AGENDA

SPC ON UTILITIES AND CORPORATE SERVICES

July 20, 2018, 9:30 AM
IN THE COUNCIL CHAMBER
Members

Councillor W. Sutherland, Chair
Councillor P. Demong, Vice-Chair
Councillor D. Colley-Urquhart
Councillor D. Farrell
Councillor J. Gondek
Councillor S. Keating
Councillor J. Magliocca
Mayor N. Nenshi, Ex-Officio

1. CALL TO ORDER

2. OPENING REMARKS

3. CONFIRMATION OF AGENDA

4. CONFIRMATION OF MINUTES

   4.1 Minutes of the Regular Meeting of the SPC on Utilities and Corporate Services, 2018 June 13

5. CONSENT AGENDA
   None

6. POSTPONED REPORTS
   (including related/supplemental reports)

   None

7. ITEMS FROM OFFICERS, ADMINISTRATION AND COMMITTEES

   7.1 Water, Wastewater, and Stormwater Lines of Service Cost of Service Study, UCS2018-0884

   7.2 Integrated Civic Facility Planning Program Update & Policy, UCS2018-0525

   7.3 Proposed Framework – Transacting with Non-Profit Organizations below Market Value, UCS2018-0912

8. ITEMS DIRECTLY TO COMMITTEE

8.1 REFERRED REPORTS
None

8.2 NOTICE(S) OF MOTION
None

9. URGENT BUSINESS

10. CONFIDENTIAL ITEMS

10.1 ITEMS FROM OFFICERS, ADMINISTRATION AND COMMITTEES

10.1.1 Feasibility Update – Notice of Motion – Haddon Road YMCA Redevelopment, UCS2018-0892
Held confidential subject to Sections 23, 24 and 25 of FOIP

10.1.2 Proposed Lease and Operating Agreement – Seton (4995 Market ST SE), UCS2018-0894
Held confidential subject to Sections 23, 24 and 25 of FOIP

10.1.3 Proposed Deferral of Report (Eau Claire) – Ward 07 (200 Barclay PR SW), UCS2018-0923
Held confidential subject to Sections 23, 24 and 25 of FOIP

10.1.4 Proposed Sale (Acadia) - Ward 11 - Verbal Report, UCS2018-0924
Held confidential subject to Sections 23, 24 and 25 of FOIP

10.1.5 Varsity Multi-Service Centre Funding Rationalization, UCS2018-0527
Held confidential subject to Sections 24 and 25 of FOIP

10.2 URGENT BUSINESS

11. ADJOURNMENT

MINUTES

SPC ON UTILITIES AND CORPORATE SERVICES

June 13, 2018, 9:30 AM
IN THE COUNCIL CHAMBER

PRESENT:	Councillor W. Sutherland, Chair Councillor P. Demong Vice-Chair Councillor D. Colley-Urquhart Councillor D. Farrell Councillor J. Gondek Councillor S. Keating Councillor J. Magliocca Mayor N. Nenshi, Ex-Officio
ALSO PRESENT:	General Manager D. Duckworth Acting City Clerk D. Williams Legislative Coordinator J. Dubetz

1. CALL TO ORDER

Councillor Sutherland called the Meeting to order at 9:32 a.m.

2. OPENING REMARKS

Councillor Sutherland provided opening remarks at today's Meeting.

3. CONFIRMATION OF AGENDA

Moved by Councillor Demong

That the Agenda for today's Meeting be amended, by adding an item of Confidential Urgent Business, entitled "Proposed Acquisition - (Great Plains) - Ward 09 File No: 5750 76 Av SE (JM), UCS2018-0791".

MOTION CARRIED

Moved by Councillor Colley-Urquhart

That the Agenda for the 2018 June 13 Regular Meeting of the SPC on Utilities and Corporate Services, be confirmed, **as amended**.

MOTION CARRIED

4. CONFIRMATION OF MINUTES

4.1 Minutes of the Regular Meeting of the SPC on Utilities and Corporate Services, 2018 May 09

Moved by Councillor Demong

That the Minutes of the Regular Meeting of the SPC on Utilities and Corporate Services held on 2018 May 09, be confirmed.

MOTION CARRIED

5. CONSENT AGENDA

Moved by Councillor Keating

That the Administration Recommendations contained in the following Reports be approved in an omnibus motion:

5.1 Integrated Civic Facility Planning Program 2017 Status Update Deferral, UCS2018-0739

5.2 Status of Outstanding Motions and Directions, UCS2018-0764

MOTION CARRIED

6. POSTPONED REPORTS

(including related/supplemental reports)

None

7. ITEMS FROM OFFICERS, ADMINISTRATION AND COMMITTEES

7.1 Climate Resilience Strategy and Action Plans, UCS2018-0688

Distributions with respect to Report UCS2018-0688:

- A PowerPoint presentation entitled "Climate Resilience Strategy and Action Plans", dated 2018 June 13;
- A letter from Geoffrey Kneller, Burnside, dated 2018 June 12;
- A letter from Mark Wynker and Tara Steell, Stantec, dated 2018 June 13;
- A letter from Kris Compton, Urban Systems, dated 2018 June 12;
- A letter from Marcello Chiacchia, Genstar, dated 2018 June 12;
- A letter from Brent MacKay, Qualico Commercial, dated 2018 June 13;
- A letter from Doug Porozni, Ronmor, dated 2018 June 12;
- A letter from Grace G. Lui, BILD Calgary, dated 2018 June 12, including a coloured Attachment entitled "Climate Mitigation Actions-Master List: 2018 May 30";
- A letter from Chuck Stepper, Stepper Homes, dated 2018 June 13;
- A letter from Doug Owens, Brookfield Residential, dated 2018 June 13;
- A letter from Ryan Germaine, ATCO & Canadian Utilities Limited;
- A document from Calgary Climate Hub, dated 2018 June 13;
- A document from Dr. Noel Keough, dated 2018 June 13; and
- A letter from Lloyd Suchet, BOMA Calgary, dated 2018 June 13.

That speaking notes from Sadie Vipond be received for the Corporate Record with respect to Report UCS2018-0688.

Speakers

1. Grace Lui
2. Chuck Stepper
3. Doug Owen
4. Chris Ollenberger
5. Paul Derksen
6. Monica Curtis
7. Bill Phipps
8. Tom Kerwin
9. Christie Page
10. Ryan Germaine
11. Larry Heather
12. Monica Leong
13. Sadie Vipond
14. Mike Schubert
15. Joe Vipond
16. Simon Irving
17. Mary Valentich
18. Matt Grace
19. Matt Hammer
20. Tim Lipp
21. Stephanie Gagnon
22. Noel Keough
23. Sonia Chopra
24. Chris Carroll

Committee recessed at 12:05 p.m. and reconvened at 1:12 p.m. with Councillor Sutherland in the Chair.

25. Mary Nokleby
26. Lloyd Suchet
27. Natalie Robertson
28. Michael Byerley
29. Faith Yongo

Moved by Councillor Demong

That with respect to Report UCS2018-0688, the following be approved, **after amendment:**

That the Standing Policy Committee on Utilities and Corporate Services recommend that Council:

1. Approve the Climate Resilience Strategy, **Climate Mitigation** and **Adaptation** Action Plans **in Report UCS2018-0688.**

2. Direct Administration to work with industry and community representatives to establish a Climate Resilience Working Group to provide input into the prioritization and continued development of climate resilience actions.

3. In developing the implementation plans with timelines and outcome measures, direct Administration to incorporate best practices from the other 100 Resilient Cities.

MOTION CARRIED

7.2 Energy Reporting for Commercial Buildings, UCS2018-0314

Speakers

1. Larry Heather

2. Lloyd Suchlet

Moved by Councillor Demong

That with respect to Report UCS2018-0314, the following be approved:

That the Standing Policy Committee on Utilities and Corporate Services recommends that Council receive this report for information.

Against: Councillor Gondek

MOTION CARRIED

7.3 Pay-as-you-throw Program for Residential Black Cart Collection, UCS2018-0656

Moved by Mayor Nenshi

That with respect to Report UCS2018-0656, Committee refer the following proposed Motion,to the Administration,to return with a financial model including an option, for tag-a-bag only, to return to Council through the SPC on Utilities and Corporate Services, no later than Q1 2019:

"**Moved by** Councillor Farrell

That with respect to Report UCS2018-0656, the following be approved:

That the Standing Policy Committee on Utilities & Corporate Services recommend that Council direct Administration to develop a detailed

implementation plan for a pay-as-you-throw program that includes three black cart sizes and a tag-a-bag program and report back no later than Q2 2019."

MOTION CARRIED

8. ITEMS DIRECTLY TO COMMITTEE

8.1 REFERRED REPORTS

None

8.2 NOTICE(S) OF MOTION

None

9. URGENT BUSINESS

None

10. CONFIDENTIAL ITEMS

Moved by Councillor Magliocca

That the following Reports be forwarded to the Closed Meeting of the 2018 June 25 Regular Meeting of Council, and remain confidential pursuant to Sections 16, 23, 24 and 25 of the *Freedom of Information and Protection of Privacy Act*:

10.1 ITEMS FROM OFFICERS, ADMINISTRATION AND COMMITTEES

10.1.1 Proposed Lease (Downtown East Village) – Ward 07 (800 3 ST SE), UCS2018-0740

10.1.2 Proposed Sale (Bridlewood) – Ward 13 (249 Bridlerange PL SW), UCS2018-0741

10.1.3 Proposed Extension to Building Commitment and Exercise of Option to Repurchase Ward 2 (2 Royal Vista LI NW), UCS2018-0743

10.1.4 Proposed Extension to Building Commitment (Lincoln Park) – Ward 08 (50 Peacekeepers DR SW), UCS2018-0744

10.1.5 Surplus School Sites, UCS2018-0745

10.1.6 Summary of Real Estate Transactions for the First Quarter 2018, UCS2018-0746

10.2 URGENT BUSINESS

10.2.1 Proposed Acquisition - (Great Plains) - Ward 09 File No: 5750 76 Ave SE (JM), UCS2018-0791

MOTION CARRIED

11. ADJOURNMENT

Moved by Councillor Demong

That the Committee adjourn at 3:05 p.m.

MOTION CARRIED

The following items have been forwarded to the 2018 June 25 Regular Meeting of Council:

Consent

Integrated Civic Facility Planning Program 2017 Status Update Deferral, UCS2018-0739

Climate Resilience Strategy and Action Plans, UCS2018-0688

Energy Reporting for Commercial Buildings, UCS2018-0314

Summary of Real Estate Transactions for the First Quarter 2018, UCS2018-0746

Closed Meeting

Proposed Lease (Downtown East Village) – Ward 07 (800 3 ST SE), UCS2018-0740

Proposed Sale (Bridlewood) – Ward 13 (249 Bridlerange PL SW), UCS2018-0741

Proposed Extension to Building Commitment and Exercise of Option to Repurchase Ward 2 (2 Royal Vista LI NW), UCS2018-0743

Proposed Extension to Building Commitment (Lincoln Park) – Ward 08 (50 Peacekeepers DR SW), UCS2018-0744

Surplus School Sites, UCS2018-0745

Proposed Acquisition - (Great Plains) - Ward 09 File No: 5750 76 Ave SE (JM), UCS2018-0791

The next Regular Meeting of the SPC on Utilities and Corporate Services scheduled to be held on 2018 July 20.

CONFIRMED BY COMMITTEE ON

CHAIR

ACTING CITY CLERK

Water, Wastewater, and Stormwater Lines of Service Cost of Service Study

EXECUTIVE SUMMARY

As part of preparing the 2019-2022 service plans and budgets, the Water Utility has undertaken a Cost of Service Study (COSS) for its three lines of service: Water Treatment and Supply (Water), Wastewater Collection and Treatment (Wastewater) and Stormwater Management (Stormwater). The COSS determines the makeup of each customer class, and its demands on the system. Most Water Utility customers are Residential Metered (e.g. single-family dwelling and duplex), Multi-family (e.g. condominium and apartment buildings) or General Service (e.g. industrial, commercial and institutional).

Utility rate changes approved by Council reflect the change in total revenue requirements for the Water Utility, or the total size of the pie. The COSS determines the cost of providing services to specific customer classes, or how the pie will be divided. Costs are assigned to each customer class based on consumption characteristics and the demand that class places on the system. This results in different customer classes paying different utility rates to ensure they are paying their fair share for the services they receive. In setting the rates, the cost of providing services to the customer class is balanced with consideration of financial sustainability, fairness and equity to customers, and natural resource management.

The COSS identified that some changes to cost recovery are required to improve fairness among customer classes. Multiple scenarios were considered to develop strategies for 2019-2022 with two options highlighted in this report. One option aims to maximize the degree of cost recovery for each customer class to achieve customer fairness. The other option proposes to close the gap between cost recovery and the outcome of the COSS to a smaller degree, moderating the impact of the rate change on customer classes while moving towards fair and equitable cost recovery for each customer class.

The option to close the gap with moderate customer impact is recommended over the maximizing fairness option. The maximizing fairness option creates challenges for industrial, commercial and institutional customers, as it requires significant increases with the trade-off being relatively small decreases for Residential Metered customers.

The recommendations are reported as cost recovery strategies that will inform rates for Water, Wastewater and Stormwater services for 2019-2022 and will be reported back to Council as part of One Calgary in 2018 November. The COSS also examined strategic issues the Water Utility is facing, and the results are reported under the investigation section of this report.

Water, Wastewater, and Stormwater Lines of Service Cost of Service Study

ADMINISTRATION RECOMMENDATIONS:

That the Standing Policy Committee on Utilities and Corporate Services recommends that Council:

1. Direct Administration to develop water, wastewater and stormwater rates for 2019-2022 for each inside city customer class, and for outside city customers following the strategies articulated in Attachment 2 of this report, and report back to Council as part of One Calgary in 2018 November.
2. Direct Administration to prepare related Bylaw amendments and report back to Council in 2018 November.
3. Direct Administration to develop an implementation plan for a variable stormwater rate structure and report back to Council by Q4 2020 for potential implementation for the 2023 to 2026 business cycle.
4. Direct Administration to report back on rates and limits for Wastewater extra strength surcharge parameters no later than 2020 November.

PREVIOUS COUNCIL DIRECTION / POLICY

At 2014 May 05 Strategic Session of Council, Council approved 2015-2018 Utilities Indicative Rates (C2014-0103) and directed Administration to incorporate a Cost of Service Study for 2019-2022 in the 2015-2018 Action Plan.

