups may have deferral accounts as part of their regulatory framework, which further negates any argument for adjusting the recommended ROE (which is based on the return of the proxy group), as the risk and returns for the proxy groups would be reflective of the inclusion of any deferral account mechanisms.

### 3.2 Depreciation Study

Reference: Mooreview Report, Page 6

Report Recommendation:

- i. Direct EWSI to conduct a benchmarking study comparing the results of the depreciation study to asset lifetimes used by comparable wastewater and stormwater utilities in Canada and the United States. This should be reviewed by the Utility Committee prior to its rates approval based on the proposed depreciation schedules.*
- ii. Direct EWSI to calculate rates for the 2025-2027 PBR term using the existing asset lifetimes and depreciation schedules.*

EWS Response:

EWS respectfully disagrees with Mooreview's recommendation for a benchmarking study comparing the results of the depreciation study to asset lives of comparable wastewater and stormwater utilities, as it is of limited value and will not result in any material added benefit to ratepayers.

EWS evaluated the impact of implementing the depreciation study results on rates effective April 1, 2025 versus using the existing asset lives suggested by Mooreview. The revenue requirement impact of implementing the depreciation study results on rates applied for over the 2025-2027 PBR term is \$2.2 million. As shown in the following table, the impact of this change on the combined residential bills results in a negligible increase of \$0.10 per month in 2025, \$0.22 per month in 2026 and \$0.33 per month in 2027. This impact is already reflected in EWS' proposed average residential bill increase of 2.9%. Therefore, EWS recommends implementing the asset life changes effective April 1, 2025 as proposed by the depreciation study.

Impact of Applied for Depreciation Rates  
on Average Monthly Residential Bills  
(\$ per month)

Average Residential Bills	A 2025	B 2026	C 2027
Wastewater Treatment			
1 At historic depreciation rates	23.63	24.19	24.84
2 At applied for rates	23.71	24.36	25.09
3 Difference per month	0.08	0.17	0.25
Wastewater Collection			
4 At historic depreciation rates	50.82	52.51	54.27
5 At applied for rates	50.84	52.56	54.35
6 Difference per month	0.02	0.05	0.08
7 Combined Bill Impact per month	0.10	0.22	0.33

Notwithstanding EWS' concerns with completing a benchmarking study within the timeframe to establish rates for the 2025 - 2027 PBR term, EWS also has concerns with using a benchmarking study to establish depreciation rates. The preparation of a depreciation study requires informed judgment as well as knowledge of the property being studied, company policies and procedures, general trends in technology and industry practice.

The term "depreciation" as used in the depreciation study is an accounting concept, that is, a system of accounting that distributes the cost of assets, over the estimated useful life of the assets in a systematic and rational manner. It is a process of allocation, not valuation. This expense is systematically allocated to accounting periods over the estimated useful life of the assets. As pronounced in the various accounting standards, an asset's estimated useful life is normally the shortest of its physical, technological, commercial or legal life, which requires the use of judgement. For example, International Accounting Standards (IAS) 16 states that "The estimation of the useful life of the asset is a matter of judgement based on the experience of the entity with similar assets". Consequently, the asset lives of comparable wastewater and stormwater utilities would reflect the estimated service life of assets based on their experiences, which would be of minimal value to inform EWS' asset lives.

### 3.3 Capitalization of Cloud Software Costs

Reference: Mooreview Report, Page 7 and Section 3.4.3 Page 35

Report Recommendation: *Direct EWSI to document an appropriate business case for its targeted program of individual investments in SaaS across 2025-2027 given that the collective expenditure is well above established thresholds.*

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**EWS Response:**

EWS is seeking approval for capitalization of 15 cloud-based Software as a Service (SaaS) projects with cumulative expenditures of \$11.1 million for Wastewater Collection and \$2.2 million for Wastewater Treatment as the existing on-premise solutions have either reached their end-of-life or are approaching it, with many vendors no longer providing support or upgrades to existing systems. The PBR business case requirement threshold for Wastewater Collection is \$10 million whereas for Wastewater Treatment the threshold is \$5 million. These thresholds were set as part of EWS' minimum regulatory filing requirements, which were approved by Edmonton City Council in 2013, to focus the regulatory review on capital projects and programs that have a material financial impact on rates. Since these expenditures relate to several projects, with none of the individual projects meeting the established threshold, no business case has been provided in the PBR application. In the event these expenditures were related to a traditional on-premise solution (i.e., not a SaaS solution), no additional business case would be included with the PBR application since the individual project expenditures do not meet the established threshold for a business case. While no business case is included for project expenditures below the PBR threshold, all capital projects, regardless of size, follow EPCOR's internal capital governance process including documenting the project justification and alternatives considered. A business case will be provided in the future if any of the individual projects meet or exceed the established thresholds.