At 2014 October 06 Combined Meeting of Council, Council adopted the recommendations for Water and Wastewater Cost of Service Study for 2015-2018 (UCS2014-0611) and Drainage Cost of Service Study for 2015-2018 (UCS2014-0612).

At 2018 March 19 Combined Meeting of Council, Council approved Financial Plan 2019-2022 for Water and Wastewater Lines of Service (UCS2018-0223) and for Stormwater Line of Service (UCS2018-0230).

At 2018 June 18 Strategic Council Meeting, Council approved 2019-2022 Utilities Indicative Rates and Funding New Growth (C2018-0787).

BACKGROUND

The City of Calgary's (The City's) Water Utility provides Water, Wastewater and Stormwater services to 1.25 million Calgarians, totalling approximately 380,000 accounts. Most customers are:

- Residential Metered customers: e.g. single-family dwelling and duplex.
- Multi-family customers: e.g. condominium and apartment buildings.
- General Service customers: e.g. industrial, commercial and institutional.

Water and Wastewater services are also provided to municipalities and general service customers outside of Calgary.

In providing these services to customers, The City incurs ongoing operating and capital expenses. These expenses are subject to the combined effects of growth, inflation, and the need to maintain, upgrade and extend existing infrastructure to deliver services to customers and meet regulatory requirements.

Water, Wastewater, and Stormwater Lines of Service Cost of Service Study

The COSS determines the makeup of each customer class and their demands on the system that change over time. It also aims to maintain equitable cost recovery among customer classes. The COSS is also an analytical tool supporting financial management. It ensures sufficient and predictable revenues are maintained, allowing financial plans and targets to be met. In 2017 April, the Water Utility engaged Stack'd Consulting Inc. to perform a COSS for each line of service for 2019-2022. The approach considered best practices and recommended COSS methodologies from industry associations.

In the COSS methodology, a base year's cost (in this case, 2016), consumption and customer information is studied alongside projected operating and capital costs. Customers are grouped based on their characteristics of consumption and demands on the system. This methodology helps to inform how much should be recovered from each customer class to then determine a rate structure that can meet the following objectives:

- to deliver sufficient and predictable revenue through stable rates;
- to apply user pay philosophy; and
- to promote water conservation and watershed protection.

The following circumstances were considered in the COSS:

- Rate design considered a mix of fixed and variable rates by customer class; and
- Outside city customers are a distinct customer class and are treated differently because they benefit differently than inside city customers.

The stormwater line of service is also approached differently because the current rate structure for stormwater will be maintained in 2019-2022. The overall cost required to provide stormwater service is equally allocated across all inside city customers, including both residential and non-residential customers.

INVESTIGATION: ALTERNATIVES AND ANALYSIS

The customer, consumption and cost analysis performed identified that some changes to cost recovery are required to improve fairness among customer classes. Specifically, if we keep the current rate unchanged, the cost recovery for combined Water and Wastewater Services by year 2022 will be 114% for Residential Metered customers; 95% for Multi-family customers, and 85% for General Service customers. Detailed information by each line of service is provided within the Cost of Service Study for Water, Wastewater and Drainage Services Executive Summary Report by Stack'd Consulting Inc. (Attachment 1).

To aid decision making among multiple scenarios, prioritized rate-making objectives and key criteria were identified for each line of service. In addition, input from stakeholders and general community attitudes were considered prior to the development of strategies for 2019-2022.

The two options presented have been evaluated against key criteria. Both options incorporate the indicative rate increases in Wastewater and Stormwater, which were approved by Council on 2018 June 18. However, the up to 0.5 per cent increase per year in Water that Council approved in 2018 June 18 (C2018-0787) relating to New Community Growth Strategy has not been incorporated in this COSS. The impact for each customer class is a combination of the overall indicative rate increases and the changes in cost recovery to improve customer fairness. Each line of service will continue to recover all costs associated with service delivery under both options.

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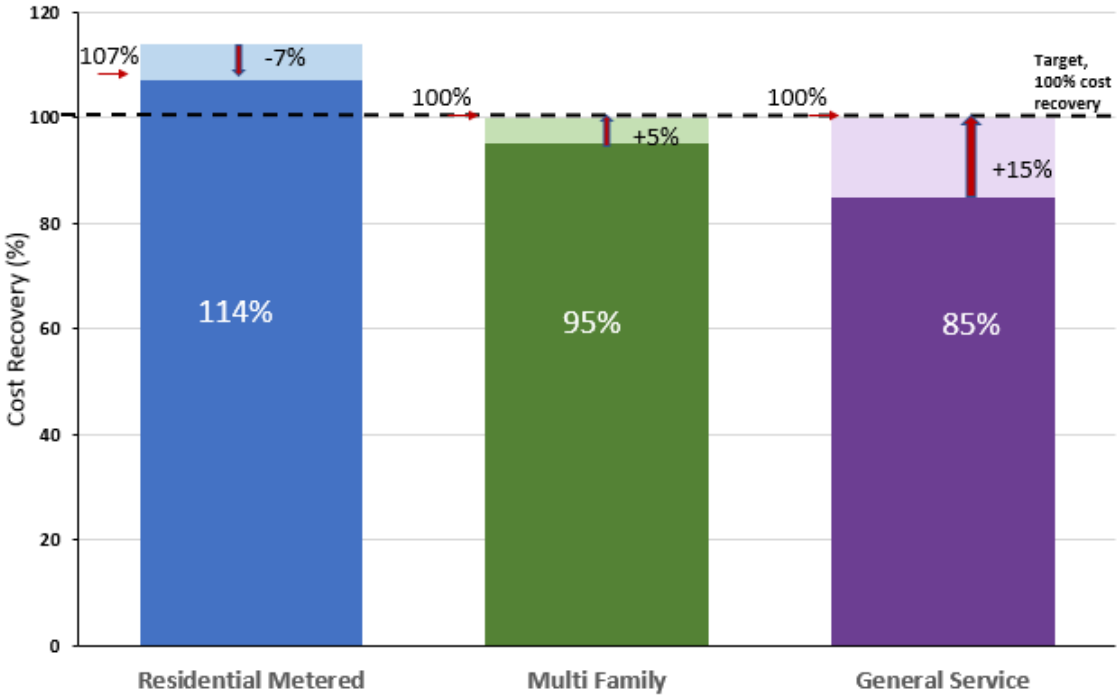
Maximizing the Degree of Customer Fairness for each Customer Class

This option aims to maximize the degree of cost recovery for each customer class to achieve customer fairness, as illustrated by Figure 1 below.

In this Option, typical Residential Metered customers will have about a 1 to 2 per cent decrease to their combined Water and Wastewater monthly bills. This equates to about $1 to $2 savings per month for each of the four years. The 5 per cent increase in cost recovery for Multi-family customers will result in a monthly bill increase of about 2 per cent per year. For example, if a property owner of a multi-family dwelling has a Water and Wastewater monthly bill for $2,000 in 2018, the bill increase will be about $40 per month in each year of 2019-2022. Analysis on bill impacts to General Service Large (GSL) and General Service Regular (GSR) customers indicates a monthly bill increase at 3 to 6 per cent. This means if a GSL customer has a Water and Wastewater monthly bill for $30,000 in 2018, the bill increase will be between $900 and $1,800 per month in each year of 2019-2022.

Figure 1: Current and Proposed Cost Recovery for Option of Maximizing Customer Fairness



Moderating Customer Impact to each Customer Class

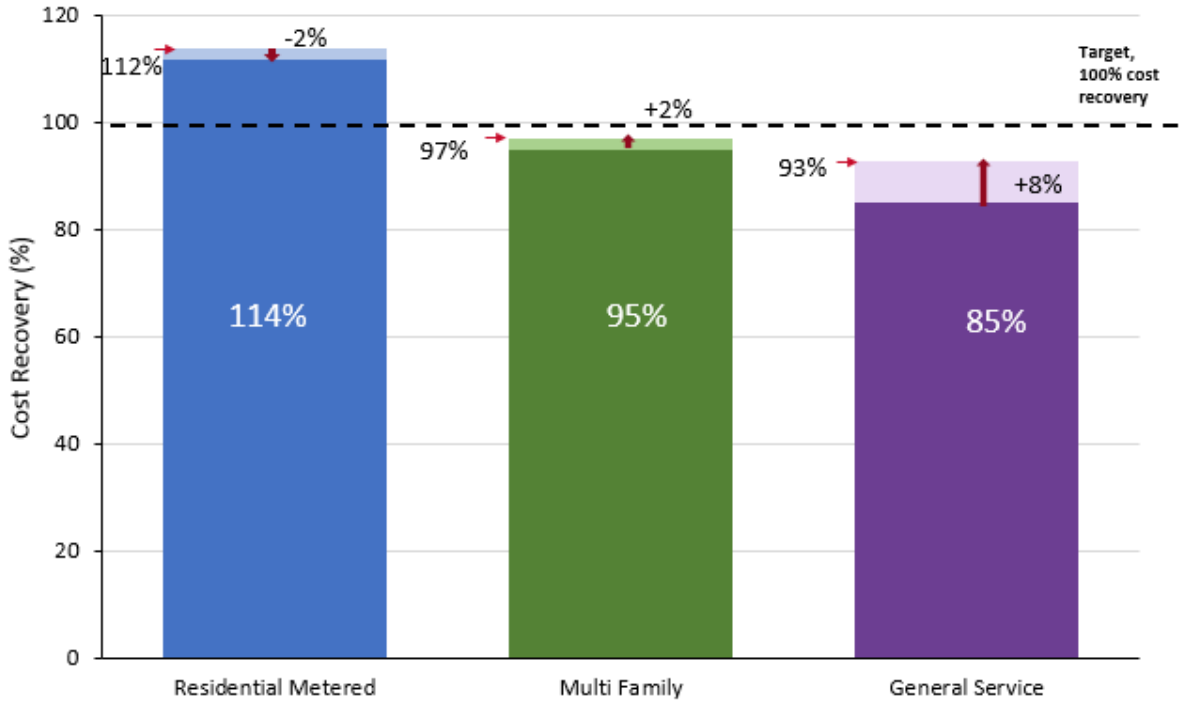
This option varies the extent of cost recovery by customer class to ensure the impact of the rate change on customer classes are moderate, and moves towards fair and equitable cost recovery for each customer class.

The gap between the cost recovery and the exact cost of service (as recognized by the COSS) was identified. It was then proposed that the gap be closed to different degrees for each customer class. This improves fairness and ensures customer bill impacts will be moderate. Figure 2 shows current and proposed cost recovery among major customer classes under this option. Typical Residential Metered customers will see slight decrease to their combined Water

Water, Wastewater, and Stormwater Lines of Service Cost of Service Study

and Wastewater monthly bills. The decrease will be less than $1 per month in each of the four years. The 2 per cent increase in cost recovery for Multi-family customers will result in a monthly bill increase of about 1 per cent per year for each of the four years. For example, if a property owner of a multi-family dwelling has a Water and Wastewater monthly bill for $2,000 in 2018, the bill increase will be about $20 per month in each year of 2019-2022. Analysis on bill impacts to GSL and GSR customers indicate a monthly bill increase of 2 to 3 per cent. For example, if a GSL customer has a monthly bill for $30,000 in 2018, the bill increase will be between $600 and $900 per month in each year of 2019-2022.

Figure 2: Current and Proposed Cost Recovery for Option of Moderating Customer Impact



The above two options have been evaluated against five rate-setting criteria. The table below summarizes the results, which concludes that Moderating Customer Impact is preferred option, due to moderate bill increases and that all rate-setting criteria are met.

Table 1: Compare and Contrast of the two options Relative to Each Criteria

	Criteria	Rationale
1	Revenue Sufficiency & Predictability	Both options target same level of sufficient and predictable revenue to recover the cost of services
2	Accessible & Simple	Option with more moderate customer impact is easier for customers to understand and accept

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	Criteria	Rationale
3	Rate Stability & Customer Impact	Option with more moderate customer impact will result in higher rate stability and lower customer impact
4	Customer Equity & User Pay Philosophy	Option that maximizes fairness (greater user pay) results in more significant customer impact
5	Conservation (Wastewater)	Both options provide same charges for treatment of wastewater loadings

To adjust the disproportionate share of costs among customer classes, a set of cost recovery strategies have been developed under the option of Moderating Customer Impact, as listed in Attachment 2. Implementing these preferred cost recovery strategies for customers within Calgary (inside city customers) will result in differences in rates among customer classes.

Regional Customers Cost of Service Study

Regional customers are treated differently because they do not benefit from all the infrastructure or services provided to customers within Calgary. As per Master Servicing Agreements (MSAs) between The City and Regional Customers, usage rates and fees for services are to be determined by the following:

- The COSS guiding principles;
- Alberta Utilities Commission (AUC) regulatory standards in Part 2 of the Public Utilities Act; and
- Industry standard water/wastewater utility service practices.

As per each MSA, Regional customers provide their current and future Water and Wastewater capacity requirements, while The City commits to undertake the COSS through open and transparent communication. This approach aligns with the mutually agreed principles and ensures regional customers cover 100 per cent of the cost for the services they receive.

Strategic Issues

A number of questions, characterized as strategic issues, were also addressed in the COSS. Key issues are summarized below with more details articulated in Attachment 1, Appendix B.

1. Moving customers into the correct customer class

Analysis of customer consumption patterns resulted in the following recommended changes to customer classes:

- Triplexes, fourplexes and all individually-metered, multi-unit dwellings be classified as Residential Metered customers instead of Multi-Family customers.
- Townhouses with more than four units that are not individually-metered, as well as apartments be classified as Multi-Family customers.

This results in approximately 3,000 customers being moved to a different customer class. Specifically, from General Service to Multi-Family, or from Multi-Family to Residential metered. Further analysis and verification is required to confirm the correct customer class changes. This

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will result in rate changes for impacted customers. Any required Bylaw amendments will be presented to Council in 2018 November. Subsequent work on customer class correction will be completed in 2019-2022 and an implementation plan will be prepared.

2. Stormwater variable rates

Currently, the same stormwater rate applies to all customers. Implementing a variable stormwater rate would improve customer fairness and be a strategic tool to promote customer behaviour for watershed protection and stormwater quality improvement. It is recommended to maintain the same rate structure for 2019-2022, and to develop an implementation plan for a variable stormwater rate structure to be reported back to Council by Q4 2020 for potential implementation for the 2023 to 2026 business cycle.