### 3.4 Return on Equity Ramp Up

Reference: Utility Advisor Report, Page 6

Report Recommendation:

*The UA accepts that in the absence of de-risking approaches to regulating a water utility that the risks faced by a water utility are higher than those faced by gas, electric and pipeline utilities regulated by the Alberta Utilities Commission.*

*The EWS Consultant concluded that the recommended ROE should fall within the range of 10.5%-12.2% and recommends an ROE for EWS of 10.8%. In the consultant's evidence, there is no evidence given for choosing 10.8%. Based on the analysis comparing the consultant's recommendations to the regulatory decisions, a reduction to the consultant's recommendations is warranted. The UA's advice to the Utility Committee and Council would be a reduction to the recommended ROE with a suggestion to reduce the final 2027 ROE to 10.5%. With this reduction, the 2025 ROE would be 8.75% and the 2026 ROE would be 9.63%.*

**EWS Response:**

Based on the analyses completed by EWS' expert, the recommended ROE for EWS should fall within the reasonable range of 10.5% and 12.2%. The results of the three methods utilized by

EWS' expert for determining the reasonable range was averaged and adjusted for flotation costs to arrive at the recommendation of 10.8%.

EWS would like to clarify that the recommended ROE for Wastewater Treatment starting in 2025 is 10.8%. In other words, EWS' proposal to voluntarily "ramp-up" the ROE only applies to Wastewater Collection operations. Implementing a ROE of 8.75% for Wastewater Treatment in 2025 would be considered punitive and arbitrary as it would be well below the current approved ROE of 9.64%, especially considering the significant change in interest rates and market conditions since the approval of the 2022-2024 PBR Application. The ROE applied to the Wastewater Treatment operations has remained constant over its several PBR terms since the transfer of operations from the City of Edmonton in 2009. As such, the proposed ROE for this PBR of 10.8% should apply for the entire PBR period.

### 3.5 Cost of Debt

Reference: Mooreview Report, Page 11

Report Recommendation:

- *Given that EWSI secures its debt from its parent company, EUI, is it difficult to truly determine if the proposed rate is reflective of market pricing if EWSI was to engage in a more traditional negotiation of financing terms with multiple lenders. However, there was nothing identified in this review which would suggest that a 4.65% cost of debt for this Company is unreasonable on a standalone basis;*
- *It is noted that EWSI has remained consistent since the 2021 PBR by using a forecast based on 30-year debt; and*
- *Given that credit rating reports are no longer available for regulatory review, it is recommended that EWSI provide further supporting information to support that the cost of debt included in EWSI's 2025-2027 Wastewater Services PBR reflects the current actual cost of borrowing to EUI. It was found that the information presented by EWSI regarding the cost of debt was consistent with their supporting materials and are reflective of current market conditions.*

EWS Response:

As noted by Mooreview, the methodology for determining EWS' cost of debt remains unchanged from the 2022-2024/2026 PBR Application and is aligned with the cost of debt methodology presented at the November 04, 2022 Utility Committee meeting – Report FCS01533. Mooreview further notes that the forecast cost of debt of 4.65% is reasonable on a standalone basis and is reflective of current market conditions. This forecast cost of new debt, which is based on a standalone basis, includes no risk premium for EWS over EUI's cost of debt, indicating that EWS and EUI have the same credit rating.

For greater clarity, EUI's current credit rating is A (low) or A-, which remains unchanged since 2021 when the last PBR application was approved. Since there are no material change to EWS' or EUI's risk profile since the last PBR Application, additional information supporting EWS' cost of debt is not warranted, especially given the reasonableness of the forecast cost of debt and current market conditions. Furthermore, under the PBR framework, EWS assumes the full risk associated with interest rate fluctuations, as annual rates are unaffected by changes in actual interest rates.

### 3.6 Wastewater Collection – Customer Service Index

Reference: Mooreview Report, Page 12

Report Recommendation: *Direct EWSI to retain response time measures (such as Service Maintenance Calls and Emergency Dig Ups or suitable alternatives) in the Customer Service Index.*

EWS Response:

For the 2025-2027 PBR term, EWS is proposing three new and important performance measures in its Customer Service Index: Stormwater Facility Response Time, Deficient Appurtenances Response time and Sewer Odour Response Time.