3. Wastewater extra strength customers and parameters

The City's wastewater treatment plants must treat high strength wastewater. Analysis indicates that two pollutants (Total Kjeldahl Nitrogen (TKN) and Total Phosphorous (TP)) currently not used to calculate monthly wastewater surcharges, should be added to the surcharge calculation. Conversely, Fats, Oils, and Grease (FOG) are included in the Bylaw as an extra strength surcharge parameter but should be removed and classified under a penalty structure. The Water Utility will investigate further and will report back to Council by 2020 November on proposed new wastewater extra strength surcharge parameters for TP and TKN, and transferring the surcharge rate (FOG) to a penalty structure.

4. Customer Assistance Program

The Water Utility is investigating a Customer Assistance Program (CAP) to assist low-income customers in accessing affordable Water, Wastewater and Stormwater services. Implementing a CAP will also enhance the revenue predictability for the Water Utility by reducing the number of customers in arrears. It is recommended that costs of offering a CAP be shared across all inside city customers (not including Bulk Water or Hauled Wastewater). The Water Utility is developing a CAP pilot project and will report to Council in Q4 2018.

5. Wastewater return factor

Not all the water consumed is returned to the Wastewater system (e.g. irrigation). Because wastewater is not metered, the application of a wastewater return factor to determine wastewater charges is considered best practice in the wastewater utility industry. Through analysis the COSS concluded that on average over the course of a year the wastewater return factors are: 90 per cent for Residential Metered customers; 92 per cent for General Service customers, and 97 per cent for Multi-Family customers. Bylaw amendments to reflect this will be brought to Council in 2018 November.

6. Customers who use water in their products

The COSS investigated how to fairly treat customers who use potable water in their products (e.g. water bottlers, breweries). It is not recommended to charge these customers differently than General Service customers as other jurisdictions are not creating a separate class for these customers. To do so would create a competitive disadvantage for Calgary in terms of economic development opportunities.

Water, Wastewater, and Stormwater Lines of Service Cost of Service Study

7. Alternative Water and Wastewater rate structure

There are several different rate structures used by utilities across North America, such as Fixed Charges, Uniform Rate, Inclining Block, Declining Block etc. After considering these options and examining specific cost components, the COSS recommended the continuation of the current fixed and variable rate structure. These rate structures will mitigate revenue risks and ensure fairness and equity amongst customer classes.

Stakeholder Engagement, Research and Communication

Customers place high value on the water services that they pay for and receive. Based on the 2017 Citizen Satisfaction Survey, 94 per cent of citizens are satisfied with the quality of drinking water. Furthermore, 2017 Citizen's Perspective Survey results indicate 95 per cent of Calgarians are in favour of a user pay approach for water and wastewater, and the vast majority believe that those who use more should pay more.

The Water Utility is planning future customer communication and engagement based on the COSS recommendations to identify and involve impacted stakeholders, and to further establish open and transparent communication between The City and customers.

Strategic Alignment

It is crucial for the Water, Wastewater and Stormwater lines of service to ensure adequate supply of water for a growing city, and maintain river water quality downstream of Calgary. The COSS contributes to strategic alignment with The City's 2020 Sustainability Direction, and the Corporate Growth Management Framework by ensuring there is sufficient funding available to support growth, operate and maintain the system, as well as expand and upgrade the treatment plants. The COSS recommendations will also strengthen the financial capacity that enables Water, Wastewater and Stormwater lines of service to deliver commitments on the following three Council Priorities:

1. To support a city of inspiring neighbourhoods, the Water, Wastewater and Stormwater lines of service provide the infrastructure needs of a growing city, enhance The City's ability to prepare for and respond to natural disasters, and build resiliency to flooding.
2. Contributing to a healthy and green city, the Water, Wastewater and Stormwater lines of service, lead by example to protect public health and the environment, and ensure regulatory compliance.
3. The financial discipline demonstrated through the Water, Wastewater and Stormwater lines of service's performance within their financial plans is an example of commitment to a well-run city.

Social, Environmental, Economic (External)

The COSS requires a balanced approach to rate setting that considers the social, environmental, and economic implications of cost and cost recoveries. In alignment with the guiding principles for COSS, results and recommendations will reflect fairness and equity to customers, be capable of recovering the Water Utility's costs of providing services and continue to meet regulatory requirements. This approach will enable the Water Utility to achieve financial targets and timelines for compliance, as well as support reaching The City's environmental goals.

Water, Wastewater, and Stormwater Lines of Service Cost of Service Study

Financial Capacity

COSS is an effective method to ensure financial plans and targets are achieved for the Water, Wastewater and Stormwater lines of service, but the COSS itself has no operating nor capital budget implications.

Current and Future Operating Budget:

The COSS incorporates the Council approved 2019-2022 financial plan targets for Water and Wastewater lines of service (UCS 2018-0223) and for the Stormwater line of service (UCS 2018-0230).

Current and Future Capital Budget:

The COSS has considered investments planned for 2019-2022 for the Water, Wastewater and Stormwater lines of service.

Risk Assessment

With the recommended cost recovery strategies (Option of Moderating Customer Impact), the Water Utility will increase fairness and equity among customers. The main risk is adverse reaction to a rate increase by a customer or set of customers, especially under current economic situations. The Water Utility is planning targeted customer communication and engagement for those with greater impacts, including but not limited to education on how to mitigate rate impacts by identifying opportunities to save water and limit pollutants in wastewater.

It is also likely that new rate increases will cause customers to change their usage patterns. These changes could lead to less revenue than anticipated and lack of alignment between those that use the system and those that pay for the system over the next business cycle. To mitigate such inequity, a future COSS will be conducted in the next business cycle (2019-2022) to prepare for 2023-2026.

REASON(S) FOR RECOMMENDATION(S):

The COSS methodology and process is a journey towards fair and equitable rates among customer classes. Closing the outstanding cost recovery gap among customers over time allows customers to adjust behaviours to reduce their proportional use of the system. Achievement of full equity within this business cycle would create challenges for General Service Large and General Service Regular customers, as it would require significant increases for them in a short period of time, with only relatively small decreases for Residential Metered customers.

Approving the recommendations of this report will result in closing the cost recovery gap while balancing the impacts to each customer class.

ATTACHMENT(S)

1. Attachment 1 - Cost of Service Study for Water, Wastewater and Drainage Services Executive Summary Report
2. Attachment 2 - Cost of Service Study Recommendations for the Water, Wastewater and Stormwater Lines of Service

Stack'd exists to deliver exceptional consulting services to our clients.

UCS2018-0884

Attachment 1

Cost of Service Study for Water, Wastewater and Drainage Services Executive Summary Report

The City of Calgary, Water Resources and Water Services

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1.0 Executive Summary

1.1 Introduction

In April 2017, Stack'd Consulting Inc. was engaged by The City of Calgary to perform a Cost of Service Study (COSS) as outlined in Request for Proposal (RFP) # 16-1773.[1] The purpose of this engagement was to perform a Cost of Service Study for each of the Water, Wastewater, and Drainage Services. Specifically, the purpose of these studies was to develop rates for the 2019-2022 business cycle.

As indicated in The City's RFP, the desired outcomes from the cost of service studies were to:

a) Determine the equitable allocation of the revenue requirements between customer classes;

b) Address in-scope utility issues and strategic objectives associated with cost of service, rates, and rate setting; and

c) Establish fair and defensible rates, based on Guiding Principles for Utility Rates for Water, Wastewater, and Drainage Services that inform the 2019 to 2022 business plans and budgets.

A phased project approach and work plan was developed, reviewed with The City Project Manager and Steering Committee, and executed to deliver upon all in-scope deliverables.

1.2 Rate-Making Objectives

To develop an optimum 2019-2022 rate structure, it was necessary to establish clear and prioritized rate-making objectives. To establish these, a review of the Utilities' existing Guiding Principles was performed. In addition, a strategic session was facilitated with the Steering Committee to further prioritize individual rate-making objectives for each of the Water, Wastewater, and Drainage Services.

The Guiding Principles are utilized as an overarching and enduring set of distinct rate-making objectives which each business cycle's rates need to consider and appropriately reflect. These principles and their definitions are summarized as below:

FINANCIAL SUSTAINABILITY

- **Deliver sufficient and predictable revenue**: In order to meet current and future regulatory requirements, and provide reliable services desired by customers, The Utility needs to receive sufficient and predictable revenue to recover its costs
- **Rate Stability:** Offer stability and predictability to The Utility and The Utilities customers
- **Adaptability:** Set rates structures that are dynamic, and provide flexibility to changing supply and demand

FAIRNESS AND EQUITY TO CUSTOMERS

- **User Pay philosophy:** Rates are based on the philosophy that a customer's rates should reflect the cost of providing the service to the customer
- **Customer Equity:** Each customer class should pay their fair share based on the customer class usage pattern and service benefits offered
- **Accessible and Simple:** Rate structures should be transparent and easy to understand

NATURAL RESOURCE MANAGEMENT

- **Conservation:** Establish a rate that allows The City to continue to meet current and future regulatory requirements, while encouraging customers to adopt behaviours focused on water conservation, and protecting the watershed and river water quality

[1] The City of Calgary, "Cost of Service Studies for Water and Wastewater Services, and Drainage Services", Issued December 7, 2016

Figure 1: Guiding Principles for Utility Rates

Based on the outcomes from the facilitated session, the following priority rate-making objectives were confirmed for the 2019-2022 business cycle per Utility (see **Appendix A** for definitions):

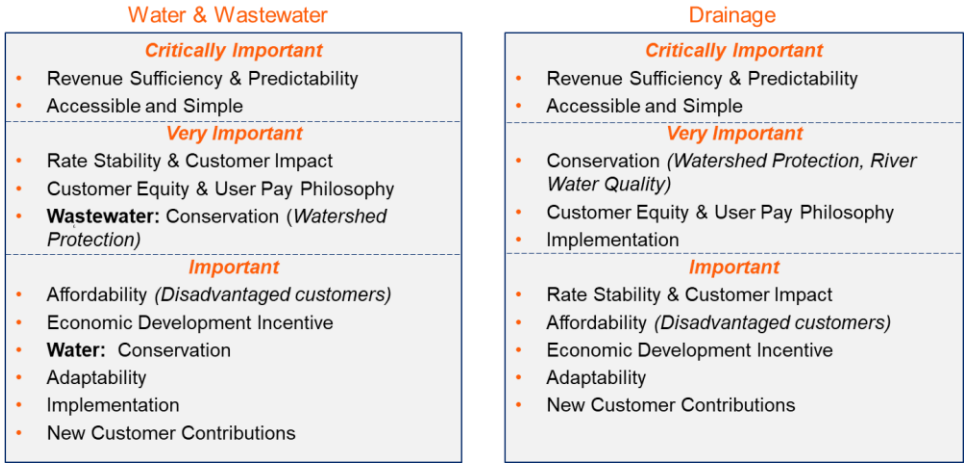


Figure 2: Priority 2019-2022 Rate-Making Objectives

There was a list of in-scope strategic issues which required internal review, external research, and the development of recommendations for the Utilities. A description of all strategic issues is provided in **Appendix B**.

1.3 Cost of Service Analysis

This section provides an overview of the approach used to conduct the cost of service analysis, highlights of the analysis, and summary results.

1.3.1 Cost of Service Approach

An industry-accepted practice was followed to both analyze costs and develop the desired rate structure. It consists of four overarching analytical steps. Each of the rate revenue requirements are allocated to distinct functions based on their purpose as part of delivering services. Then, costs within each of these functional pools are classified against customer cost drivers using a combination of industry-accepted and utility-specific cost drivers. Finally, costs from these cost driver pools are allocated against relevant customer classes based on their relative usage, as primarily represented by each class' projected units of service. A generic illustration of the steps used is illustrated below (note, actual functions and cost drivers are described in the following sections):

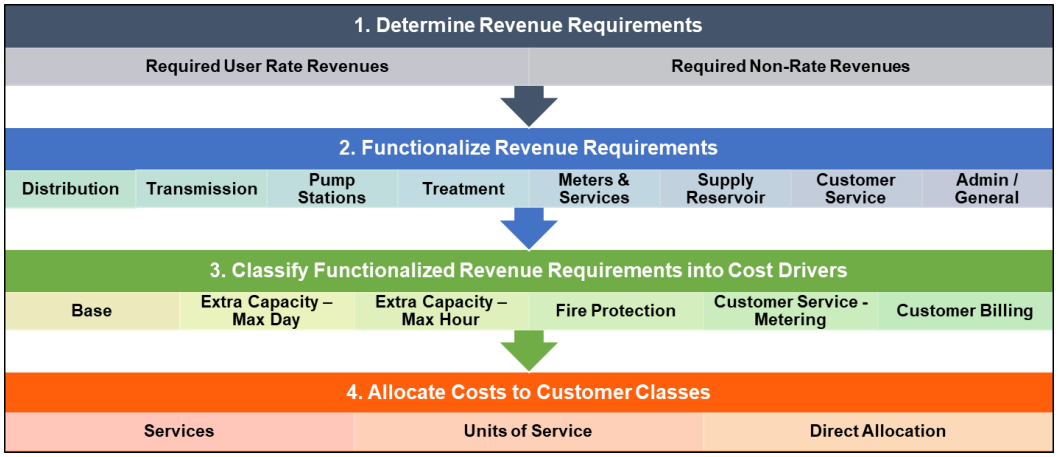


Figure 3: Generic Cost of Service Approach

Water cost allocations were developed and performed in collaboration with a Water Cost of Service Technical Team. Both functions and allocations to cost causation factors were based on review of appropriate industry leading practices, financial and operating information, and input from team members.

1.3.2 Rate Revenue Requirements

For Inside-City customers, the Utilities utilize a cash-basis approach to define total rate revenue requirements per utility. As such, rate revenues are primarily focused on covering each year's cash requirements for both operating and capital needs. This is a common method for municipal utilities to define their rate revenue requirements, as it places emphasis on addressing the Utilities' cash flows.

Both the Water and Wastewater Services have identical rate revenue requirement cash components. The graphic below highlights each distinct cash requirement and its specific uses:

Water & Wastewater Utilities: Cash Basis

\+ **O&M Expenses** *(including overhead allocations)*
\+ **Debt Interest Expense** (*funds debt interest*)
\+ **Debt Principal Repayments** *(pays down debt)*
\+ **Cash Financed Capital** *(pay-as-you-go funding)*
\+ **ROE Payments to City** *(dividend to shareholder)*
\+ **Franchise Fees** *(flow through to City)*
\- **Non Rate Revenues**

∑ **Total Rate Revenue Requirement**

Figure 4: Water and Wastewater Rate Revenue Requirements

It should be noted that the Debt Interest Expense and Debt Principal Repayments are net of projected Principal and Interest contributions from the scheduled Off-Site Levies (from developers for Inside City growth). These contributions were forecasted by the Utilities' Off-Site Levy models and were used as input to this analysis.

In addition, it is noted that the Utilities have established "to-be" utility fiscal policies for both the Water and Wastewater Services. Of pertinence is the target to establish an Operating Reserve equivalent to 120 days (i.e. 4 months) worth of annual Operations and Maintenance expenses. It is understood that this target is planned for implementation across the 2019-2022 business cycle, with the end goal to build this reserve to its target level by the end of 2022. This targeted reserve level represents an additional rate revenue requirement to evaluate the appropriateness of the 2019-2022 rate schedules.

Although the Drainage Service also uses the cash basis, its composition is slightly different as compared to the Water and Wastewater Services. The graphic below highlights each distinct cash requirement:

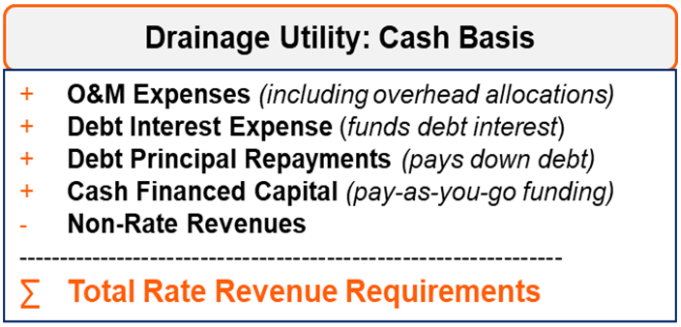


Figure 5: Drainage Rate Revenue Requirements

It is noted that the Drainage Service does not include a Return on Equity (or Dividend) payment to The City, nor does it include a Franchise Fee payment obligation. It is recommended to avoid implementing such rate revenue requirements in the short-term given rising funding requirements for increasing Drainage levels of service and a potential move to a Variable Rate Structure in 2023.

Similar to the Water and Wastewater Services, the Drainage Service has a targeted fiscal policy to establish an operating reserve equivalent to 120 days of Operating and Maintenance expenses by the end of 2022. This targeted reserve level represents an additional rate revenue requirement to evaluate the appropriateness of the 2019-2022 rate schedules.

Based on the 2016 "test year" (based on actual financial results), the total rate revenue requirements for each utility were analyzed and confirmed. Based on received growth projections, capital planning, and net-new operating activities, they were projected forward from 2016 out across a 10-year horizon (with focus on the 2019-2022 business cycle). Rate revenue requirements for 2016 are summarized below:

Rate Revenue Requirement	Water 2016	Wastewater 2016	Drainage 2016
O&M Expenses	$113,329,524	$118,555,647	$31,178,489
Debt Interest Expense	$26,929,690	$24,144,892	$4,144,240
Debt Principal Repayment	$44,371,223	$25,691,231	$5,754,724
Cash-Financed Capital	$63,286,000	$51,970,000	$13,831,000
Non-Rate Revenues	$(3,764,966)	$(4,140,984)	$(1,389,184)
ROE Payment to City	$28,750,000	$13,750,000	-
Franchise Fees	$29,017,466	$29,038,005	-
Total	***$301,918,937***	***$259,008,791***	***$53,519,269***

Table 1: Summary Rate Revenue Requirements 2016

1.3.3 Water Cost of Service Analysis and Results

1.3.3.1 Water Projected Rate Revenue Requirements

Based on the assumed operating and capital projections, the total rate revenue requirements were projected from the 2016 base year to the end of 2022. The following graph illustrates both the total rate revenue requirements and trends for the specific elements:

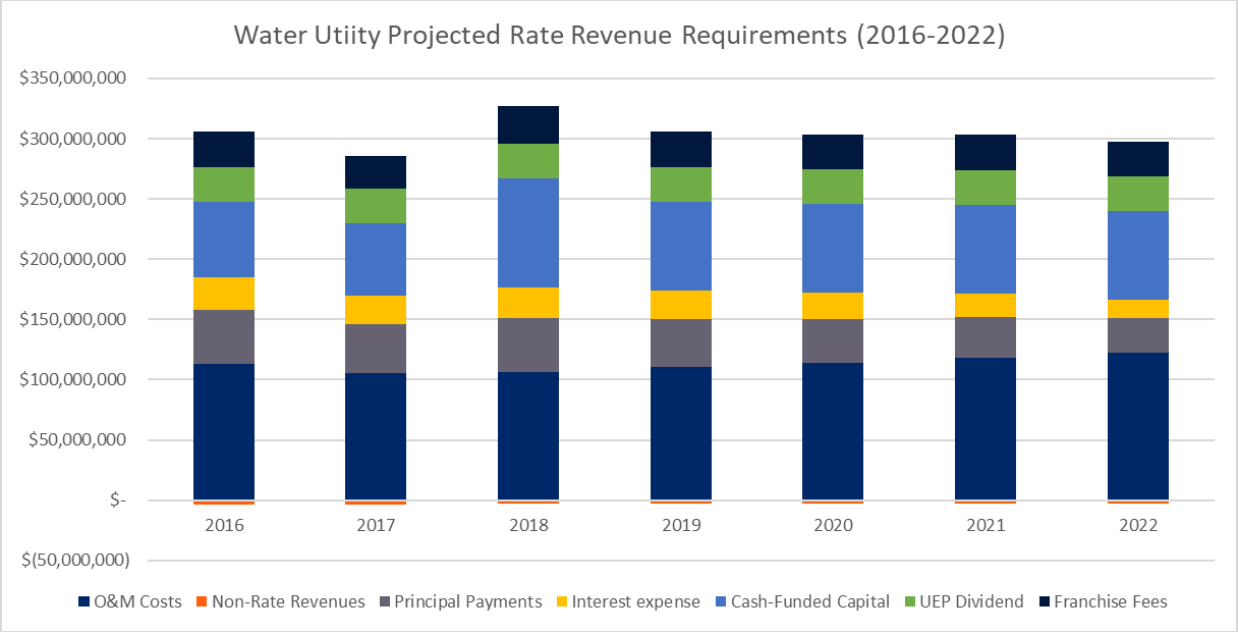


Figure 6: 2016-2022 Water Rate Revenue Requirements

From this figure, it can be determined that the Water Service's total rate revenue requirements are expected to remain somewhat stable over the next business cycle. They reach a maximum of approximately $304 million in 2019, and then slightly decline to approximately $295 million in 2022. A key reason for this slight decline is less debt servicing costs, as the capital financing plan emphasizes more cash-financed capital to decrease current debt levels. A snapshot of the specific rate revenue components as compared from 2019 versus 2022 is also provided below, with specific projections for individual rate revenue requirements:

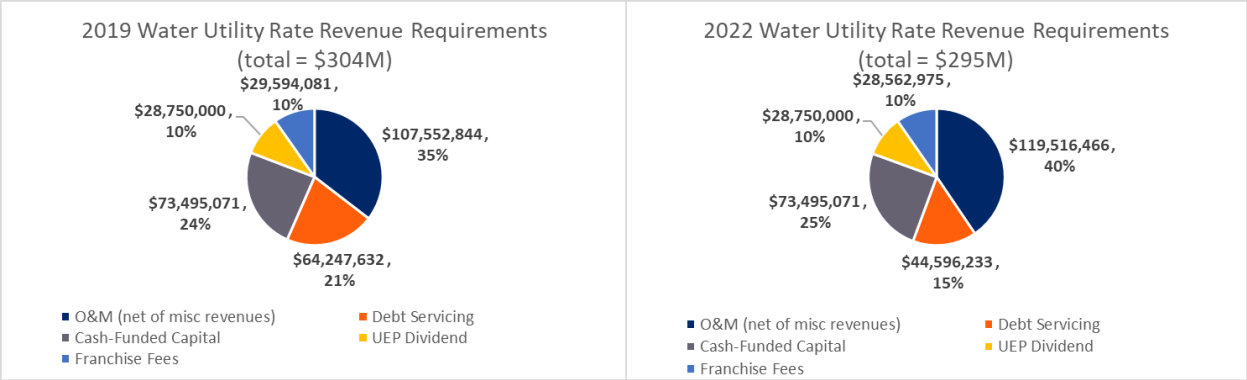


Figure 7: Water 2019 versus 2022 Rate Revenue Requirements

1.3.3.2 Water Functions

Functions were selected to represent the comprehensive scope of distinct work elements performed in the delivery of water services. They were also selected to recognize the distinction between retail versus wholesale customers. Retail customers receive full distribution services as provided by the Utilities, while wholesale receive bulk water at a regional boundary point and then provide their own distribution storage and retail services. The following distinct water functions and supporting descriptions (regarding the assignment of unique assets into specific functions) are summarized below:

Function	Assets
Source of Supply	Glenmore Reservoir; Dam; Raw Water Pumping
Treatment	Plant, Filtration; Lab; Power Generation Area; Residuals Treatment; etc.
Pumping	Pumpstations *(split between Distribution vs. Transmission based on an individual assessment)*
Distribution Storage	Reservoirs
Transmission Network	Feedermains; Large Pipes ≥ 500mm; Valve Chambers; Transmission Valves
Distribution Network	Distribution Pipes; Small Pipes < 500mm; Distribution Valves; Anode Retrofit
Meters & Services	Meters; Services
Hydrants	Hydrants
General	General Site Development; Administration; Gate House, etc.

Table 2: Water Functions by Asset Type

Assets designated as "General" were subsequently allocated to all other specific functions based on an overhead allocation. This was based on the percentage of the net book value of assets as directly allocated to each function.

The allocation of debt servicing costs was also performed using the same distribution of the net book value of assets to functions. This is based on the principle that debt capital financing policies can apply equally to assets across all functions. From a cost allocation perspective, it is typically more reasonable to allocate debt servicing based on this approach versus a specific review of each individual debenture.

In addition to the assignment of assets to these functions, a similar exercise was performed to assign all operating-related costs. This exercise was completed in parallel during the Line of Service allocations analysis. A "bottom-up" review of each Division's activities and chartfield drill financial results (by both Dept ID and Activity ID) was performed. In addition, input on specific allocations was provided by internal Utilities administration and technical subject-matter-experts.

The distribution of the Water Service rate revenue requirements into functions is illustrated in the following graphic. As can be seen, the Treatment and Distribution Network (retail customers only) represent 57% of the 2019-2022 projected costs.

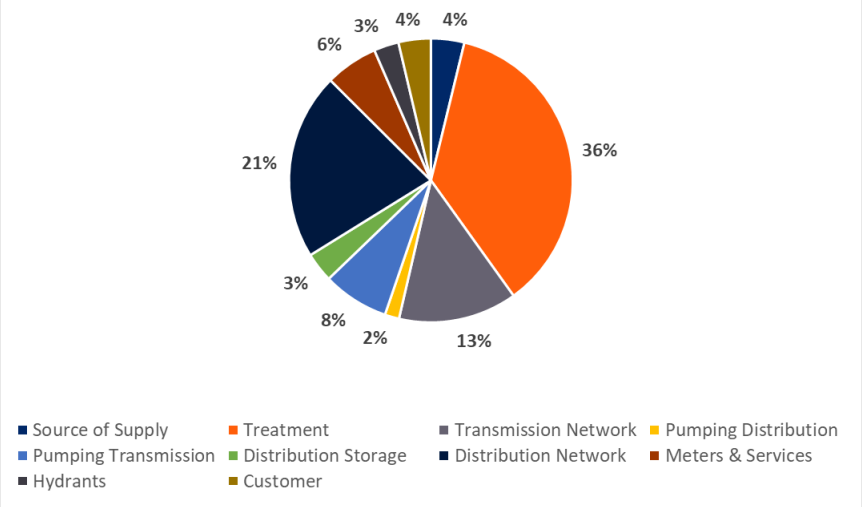


Figure 8: Water Distribution of Functionalized Rate Revenue Requirements

1.3.3.3 Water Cost Drivers

The base-extra capacity method was used to allocate functionalized cost pools into cost drivers. This method is accepted by the American Water Works Association[2], and is typically used for water utilities across North America. It focuses on assigning costs to (1) base costs, (2) extra-capacity costs, (3) customer-related costs, and (4) fire protection costs. Base costs are those which tend to vary with the total quantity of water consumed or those tied to customer average day usage. Extra-capacity costs are those required to meet peak demand rate of use requirements in excess of average (base) use, and are typically sub-divided into both maximum day and maximum hour components. Customer-related costs comprise those required to serve customers regardless of the volume or capacity of water provided, and typically include meter reading, billing, and customer service. Fire protection costs typically include both dedicated assets (i.e. hydrants) and fire flow capacities required to support community fire protection standards.

To identify the specific cost allocations percentages for each function, internal technical subject-matter-experts were engaged (both through the Water Technical Team and others as appropriate), leading practices were reviewed, and background customer and operating information was analyzed. Further, considerations were made on which cost drivers were the most reasonable and appropriate. From this, cost driver allocations were further refined to support both operating and capital functional costs. The tables below summarize these cost driver allocation frameworks:

Operating Cost Allocations Framework:

	Operating Cost Allocations Framework						
		Extra Capacity					
Function	Base Annual Volume m3	Max Day Demand m3	Max Hr Demand m3	Meters & Services # Accounts	Fire Protection	Customer # Bills	Total
Source of Supply	100.00%						100.00%
Treatment (Excl Chems & Electricity)	63.32%	36.68%					100.00%
Treatment Chemicals	100.00%						100.00%
Treatment Electricity	100.00%						100.00%
Transmission Network	63.32%	36.68%					100.00%
Pumping Distribution	44.82%	25.96%	29.21%				100.00%
Pumping Transmission	63.32%	36.68%					100.00%
Distribution Storage	100.00%						100.00%
Distribution Network	44.82%	25.96%	29.21%				100.00%
Meters & Services				100.00%			100.00%
Hydrants					100.00%		100.00%
Customer Service						100.00%	100.00%

Table 3: Water Operating Cost Allocations Framework

Capital Cost Allocations Framework:

	Capital Cost Allocations Framework						
		Extra Capacity					
Function	Base Annual Volume m3	Max Day Demand m3	Max Hr Demand m3	Meters & Services # Accounts	Fire Protection	Customer # Bills	Total
Source of Supply	100.00%						100.00%
Treatment	50.43%	49.57%					100.00%
Transmission Network	50.43%	49.57%					100.00%
Pumping Distribution	44.82%	25.96%	29.21%				100.00%
Pumping Transmission	50.43%	49.57%					100.00%
Distribution Storage	100.00%						100.00%
Distribution Network	44.82%	25.96%	29.21%				100.00%
Meters & Services				100.00%			100.00%
Hydrants					100.00%		100.00%

Table 4: Water Capital Cost Allocations Framework

[2] American Water Works Association (AWWA), "Principles of Water Rates, Fees, and Charges M1 Manual", Sixth Edition, 2012

The major difference between the Operating and the Capital Allocations Frameworks is the use of system design versus functional usage. From a review of the Water Service's engineering records, its max day treatment capacity has been designed to be approximately twice that of its average day demand. Based on this, it is reasonable to assume that design standards drive capital-related investments in the treatment and transmission functions. However, actual system production data was used across 2014-2016 to develop the base versus extra-capacity splits for the treatment and transmission operating costs. It is viewed that the system's actual use is appropriate to guide the allocation of operating costs.