As such, EWS has proposed to move two existing performance measures (the Service Maintenance Calls and Emergency Dig Ups – Service Restored) from the Customer Service Index into the System Reliability and Optimization Index to ensure the indices are balanced in terms of the number of performance measures in each. The new measures included the Customer Service index are measures of EWS' time to respond to a customer-initiated call or request. While the Service Maintenance Calls and Emergency Dig Ups measures are related to customer service issues, both are also related to maintaining reliability of service and therefore are appropriate for the System Reliability and Optimization Index.

### 3.7 Wastewater Collection – System Reliability and Optimization Index

Reference: Mooreview Report, Page 13

Report Recommendation:

*i. Direct EWSI to evaluate whether the Full Property Flood Inspections measure should be replaced by a lagging indicator that reflects the effectiveness of the Enhance Building Flood Proofing program.*

*ii. Direct EWSI to consider measures within the System Reliability Index that reflect the impact of the proposed reliability and life-cycle investments.*

## EWS Response:

- i. A lagging indicator reflecting the effectiveness of the Enhance Building Flood Proofing Program would not be appropriate as a PBR measure because it is largely outside EWS' control as to whether the customer decides to implement recommended floodproofing activities. EWS' measure of inspections is within its control and is an appropriate leading measure for improving flood proofing at customer sites.
- ii. For the 2025-2027 PBR term, EWS removed the Infrastructure Condition Rating measure which assesses the overall condition of sewer assets, reflecting the impact of reliability and life-cycle investments. However, due to the size of the Edmonton wastewater collection network included in the existing asset inventory and the current rate of new asset growth, the overall system condition rating does not change appreciably over time. Therefore, it was removed because it is not suitable as an annual performance measure. EPCOR continues to measure and track this rating and the information gathered is used in the development of the proposed capital and operational maintenance programs for the wastewater system. The measures included in the System Reliability Index do reflect EWS' ability to respond to system issues in a timely manner. The number of customer calls is related to the overall health of the system.

3.8 Wastewater Treatment – H<sub>2</sub>S 1-hour and 24-hour Exceedances

Reference: Mooreview Report, Page 13

*Report Recommendation: For the H<sub>2</sub>S 1-hour and 24-hour Exceedances measures, direct EWSI to evaluate if measures reporting individual exceedances at the monitoring sites would better represent actual performance and potential odour incidents.*

## EWS Response:

The dispersion of any odour from Gold Bar depends on the air temperature, and wind speed and direction. Wind speed and direction varies greatly based on the weather and season. The Strathcona Industrial Association Gold Bar and Beverly Monitoring Stations are south and north of the Gold Bar plant, respectively. The location of the stations helps monitor for any H<sub>2</sub>S exceedances surrounding the plant and each station can have significant annual differences in data as a result of variable wind speed and direction.

In previous PBR applications, the metric used to monitor performance was an average of 4 exceedances per year for 1-hour exceedances and an average of 1 exceedance per year for 24-hour exceedances to provide a better understanding of performance over the larger area surrounding the plant, instead of measuring performance at one station location. The same metric has been chosen because it provides continuity with previous PBR periods and allows for annual comparisons and trending. Another metric option is to set a total absolute number for these

exceedances for both of these stations, rather than an average. This will be considered in the next PBR application.

## APPENDIX A

## Mooreview and the Utility Advisor Recommendations Applicable to 2025-2027 PBR

#	Topic	Report Reference	Recommendation
1	Efficiency Factor	Mooreview Page 11	Consider doubling the proposed efficiency factor from 0.25% to 0.50% for Wastewater Collection and direct EWSI to recalculate 2025-2027 rates.
2	Wastewater Treatment – Biosolids Management	Mooreview Page 13	Direct EWSI to consider adjusting the Biosolids Management measure to one that reflects the ratio of beneficial reuse of biosolids to the total amount of biosolids generated.
3	Public Consultation	Utility Advisor Report, Page 4	EPCOR continues to resist exploring any de-risking regulatory approaches which might cause the regulator to award a lower Return on Equity than that requested by EWS. As a result, their survey questions did not yield any evidence related to customer willingness to accept the effects of deferral accounts in return for lower rates. The UA is disappointed that EPCOR has not investigated this approach, particularly given the attention the regulator placed on this issue at EPCOR's last PBR application (which resulted in the imposition of a deferral account).
4	Depreciation Study	Mooreview Page 6	<p>i. Direct EWSI to conduct a benchmarking study comparing the results of the depreciation study to asset lifetimes used by comparable wastewater and stormwater utilities in Canada and the United States. This should be reviewed by the Utility Committee prior to its rates approval based on the proposed depreciation schedules.</p> <p>ii. Direct EWSI to calculate rates for the 2025-2027 PBR term using the existing asset lifetimes and depreciation schedules.</p>
5	Capitalization of Software Costs	Mooreview Page 7 and Section 3.4.3 page 35	Direct EWSI to document an appropriate business case for its targeted program of individual investments in SaaS across 2025-2027 given that the collective expenditure is well above established thresholds.
6	Consumption Forecast	Mooreview Page 8	<p>i. Direct EWSI to detail the specific analysis that leads to their proposal to base 2025-2027 rates on the assumption that the average residential account consumption will decline by 1.3% annually, with specific responses to why this is reasonable given average consumption per account results since 2019.</p> <p>ii. If the 1.3% annual decline is not supported in a satisfactory manner from (i) above, direct EWSI to calculate</p>



## EPCOR Water Services

## EWS Response to Reasonableness Review Reports

#	Topic	Report Reference	Recommendation
			<p>a revised and reasonable trend estimate for 2025-2027.</p> <p>iii. Direct EWSI to calculate a revised and reasonable estimate for 2024 (upon which 2025-2027 forecasts are based).</p> <p>iv. Direct EWSI to calculate updated rates for the 2025-2027 PBR term using updated projected average consumption per residential account based on the above steps.</p>
7	Cost of Equity	Mooreview Page 10	<p>i. Direct EWSI to calculate the cost of equity for Water by removing the ECAPM methodology and to keep the spread above the AUC generic rate consistent with the 2021 PBR. It is concluded that an appropriate cost of equity for EWSI as a starting point is 10.67% to reflect the removal of the ECAPM methodology and to keep the spread above the AUC generic rate consistent with the 2021 PBR as there is no evidence that EWS's risk profile has changed.</p> <p>ii. Direct EWSI to further calculate the cost of equity to be more aligned with the weighted average of the unique risk profile by line of business. Since Water has a higher risk profile, it is recommended the City consider applying a lower cost of equity to Wastewater Treatment and Wastewater Collection in comparison to the cost of equity for Water. For illustrative purposes, three scenarios which reduce the wastewater treatment and wastewater collection by 0.10%, 0.20% and 0.30% have been provided, resulting in a recommended total cost of capital for EWS overall which has been calculated as 10.49% to 10.67%.</p> <p>iii. Direct EWSI to continue with a ROE ramp-up approach for Wastewater Collection across the 2025-2027 PBR term.</p>
8	Cost of Equity	UA – Page 6	<p>The UA accepts that in the absence of de-risking approaches to regulating a water utility that the risks faced by a water utility are higher than those faced by gas, electric and pipeline utilities regulated by the Alberta Utilities Commission.</p> <p>The EWS Consultant concluded that the recommended ROE should fall within the range of 10.5%-12.2% and recommends an ROE for EWS of 10.8%. In the consultant's evidence, there is no evidence given for choosing 10.8%. Based on the analysis comparing the consultant's</p>

## EPCOR Water Services

## EWS Response to Reasonableness Review Reports

#	Topic	Report Reference	Recommendation
			recommendations to the regulatory decisions, a reduction to the consultant's recommendations is warranted. The UA's advice to the Utility Committee and Council would be a reduction to the recommended ROE with a suggestion to reduce the final 2027 ROE to 10.5%. With this reduction, the 2025 ROE would be 8.75% and the 2026 ROE would be 9.63%.
9	Cost of Debt	Mooreview Page 11	Direct EWSI to provide further information to support that the cost of debt included in its 2025-2027 PBR Application reflects the current actual cost of borrowing to EUI.
10	Performance Measures	Mooreview Page 12	<p>i. Direct EWSI to provide a comprehensive description of how the proposed suite of performance measures provides a balanced view of EWSI's overall performance and how the company is progressing towards achieving its strategic objectives; and</p> <p>ii. Direct EWSI to provide a comprehensive description of how the proposed suite of performance measures reflects the customer priorities derived from stakeholder engagement.</p>
11	Wastewater Collection – Customer Service Index	Mooreview Page 12	Direct EWSI to retain response time measures (such as Service Maintenance Calls and Emergency Dig Ups or suitable alternatives) in the Customer Service Index.
12	Wastewater Collection – System Reliability and Optimization Index	Mooreview Page 12	<p>i. Direct EWSI to evaluate whether the Full Property Flood Inspections measure should be replaced by a lagging indicator that reflects the effectiveness of the Enhance Building Flood Proofing program.</p> <p>ii. Direct EWSI to consider measures within the System Reliability Index that reflect the impact of the proposed reliability and life-cycle investments.</p>
13	Wastewater Treatment – H2S 1-hour and 24-hour Exceedances	Mooreview Page 13	For the H2S 1-hour and 24-hour Exceedances measures, direct EWSI to evaluate if measures reporting individual exceedances at the monitoring sites would better represent actual performance and potential odour incidents.