UEP Dividend rate revenue requirements are allocated across each cost driver based on the percentage allocation of all operating and capital costs. Further, Franchise Fees (10% of revenues as earned on Inside City customers only) are allocated based on this same premise.

Based on these allocations, each rate revenue requirement was split into its base-extra capacity cost drivers. The following table summarizes the 2016 rate revenue requirement allocations:

Rate Revenue Requirement	2016 Test Year Amount	Base	Extra Capacity		Meters & Services	Fire Protection	Customer	Regional
		Annual Volume m3	Max Day Demand m3	Max Hr Demand m3	# Equivalent Meters	Fire Flow L/min	# Bills	Direct Allocation
O&M Costs	$ 113,329,524	$ 53,215,497	$ 22,952,383	$ 11,074,012	$ 10,860,181	$ 6,496,474	$ 8,474,864	$ 256,114
Non-Rate Revenues	$ (3,764,966)	$ (1,316,956)	$ (696,112)	$ (378,049)	$ (168,240)	$ (223,130)	$ (982,478)	$ -
Principal Payments	$ 44,371,223	$ 23,065,423	$ 17,871,266	$ 1,721,628	$ 1,528,599	$ 184,307		
Interest expense	$ 26,929,690	$ 13,998,818	$ 10,846,391	$ 1,044,887	$ 927,734	$ 111,859		
Cash-Funded Capital	$ 63,286,000	$ 32,897,861	$ 25,489,515	$ 2,455,531	$ 2,180,218	$ 262,875		
Sub-Total RRR's	*$ 244,151,472*	*$ 121,860,643*	*$ 76,463,443*	*$ 15,918,008*	*$ 15,328,493*	*$ 6,832,386*	*$ 7,492,386*	*$ 256,114*
		49.91%	31.32%	6.52%	6.28%	2.80%	3.07%	0.10%
UEP Dividend	$ 28,750,000	$ 14,364,740	$ 9,013,390	$ 1,876,390	$ 1,806,899	$ 805,391	$ 883,191	$ -
Franchise Fees	$ 29,017,466	$ 14,498,378	$ 9,097,243	$ 1,893,846	$ 1,823,708	$ 812,884	$ 891,407	$ -
Total RRR's	***$ 301,918,938***	***$ 150,723,762***	***$ 94,574,076***	***$ 19,688,244***	***$ 18,959,100***	***$ 8,450,660***	***$ 9,266,983***	***$ 256,114***

Table 5: 2016 Water Summary Rate Revenue Requirements by Cost Driver

In addition, the composition of 2019-2022 total rate revenue requirements per Cost Driver was also analyzed. Opposite is the distribution of rate revenue requirements for each Cost Driver. It demonstrates that approximately 50% of the costs have been assigned to the "Base Volume" component, while 30% has been assigned to the "Max Day" component. The remaining rate revenue requirements have been almost evenly split between "Max Hour", "Meters and Services", "Fire Protection", and "Customer-Related".

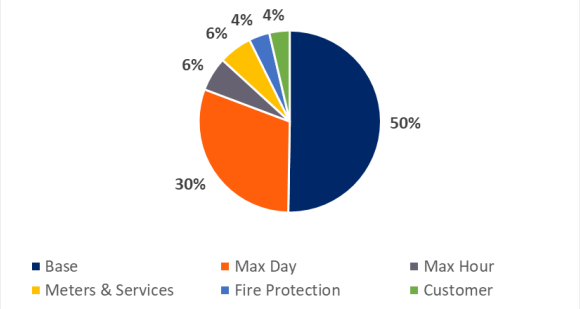


Figure 9: Water 2019-2022 Cost Drivers

1.3.3.4 Water Cost Allocations to Customers

The units of services for each customer class provides a fair and proportional method to allocate rate revenue requirements within the Cost Driver pools across customer classes. Service requirements are determined for each customer class based on its total annual water volume, maximum day demand, maximum hour demand, number of equivalent meter services, billing frequency, and fire protection flow requirements. Units of service per customer class are determined based on analysis of customer consumption data from 2014-2016, customer peaking behaviors, the distribution of meters (by size) per customer class, billing frequencies, and fire flow standards.

Based on the projected units of service per customer class across the 2019-2022 business cycle, the following summary distribution of cost allocations per cost driver was developed:

Customer Class	Base	Max Day	Max Hr	Meters & Services	Fire Protection	Customer
Residential Metered	52.5%	53.9%	52.9%	67.9%	76.7%	92.1%
General Service Large	21.8%	15.8%	19.5%	7.7%	2.1%	0.4%
General Service Regular	12.3%	9.6%	11.3%	10.0%	17.6%	3.8%
Multi-Family Residential	8.8%	5.9%	7.7%	5.4%	2.6%	1.4%
Irrigation	3.3%	13.4%	7.3%	9.1%	0.0%	1.1%
Bulk Water	0.2%	0.3%	0.2%	0.0%	0.0%	0.0%
Residential Unmetered	1.0%	1.0%	1.0%	0.0%	1.0%	1.2%

Table 6: Summary 2019-2022 Distribution of Water Customer Units of Service Allocations

Additionally, based on the projected cost allocations per customer class across 2019-2022, a comparison versus 2018 rates was performed to evaluate projected cost recovery levels. This projects the expected revenues per customer class (using the existing 2018 rates) against its projected cost of service, thus providing a starting point for 2019-2022 rate adjustments. The 2018 versus 2022 cost recoveries for each customer class are summarized below:

Class	2018 Projected Cost Recovery	2022 Projected Cost Recovery
Residential Metered	102%	119%
General Service Large	76%	91%
General Service Regular	88%	104%
Multi-Family Residential	101%	120%
Irrigation	62%	76%
Bulk Water	84%	102%
Residential Unmetered	130%*	154%*

Table 7: Water 2018 versus 2022 Cost Recoveries with 2018 Rates

1.3.4 Wastewater Cost of Service Analysis and Results

1.3.4.1 Wastewater Projected Rate Revenue Requirements

Based on the assumed operating and capital projections, the total rate revenue requirements were projected from the 2016 base year to the end of 2022. The following graph illustrates both the total rate revenue requirements and trends for the specific elements:

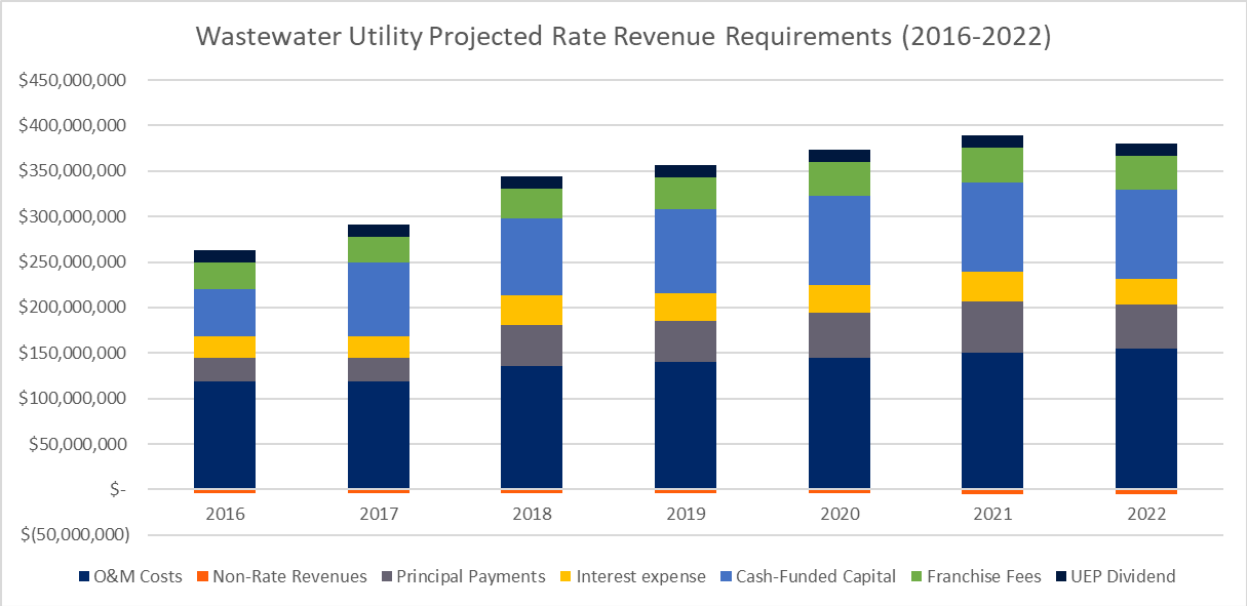


Figure 10: 2016-2022 Wastewater Rate Revenue Requirements

From this figure, it can be determined that the Wastewater Service's total rate revenue requirements are expected to significantly grow over the next business cycle. They reach a maximum of approximately $384 million in 2021 from a 2016 value of $259 million. A key reason for this are increased capital investments and operating costs required for Sludge Processing and Biosolids Management functions, as it is noted that additional capacity is being implemented to accommodate projected customer demands and regulatory requirements.

A snapshot of the specific rate revenue components as compared from 2019 versus 2022 is also provided below, with specific projections for individual rate revenue requirements:

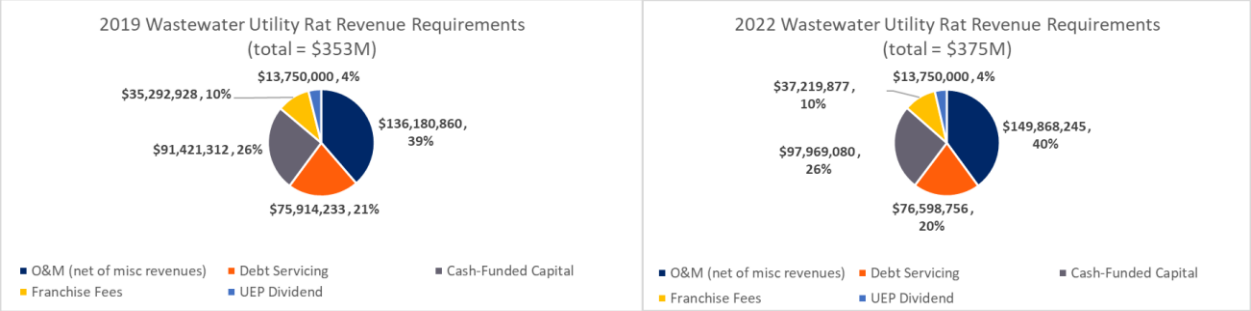


Figure 11: Wastewater 2019 versus 2022 Rate Revenue Requirements

1.3.4.2 Wastewater Functions

Functions were selected to represent the comprehensive scope of distinct work elements performed in the delivery of Wastewater services. They were also selected to recognize the distinction between retail versus wholesale customers. In addition, the Wastewater Treatment Plant functions were subdivided into sub-functions. This was necessary to identify unique Wastewater treatment processes which have unique cost causation drivers. Combined, these functions represent the overarching purpose of a Wastewater treatment facility to not only support contributed Wastewater flows (complete with inflow and infiltration), but also treat these flows for various Wastewater pollutants and produce effluent which fall within regulatory standards.

The following distinct Wastewater functions and supporting descriptions (regarding the assignment of unique assets into specific functions) are summarized below:

Function	Assets *(as identified in asset register)*
Collection	Manholes, Sanitary Services, Mains & Liners < 600 mm Allocated Forcemains, Chambers, Lift Stations, and Syphons *(as reviewed by Engineering)*
Transmission	Trunks, Mains, and Liners ≥ 600 mm Allocated Forcemains, Chambers, Lift Stations, and Syphons *(as reviewed by Engineering)*
Preliminary Treatment	Headworks, Influent Pump Station
Primary Treatment	Primary Clarifier
Secondary Treatment	Secondary Clarifier, Bioreactor, Oxygenation Tanks, Phosphorous Removal, Blower, Fermenters
Disinfection	UV Disinfection,
Effluent Filtration	Effluent Filtration, Outfall Ducts
Sludge Processing	Digesters, Thickeners, Blenders, Dissolved Air Flotation, FOG, Dewatering Facility
Biosolids Management	Lagoons, Composting Facility
Biogas	Thermal Oxidation, Power Gen & Heating, Waste Gas Burner
Reclaimed Water	Reclaimed Water Pump Station, Reclaimed Pipeline
Hauled Wastewater & FOG	Hauled Wastewater Receiving Station
Treatment General	Common Area, Admin, Control Building, General Site Development, Maintenance Shop, Odour Control, Utility Building, etc.

Table 8: Wastewater Functions versus Assets

Assets designated as “Treatment General” were subsequently allocated to all other specific treatment functions (i.e. not including the Collection nor Transmission functions) based on an overhead allocation. This was based on the percentage of the net book value of assets as directly allocated to each function. The allocation of debt servicing costs was also performed using the same distribution of the net book value of assets to functions.

In addition to the assignment of assets to these functions, a similar exercise was performed to assign all operating-related costs. This exercise was completed in parallel during the Line of Service allocations analysis. A “bottom-up” review of each Division’s activities and chartfield drill financial results (by both Dept ID and Activity ID) was performed. In addition, input on specific allocations was provided by internal Utilities administration and technical subject-matter-experts. This included a specific review on chemicals used (versus the pollutants they treat) and manpower analysis for both Operations and Maintenance Sections (as provided by Wastewater Treatment Plant O&M Leaders). Finally, consultant judgment (based on comparable Wastewater treatment utilities) were provided to estimate the distribution of plant electricity costs across the various treatment functions.

The distribution of the Wastewater Service rate revenue requirements into functions is illustrated in the following graphic. As can be seen, the Treatment and Collection Network (retail customers only) represent 82% of the 2019-2022 projected costs. The Treatment function was further detailed into its sub-functions to better allocate costs against contributed Wastewater flows versus various treatment parameters.

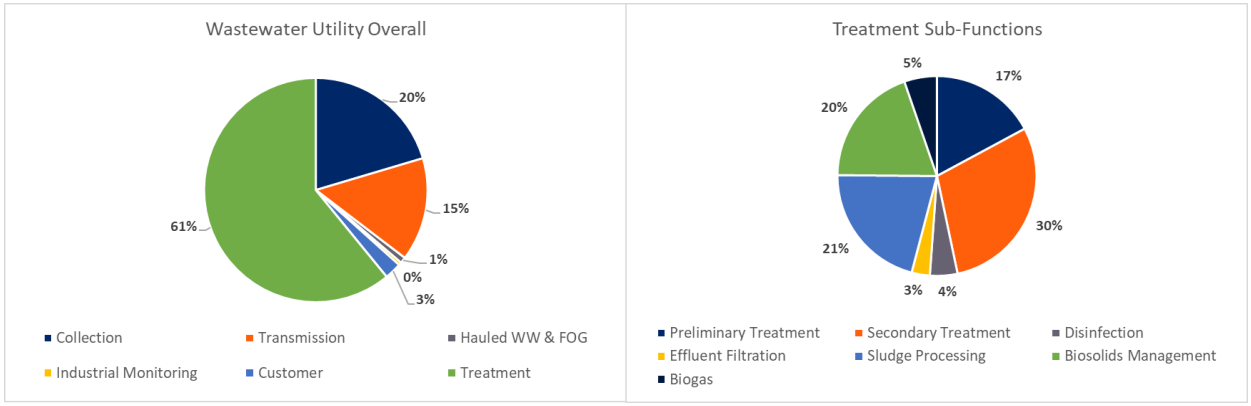


Figure 12: Wastewater Distribution of Functionalized Rate Revenue Requirements

1.3.4.3 Wastewater Cost Drivers

To guide cost allocation efforts, industry leading practices (based on comparison Wastewater treatment utilities) and knowledge were leveraged. In particular, guidance was leveraged from the Water Environment Federation Manual of Practice No. 27[3]. This provided a starting point for consideration for the Wastewater Technical Team, as facilitated sessions were conducted to identify the most appropriate allocation techniques for the Wastewater Service. This included considerations for both the "design-basis" (which allocates costs based on the premise for what the infrastructure was designed to do) and the "functional-basis" (which allocates costs based on the premise of the actual contributed Wastewater flows and loadings).

From this, cost driver allocations were further refined to support both operating and capital functional costs. The tables below summarize these cost driver allocation frameworks:

Operating Cost Allocations Framework:

	Operating Cost Allocations Framework									
	Loading Parameter									
Function	Wastewater Volume	Suspended Solids	BOD	TKN	TP	FOG	Hauled WW & FOG	Reclaimed Water	Industrial Monitoring	Customer Service
Collection	0.0%									100.0%
Transmission	100.0%									
Preliminary Treatment	100.0%									
Primary Treatment	80.0%	20.0%								
Secondary Treatment (not incl. Alum or Liquid O2)		20.3%	64.7%	13.4%	1.6%					
Secondary Treatment - Alum					100.0%					
Secondary Treatment - Liquid Oxygen			100.0%							
Disinfection	100.0%									
Effluent Filtration	100.0%									
Sludge Processing		33.3%	11.1%	27.8%	27.8%					
Biosolids Management		40.0%	10.0%	25.0%	25.0%					
Biogas		46.0%	43.9%	9.1%	1.1%					
Reclaimed Water								100.0%		
Hauled Wastewater & FOG							100.0%			
Industrial Monitoring									100.0%	
Customer Service										100.0%

Table 9: Wastewater Operating Cost Allocations Framework

[3] Water Environment Federation, "Financing and Charges for Wastewater Systems, Manual of Practice No. 27", WEF Press, 2004

Capital Cost Allocations Framework:

Function	Capital Cost Allocations Framework									
	Loading Parameter									
	Wastewater Volume	Suspended Solids	BOD	TKN	TP	FOG	Hauled WW & FOG	Reclaimed Water	Industrial Monitoring	Customer Service
Collection	100.00%									
Transmission	100.00%									
Preliminary Treatment	100.00%									
Primary Treatment	80.00%	20.00%								
Secondary Treatment		20.34%	64.69%	13.36%	1.61%					
Disinfection	100.00%									
Effluent Filtration	100.00%									
Sludge Processing		33.30%	11.10%	27.80%	27.80%					
Bio Solids Management		40.00%	10.00%	25.00%	25.00%					
Biogas		45.98%	43.87%	9.06%	1.09%					
Reclaimed Water								100.00%		
Hauled Wastewater							100.00%			
Industrial Monitoring									100.00%	

Table 10: Wastewater Capital Cost Allocations Framework

The major difference between the Operating and the Capital Allocations Frameworks is the allocation of costs in the Collection function. It was viewed that the total contributed Wastewater volume is a reasonable cost driver to allocate all capital-related costs against. However, it was viewed that the number of customers primarily drive operations and maintenance costs (particularly for Construction and Field Services crews).

Based on these allocations, each rate revenue requirement was split into its base-extra capacity cost drivers. The following table summarizes the 2016 rate revenue requirement allocations:

Rate Revenue Requirement	2016 Test Year Amount	Wastewater Volume Annual Volume m3	Loading Parameters TSS Kg	BOD Kg	TKN Kg	TP Kg	FOG Kg	Hauled WW & FOG Volume	Reclaimed Water Volume	Strength Monitoring # Samples	Customer # Accounts	Regional Direct Allocation
O&M Costs	$ 118,555,647	$ 20,437,556	$ 17,218,706	$ 16,120,923	$ 10,095,688	$ 10,794,510	$ -	$ 642,104	$ 1,821,912	$ 1,201,067	$ 39,967,066	$ 256,114
Non-Rate Revenues	$ (4,140,984)	$ (471,214)	$ (412,748)	$ (418,226)	$ (243,046)	$ (179,443)	$ -	$ (14,842)	$ -	$ (27,538)	$ (2,373,928)	
Principal Payments	$ 25,691,231	$ 15,840,277	$ 2,944,529	$ 4,295,864	$ 1,542,753	$ 813,842	$ -	$ 253,965	$ -	$ -	$ -	
Interest expense	$ 24,144,892	$ 14,886,861	$ 2,767,300	$ 4,037,299	$ 1,449,896	$ 764,857	$ -	$ 238,679	$ -	$ -	$ -	
Cash-Funded Capital	$ 51,970,000	$ 32,042,809	$ 5,956,398	$ 8,689,972	$ 3,120,788	$ 1,646,296	$ -	$ 513,738	$ -	$ -	$ -	
Sub-Total RRR's	*$ 216,220,786*	*$ 82,736,289*	*$ 28,474,186*	*$ 32,725,832*	*$ 15,966,080*	*$ 13,840,062*	*$ -*	*$ 1,633,643*	*$ 1,821,912*	*$ 1,173,529*	*$ 37,593,138*	*$ 256,114*
		38.26%	13.17%	15.14%	7.38%	6.40%	0.00%	0.76%	0.84%	0.54%	17.39%	0.12%
UEP Dividend	$ 13,750,000	$ 5,312,455.92	$ 1,828,313.28	$ 2,101,309.40	$ 1,025,174.08	$ 888,663.51	$ -	$ 104,895.43	$ -	$ 75,351.74	$ 2,413,836.64	$ -
Franchise Fees	$ 29,038,005	$ 9,382,979	$ 3,166,455	$ 3,666,720	$ 1,781,533	$ 1,540,479	$ -	$ 193,171	$ 202,435	$ 128,182	$ 4,445,149	$ -
Total RRR's	*$ 259,008,791*	*$ 97,431,724*	*$ 33,468,954*	*$ 38,493,862*	*$ 18,772,787*	*$ 16,269,205*	*$ -*	*$ 1,931,710*	*$ 2,024,346*	*$ 1,377,063*	*$ 44,452,123*	*$ 256,114*

Table 11: 2016 Wastewater Summary Rate Revenue Requirements by Cost Driver

In addition, the composition of 2019-2022 total rate revenue requirements per Cost Driver was also analyzed. Opposite is the distribution of rate revenue requirements for each Cost Driver. It demonstrates that approximately 40% of the costs have been assigned to the "Wastewater Volume" component, while 46% has been assigned across the BOD, TSS, TP, and TKN loadings components.

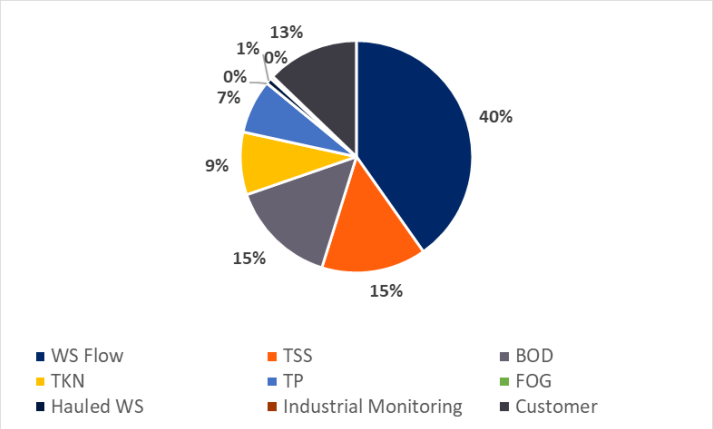


Figure 13: 2019-2022 Wastewater Cost Drivers

1.3.4.4 Wastewater Cost Allocations to Customers

The units of services for each customer class provides a fair and proportional method to allocate rate revenue requirements within the Cost Driver pools across customer classes. Service requirements are determined for each customer class based on its total contributed Wastewater volume, assigned loadings of BOD, TSS, TP, TKN, Wastewater over strength monitoring activities, and billing frequency. Units of service per customer class are determined based on analysis of customer consumption data from 2014-2016, measured effluent volumes (for customers with an effluent meter), plant influent volumes, Wastewater treatment mass balance analysis, Active Surcharge customer over strength data samples, and billing frequencies.

For customers with an effluent meter, their contributed Wastewater volumes are directly measured. However, the vast majority of Wastewater Service customers do not have an effluent meter. For these customers, contributed Wastewater volumes are determined based on an average of the 2014-2016 total water consumption per class (for customers without an effluent meter). Their contributed Wastewater flows are determined by applying a standard return factor, which recognizes that a portion of customers' water consumption does not return to the Wastewater collection network. The return factors are determined by comparing the total annual water consumption per class against its pro-rated annual volumes based on measured consumption during winter months (i.e. December, January, and February). Based on this analysis, it was determined that the updated Wastewater return factors to be used are:

- Residential Metered: 90%
- General Service: 92%
- Multi-Family Residential: 97%

Based on the projected units of service per customer class across the 2019-2022 business cycle, the following summary distribution of cost allocations per cost driver was developed:

		Loading Parameters						
Customer Class	Wastewater Volume	TSS	BOD	TKN	TP	Hauled Wastewater	Industrial Monitoring	Customer
Residential Metered	52.6%	46.4%	45.6%	51.7%	49.9%	0.0%	0.0%	93.2%
General Service	33.3%	29.4%	28.9%	32.8%	31.6%	0.0%	0.0%	4.3%
Multi-Family Residential	9.5%	8.4%	8.2%	9.3%	9.0%	0.0%	0.0%	1.4%
Septage Hauling	0.2%	7.5%	4.0%	1.8%	5.2%	100.0%	0.0%	0.0%
General Service Effluent	3.5%	3.1%	3.0%	3.4%	3.3%	0.0%	0.0%	0.0%
Active Surcharge	0.0%	4.4%	9.5%	0.0%	0.0%	0.0%	100.0%	0.0%
Residential Unmetered	1.0%	0.9%	0.9%	1.0%	1.0%	0.0%	0.0%	1.2%

Table 12: Summary 2019-2022 Distribution of Wastewater Customer Units of Service Allocations

Additionally, based on the projected cost allocations per customer class across 2019-2022, a comparison versus 2018 rates was performed to evaluate projected cost recovery levels. This projects the expected revenues per customer class (using the existing 2018 rates) against its projected cost of service, thus providing a starting point for 2019-2022 rate adjustments. The 2018 versus 2022 cost recoveries for each customer class are summarized below:

Class	2018 Projected Cost Recovery	2022 Projected Cost Recovery
Residential Metered	118%	110%
General Service	80%	76%
Multi-Family Residential	82%	78%
General Service Effluent	78%	74%
Septage Hauling	54%	50%
Residential Unmetered	177%*	169%*

Table 13: Wastewater 2018 versus 2022 Cost Recoveries with 2018 Rates

1.3.5 Drainage Rate Revenue Projections

In parallel, rate revenue requirement projections were developed for the Drainage Service. This was required to identify customer rates not only for the 2019-2022 business cycle, but also indicative rates for 2023 and beyond given a potential move to a Variable Rate Structure.

Note that a cost of service framework as followed for both Water and Wastewater was not required for the Drainage Service. The approved method does not require the functionalization nor classification of costs. Instead, overall rate revenue requirements are allocated across all customers (i.e. both residential and non-residential) based on the selected rate structure and unique customer class characteristics.

Drainage Service projections assumed the same customer growth and cost inflation assumptions as previously described for the Water and Wastewater Services. Based on the projection assumptions and capital financing plan, the total rate revenue requirements were projected from the 2016 base year to the end of 2022:

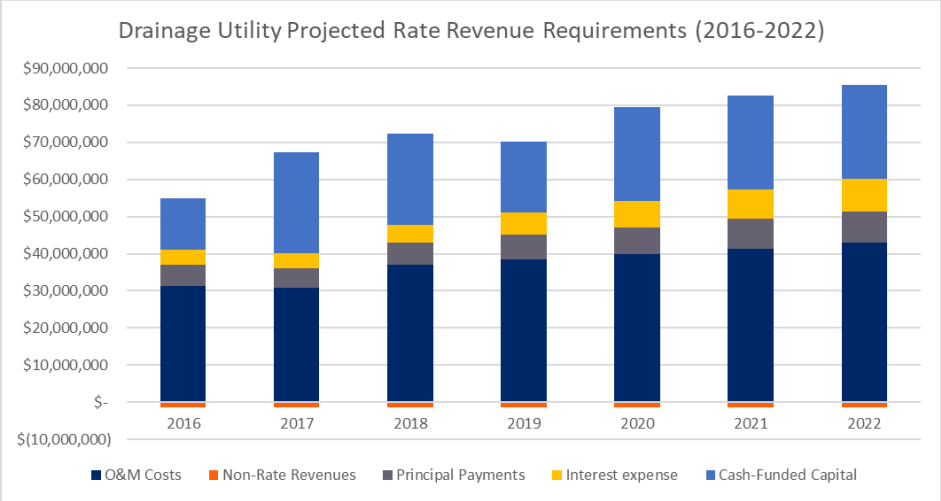


Figure 14: 2016-2022 Drainage Rate Revenue Requirements

From this figure, it can be determined that the Drainage Service's total rate revenue requirements are expected to grow over the next business cycle. They reach a maximum of approximately $84 million in 2022 from a 2016 value of $54 million. This largely reflects the investments required by the capital investment plan based on previously reviewed and approved levels of service.

A snapshot of the specific rate revenue components as compared from 2019 versus 2022 is also provided below, with specific projections for individual rate revenue requirements:

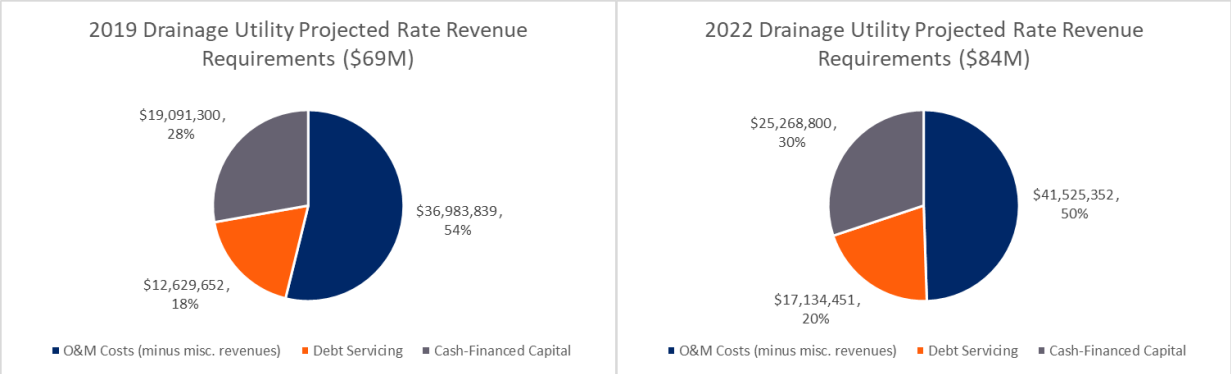


Figure 15: Drainage 2019 versus 2022 Rate Revenue Requirements

As seen from the above figure, all rate revenue requirement components are projected to increase from 2019-2022. Approximately $10.8 million will be added to the Drainage Service's capital-related costs (i.e. both cash-financed capital and debt servicing costs, as compared from 2022 versus 2019 projections).

1.4 Inside City Rate Design Strategies

1.4.1 Rate Design Considerations

Beyond the Rate Making Priorities (Section 1.2), input from additional stakeholders was gathered and considered. The following customer input and general community attitudes were specifically noted:

i. General Service customers are seeing higher property tax increases due to the prolonged economic recession;

ii. Customers generally don't realize the extent to which their bill is fixed versus variable;

iii. Approximately half of customers agreed with the statement that *"no matter what I do, the total amount of my bill doesn't change from month to month"*;

iv. Customers overwhelmingly believe that those who use more should pay more; and

v. There is support for incorporating an Affordability Program.

In addition, the 2019-2022 were required to meet specific Utility Fiscal Policy objectives. The following fiscal policy objectives were considered in developing 2019-2022 rates:

i. Maintain annual debt servicing ratio > 1.75;

ii. Minimize the addition of net-new debt; and

iii. Ensure each Utility's Sustainment Reserve has established 120 days of O&M funding by the end of 2022.

Based on these considerations, the cost of service results, and the priority rate-making objectives, unique 2019-2022 rate strategies were developed and reviewed with the Steering Committee. It was noted that the 2015-2018 rates were primarily selected based on closing 50% of the projected gap (for each customer class) by the end of the business cycle. This rate-setting philosophy was utilized further for evaluating alternative 2019-2022 rates, but with individual adjustments per customer class to better align with priority objectives. The following figure visualizes how 2019-2022 rates have been analyzed and phased in across 2019-2022 based on this approach of *"closing the cost recovery gap"*:

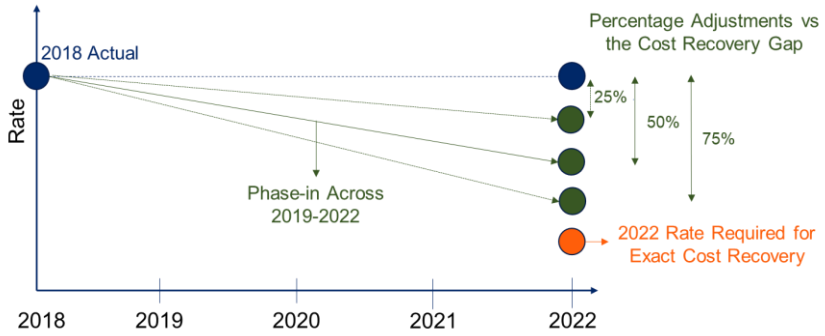


Figure 16: 2019-2022 Rate Setting Approach

Based on this, two alternative rate design scenarios were developed for evaluation. The first was primarily focused on ***maximizing the degree of customer fairness***. The second was focused on for each class ***moderating the impact to each customer class***.

1.4.2 Rate Scenario 1: Maximize Customer Fairness

This rate design scenario was focused on maximizing the degree of cost recovery for each customer class. This impacted rate design recommendations for each fixed and variable charge across both Water and Wastewater. A description of the rates across 2019-2022 are described in the following sub-sections.

1.4.2.1 Water Fixed Monthly Service Charges

It was acknowledged that customers expressed a lack of clarity regarding the present Water Service billing. In addition, the Water Service had questioned what an appropriate mix of fixed versus variable revenues should be targeted to ensure alignment with utility fiscal policies and ensure appropriate revenue risk management practices.

Per industry accepted practices, the most common costs which the fixed monthly rate are intended to address are all non-consumption related costs. This is based on the rationale that even if customer's usage was zero, there still exists non-consumption related costs which need to be funded on a monthly basis. This includes all rate revenue requirements for the following:

- Customer Service;
- Fire Protection;
- Meters and Services; and
- Customer Assistance Program (assumed for 2019 and 2020 only).

In addition, a recent industry trend for water utilities is the inclusion of system "readiness to serve" costs into the monthly fixed portion of the rate. This is to reflect the capital-related (and hence largely fixed) costs required to invest in utility system capacity. Based on this, a review of the Water Service's "Max Day" and "Max Hour" capital-related costs was performed. These costs were further included as targeted rate revenue requirements to be funded by the fixed portion of the rate.

Finally, a review of additional revenue risks was performed with the goal of identifying other revenue risk-mitigating components to potentially include within the fixed portion of the rate. Based on review of the Water Service's rate model, the following two revenue risks were highlighted:

i. **Developer Principal and Interest Funding:** Given that rate-payers are allocated all debt servicing costs net of funds provided from developers via off-site levies, there is risk to the total rates required based on potential year-to-year variations in developer growth. Given this

variation, a potential revenue risk mitigation technique may be to include a percentage of annual off-site levy principal and interest funding projections within rate payer's fixed portions of the rate.

ii. **Consumption Variability:** Based on historical consumption behaviors (i.e. back to 2012), an analysis on the year-to-year variation on total consumption per customer class was performed. This analysis indicated an approximate standard deviation of approximately 2.5% across all customer classes. Based on this, a potential revenue risk mitigation technique may be to include approximately 2.5% of all "Base Volume" costs into the fixed portion of the rate.

Based on a review of these costs and revenue risks versus present fixed rates, the following elements were proposed to be funded by the Water Service's fixed portion of the rate:

Rate Revenue Requirement Component	2019-2022 Range $	% of Total
Customer Service	$8.9 - $10.1M	4%
Fire Protection	$10.7 - $11.3M	4.50%
Meters & Services	$17.1 – $18.1M	6%
Customer Assistance Program ('19 & '20 only)	$0.8M	0.4%
Extra-Capacity "Readiness to Serve" •*Capital costs for Max Day & Max Hr*	$44.8 - $55.4M	16%
% of Projected Developer OSL's •*fund growth-related P&I*	-	-
% of Consumption "Base" Costs •*account for consumption variability*	-	-
Totals vs. Overall Retail Rate Revenue Requirements:	***$85.0 - $91.2M***	***30.3% - 31.1%***

Table 14: Water 2019-2022 Fixed Rate Components

It is noted that portions of projected off-site levy funding and consumption "base" costs were ultimately not included as risk components to include in the fixed portions of the rate. However, it is recommended that the 2019-2022 rates still maintain a significant percentage of rate revenues from the fixed rate to better achieve overall revenue sufficiency and predictability. These specific outcomes were noted as the highest priority rate-making objective for the 2019-2022 business cycle. Should the Water Service be successful in building its targeted sustainment reserve levels (i.e. 120 days of O&M expenses by 2022), there may be an opportunity to decrease the fixed portion of the rates for the 2023-2026 business cycle.

Itemizing these rate revenue requirements provided the total target funding to be received from the monthly fixed rates across all customers. However, it was then required to allocate these costs against the different meter sizes. To do this, rate revenue requirements for each element were allocated against each meter size ranging from 15 mm to 250 mm. The use of equivalent meter ratios was leveraged to determine these allocations as appropriate. Additionally, rate adjustment strategies were selected to achieve desired Water Service financial targets, manage customer impact, and move towards improved customer equity.

Based on the objective of maximizing targeted cost recovery for each meter size, the following fixed rate schedule per meter size across 2019-2022 is developed (based on adjusting each meter size by 50% of its respective cost recovery gap):

Fixed Service Charges 30 Days per Meter Size	2018	2019	2020	2021	2022	Average Annual % Change	Cost Recovery Gap %
15 mm	$ 15.33	$ 15.3771	$ 15.2268	$ 14.8855	$ 14.7374	-0.97%	close gap by 50% by 2022
20 mm	$ 30.44	$ 29.3305	$ 28.0236	$ 26.5257	$ 25.2209	-4.29%	close gap by 50% by 2022
25 mm	$ 37.17	$ 36.6836	$ 35.9997	$ 35.1248	$ 34.4431	-1.83%	close gap by 50% by 2022
40 mm	$ 63.63	$ 63.4968	$ 63.1661	$ 62.6445	$ 62.3160	-0.52%	close gap by 50% by 2022
50 mm	$ 86.63	$ 88.0147	$ 89.2018	$ 90.1981	$ 91.3874	1.37%	close gap by 50% by 2022
75 mm	$ 173.76	$ 174.5034	$ 175.0494	$ 175.4044	$ 175.9525	0.32%	close gap by 50% by 2022
100 mm	$ 242.62	$ 249.3988	$ 255.9801	$ 262.3705	$ 268.9540	2.71%	close gap by 50% by 2022
150 mm	$ 406.18	$ 429.1210	$ 451.8645	$ 474.4171	$ 497.1628	5.60%	close gap by 50% by 2022
200 mm	$ 653.25	$ 689.2359	$ 725.0243	$ 760.6218	$ 796.4124	5.48%	close gap by 50% by 2022
250 mm	$ 1,056.48	$ 1,093.3122	$ 1,129.9470	$ 1,166.3908	$ 1,203.0277	3.47%	close gap by 50% by 2022
Bulk Water	$ 30.44	$ 29.3305	$ 28.0236	$ 26.5257	$ 25.2209	-4.29%	same as Irrigation (20 mm)

Table 15: Water 2019-2022 Fixed Rate Schedule – Maximize Customer Fairness

1.4.2.2 Water Variable Rates

With fixed rates representing a significant portion of total rate revenues, the remaining rate revenue requirements are the responsibility of the variable rates to address. To determine appropriate variable rates, iterative analysis was performed to evaluate overall utility financial results, impact to the calculated cost of service results, impact to customers, and alignment with the priority rate-making objectives.

Based on an objective to maximize the degree of customer fairness, the following recommended variable rates per class were developed:

Customer Class	2018	2019	2020	2021	2022	Average Annual % Change	Cost Recovery Gap %
Calgary Residential Metered	$ 1.6652	$ 1.5839	$ 1.5027	$ 1.4214	$ 1.3402	-4.88%	close gap by 88% by 2022
Calgary General Service - Large	$ 1.2977	$ 1.3263	$ 1.3548	$ 1.3834	$ 1.4120	2.20%	close gap by 88% by 2022
Calgary General Service – Regular	$ 1.4099	$ 1.3971	$ 1.3844	$ 1.3716	$ 1.3589	-0.90%	close gap by 88% by 2022
Calgary Residential Multi Family Metered	$ 1.6098	$ 1.5370	$ 1.4642	$ 1.3914	$ 1.3186	-4.52%	close gap by 88% by 2022
Calgary General Service – Irrigation	$ 2.5911	$ 2.7264	$ 2.8617	$ 2.9970	$ 3.1323	5.22%	close gap by 50% by 2022
Calgary Bulk Water	$ 1.7093	$ 1.7101	$ 1.7109	$ 1.7117	$ 1.7126	0.05%	close gap by 100% by 2022

Table 16: Water Proposed 2019-2022 Variable Rates – Maximize Customer Fairness

1.4.2.3 Wastewater Fixed Monthly Service Charges

Similar to the situation with the Water Service, it was acknowledged that customers expressed a lack of clarity regarding the present Wastewater Service billing. Based on this, an analysis of what specific costs should be addressed by the fixed monthly charge was performed. This leveraged guidance from comparable industry practices and review of the costs of service results. Per industry accepted practices, the most common costs which the fixed monthly rate are intended to address are all non-flow related costs. This is based on the rationale that even if customer's usage was zero, there still exists non-flow related costs which they still need to fund on a monthly basis. Based on the cost of service framework, this includes all rate revenue requirements for the following:

- Customer Service;
- Customer Assistance Program (assumed for 2019 and 2020 only); and
- Collection Network O&M.

In addition, "readiness to serve" costs were analyzed. For Wastewater Utilities, these are represented by the capital-related (and hence largely fixed) costs required to treat pollutants as received by the treatment plants. Based on this, a review of the Wastewater Service's capital-related costs to treat loadings was performed. These costs were further included as targeted rate revenue requirements to be funded by the fixed portion of the rate.

Additionally, a review of costs required to treat plant influent volumes attributable to inflow and infiltration was performed. It can be reasoned that Wastewater treatment facilities are required to treat inflow and infiltration regardless of end-customers actual contributed Wastewater volumes. As such, a percentage of Wastewater flow costs was identified based on the total inflow and infiltration flows calculated at the Wastewater treatment facilities.

Finally, a review of additional revenue risks was performed with the goal of identifying other revenue risk-mitigating components to potentially include within the fixed portion of the rate. The same revenue risks as identified for the Water Service were considered (i.e. both Developer Off-Site Levy funding and Contributed Wastewater Flows). Similar as the Water Service, neither of these considerations were ultimately included in the fixed portions of the rates. However, they are outlined to provide a potential basis for future considerations.

Based on a review of these costs and revenue risks versus present fixed rates, the following elements were proposed to be funded by the Wastewater Service's fixed portion of the rate:

Rate Revenue Requirement Component	2019-2022 Range	% of Total
Customer-Related Costs •*Customer service and Collection System O&M*	$43.3 – $48.8M	14%
Customer Assistance Program ('19 & '20 only)	$1.4M	0.5%
"System Readiness" Costs for Treating Pollutant Strengths •*WWTP capital costs for treating BOD, TSS, TKN, and TP*	$50.3 - $63.4M	16%
Inflow & Infiltration Costs •*Portion of WS volume cost attributable to I/I*	$30.3 - $34.1M	10%
% of Projected Developer OSL's •*to fund growth-related P&I*	-	-
% of "WS Volume" Costs •*account for consumption variability*	-	-
Totals vs. Overall Retail Rate Revenue Requirements:	***$117.4 - $136M***	***38.8% – 40.5%***

Table 17: Wastewater 2019-2022 Fixed Rate Components

Itemizing these rate revenue requirements provided the total target funding to be received from the monthly fixed rates across all customers. The Wastewater Service is different than the Water Service in that each customer is charged the same monthly fixed rate, regardless of water meter size. This positions customers across different classes with the requirement to pay the same fixed rate. As such, this rate needs to be carefully considered for both small and large customers.

The 2022 fixed rate is based on correcting the calculated cost recovery gap by 59% by 2022. As such, the following fixed rate schedule across 2019-2022 is recommended:

Fixed Service Charges 30 Days	2018	2019	2020	2021	2022	Average Annual % Change	Cost Recovery Gap %
Monthly Fixed Charge (All Customers)	$ 25.69	$ 26.8607	$ 27.6888	$ 28.1881	$ 29.0207	3.24%	close 59% gap by 2022

Table 18: Wastewater 2019-2022 Fixed Rates

1.4.2.4 Wastewater Variable Rates

With fixed rates representing a significant portion of total rate revenues, the remaining rate revenue requirements are the responsibility of the variable rates to address. To determine appropriate variable rates, iterative analysis was performed to evaluate overall utility financial results, impact to the calculated cost of service results, impact to customers, and alignment with the priority rate-making objectives. Based on this analysis, the following recommended variable rates per class were developed:

Customer Class	2018	2019	2020	2021	2022	Average Annual % Change	Cost Recovery Gap %
Calgary Residential Metered (per m3 Water)	$ 1.4852	$ 1.4291	$ 1.3731	$ 1.3170	$ 1.2610	-3.77%	close 47% gap by 2022
Calgary General Service (per m3 Water)	$ 1.5552	$ 1.6836	$ 1.8120	$ 1.9405	$ 2.0689	8.26%	close 100% gap by 2022
Calgary Residential Multi Family Metered (per m3 Water)	$ 1.6636	$ 1.7901	$ 1.9166	$ 2.0431	$ 2.1696	7.60%	close 100% gap by 2022
Calgary Septage Hauled Wastewater	$ 22.4483	$ 28.0072	$ 33.5661	$ 39.1251	$ 44.6840	24.76%	close 100% gap by 2022
Calgary Effluent Meters (per m3 wastewater)	$ 1.7281	$ 1.8796	$ 2.0311	$ 2.1826	$ 2.3341	8.77%	close 100% gap by 2022

Table 19: Wastewater Proposed 2019-2022 Variable Rates – Maximize Customer Fairness

1.4.2.5 Wastewater Surcharge Rates

In addition, the costs to treat the in-scope Wastewater pollutants were evaluated. This was completed for BOD, TSS, TP, and TKN. Implementation of TP and TKN into the surcharge rates and transitioning FOG

from an accepted surcharge pollutant to a penalty was also considered. Based on additional work required to review and the plan the transition of these items, it was assumed that these changes would start to be phased in by 2021. As such, it is noted that a Surcharge Bylaw mid-cycle update for these rates will be required to support rate modifications in 2021. The following 2019-2020 rate schedules were developed for surcharge rates:

Extra Strength Surcharges	2018	2019	2020	Average Annual % Change
Monthly Over Strength Charges ($ per m3 Water for each mg/L > Bylaw)				
TSS (300 mg/L)	$ 0.001147	$ 0.001147	$ 0.001147	0.00%
BOD (300 mg/L)	$ 0.001443	$ 0.001443	$ 0.001443	0.00%
FOG (100 mg/L)	$ 0.001947	$ 0.001947	$ 0.001947	0.00%
TP (10 mg/L)	$ -	$ -	$ -	-
TKN (50 mg/L)	$ -	$ -	$ -	-

Table 20: Wastewater Proposed 2019-2020 Surcharge Rates

1.4.2.6 Impact of Water and Wastewater Rate Strategies

Given the developed rate schedules as outlined, impact to typical customers within each customer class was analyzed. The following table summarizes the projected monthly impact to average customers (based on historical consumption analysis and meter sizes) across the 2019-2022 business cycle:

Average 30-Day Bill Impact	2018			2022			Annual Bill Impact %
	Water	Wastewater	Total	Water	Wastewater	Total	
Residential Metered	$ 43.08	$ 50.44	$ 93.52	$37.07	$ 50.03	$87.10	-1.71%
General Service Large (100 mm)	$ 2,098.55	$ 2,249.89	$ 4,348.45	$2,288.34	$ 2,987.86	$5,276.20	5.33%
General Service Regular (25 mm)	$ 170.84	$ 173.14	$ 343.98	$163.28	$ 225.17	$388.45	3.23%
Multi-Family Residential (40 mm)	$ 369.14	$ 341.41	$ 710.54	$312.56	$ 440.77	$753.33	1.51%
General Service Irrigation (20 mm)	$ 183.66		$ 183.66	$210.45	$ -	$210.45	3.65%
General Service Effluent Metered	0	$ 15,671.75	$ 15,671.75	0	$ 21,161.84	$21,161.84	8.76%
Septage Hauling	0	$ 10,098.97	$ 10,098.97	0	$ 20,080.17	$20,080.17	24.71%
Bulk Water	$ 289.64	$ -	$ 289.64	$284.91	$ -	$284.91	-0.41%

Table 21: Average Customer Water and Wastewater Billing Impact Analysis – Maximize Customer Fairness

In addition, a review of the projected cost recovery performance per customer class was performed. In this scenario, the primary consideration was to maximize cost recovery for each customer class within both Water and Wastewater Services. The following tables summarize the impact to projected customer cost recovery percentages based on this scenario:

Water

Class	2022 Projected Cost Recovery
Residential Metered	102%
General Service Large	99%
General Service Regular	100%
Multi-Family Residential	102%
Irrigation	87%
Bulk Water	100%
Residential Unmetered	154%*

Wastewater

Class	2022 Projected Cost Recovery
Residential Metered	109%
General Service	100%
Multi-Family Residential	100%
General Service Effluent	100%
Septage Hauling	100%
Residential Unmetered	169%*

Table 22: Projected 2022 Cost Recovery per Utility Service per Class – Maximize Customer Fairness

1.4.3 Rate Scenario 2: Moderate Customer Impact

This rate design scenario was focused on moderating the total rate impact to each customer class *(with improvements to customer fairness outcomes also identified but not maximized)*. This impacted rate design recommendations for each fixed and variable charge across both Water and Wastewater. A description of the proposed rates across 2019-2022 are described in the following sub-sections.

1.4.3.1 Water Fixed Rates

Based on the objective of moderating customer impact for each meter size, the following fixed rate schedule per meter size across 2019-2022 is developed. It is based on adjusting the cost recovery gap for 15 mm customers by 50%. Each additional meter's cost recovery gap was adjusted by only 25%.

Fixed Service Charges 30 Days per Meter Size	2018	2019	2020	2021	2022	Average Annual % Change	Cost Recovery Gap %
15 mm	$ 15.33	$ 15.3771	$ 15.2268	$ 14.8855	$ 14.7374	-0.97%	close gap by 50% by 2022
20 mm	$ 30.44	$ 29.9829	$ 29.3284	$ 28.4829	$ 27.8305	-2.14%	close gap by 25% by 2022
25 mm	$ 37.17	$ 37.0244	$ 36.6814	$ 36.1474	$ 35.8065	-0.92%	close gap by 25% by 2022
40 mm	$ 63.63	$ 63.6610	$ 63.4946	$ 63.1372	$ 62.9730	-0.26%	close gap by 25% by 2022
50 mm	$ 86.63	$ 87.4200	$ 88.0125	$ 88.4140	$ 89.0087	0.69%	close gap by 25% by 2022
75 mm	$ 173.76	$ 174.2294	$ 174.5013	$ 174.5822	$ 174.8562	0.16%	close gap by 25% by 2022
100 mm	$ 242.62	$ 246.1071	$ 249.3966	$ 252.4953	$ 255.7870	1.36%	close gap by 25% by 2022
150 mm	$ 406.18	$ 417.7481	$ 429.1188	$ 440.2986	$ 451.6714	2.80%	close gap by 25% by 2022
200 mm	$ 653.25	$ 671.3406	$ 689.2337	$ 706.9359	$ 724.8312	2.74%	close gap by 25% by 2022
250 mm	$ 1,056.48	$ 1,074.9938	$ 1,093.3100	$ 1,111.4354	$ 1,129.7538	1.73%	close gap by 25% by 2022
Bulk Water	$ 30.44	$ 29.9829	$ 29.3284	$ 28.4829	$ 27.8305	-2.14%	same as Irrigation (20 mm)

Table 23: Water 2019-2022 Fixed Rates – Moderate Customer Impact

1.4.3.2 Water Variable Rates

With fixed rates representing a significant portion of total rate revenues, the remaining rate revenue requirements are the responsibility of the variable rates to address. Based on moderating the degree of customer impact, the following variable rates per class were developed:

Customer Class	2018	2019	2020	2021	2022	Average Annual % Change	Cost Recovery Gap %
Calgary Residential Metered	$ 1.6652	$ 1.5947	$ 1.5242	$ 1.4537	$ 1.3832	-4.23%	close gap by 76% by 2022
Calgary General Service - Large	$ 1.2977	$ 1.3067	$ 1.3157	$ 1.3246	$ 1.3336	0.69%	close gap by 26% by 2022
Calgary General Service – Regular	$ 1.4099	$ 1.3983	$ 1.3868	$ 1.3752	$ 1.3637	-0.82%	close gap by 76% by 2022
Calgary Residential Multi Family Metered	$ 1.6098	$ 1.5471	$ 1.4845	$ 1.4218	$ 1.3591	-3.89%	close gap by 76% by 2022
Calgary General Service – Irrigation	$ 2.5911	$ 2.6560	$ 2.7209	$ 2.7858	$ 2.8507	2.50%	close gap by 25% by 2022
Calgary Bulk Water	$ 1.7093	$ 1.7058	$ 1.7023	$ 1.6988	$ 1.6954	-0.20%	close gap by 100% by 2022

Table 24: Water 2019-2022 Variable Rates – Moderate Customer Impact

Based on these rate strategies, the Water variable rate profiles across 2016 - 2022 per customer class are visualized:

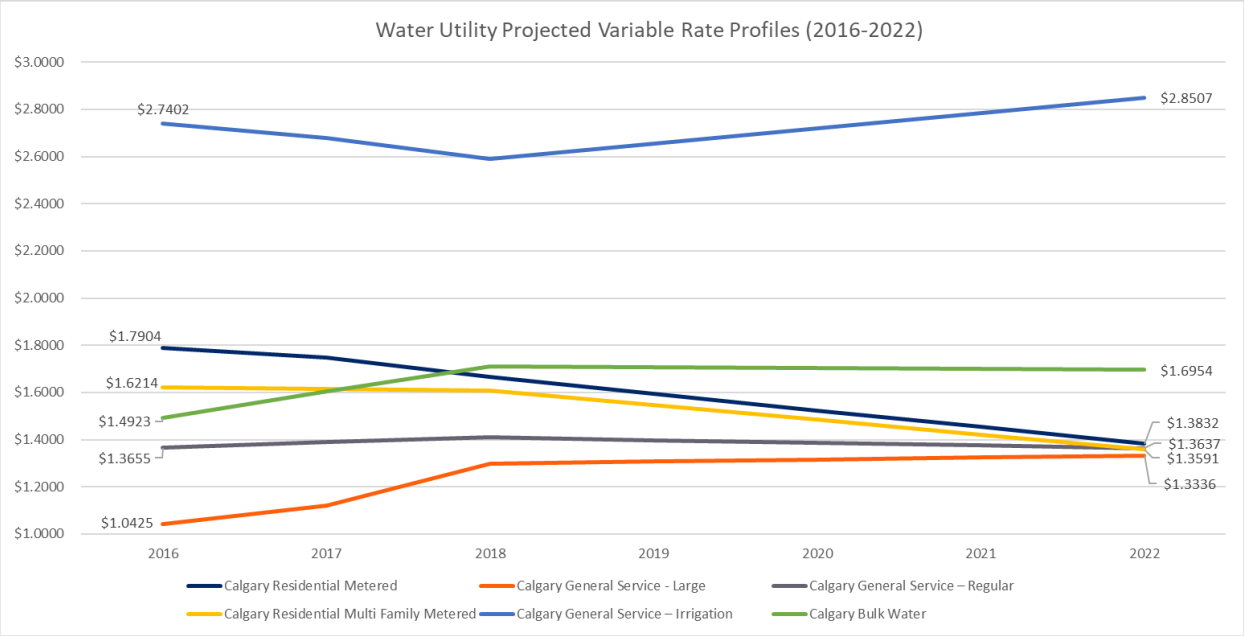


Figure 17: Water 2016-2022 Variable Rates per Class

1.4.3.3 Wastewater Fixed Monthly Service Charges

For Scenario 2, the 2022 fixed rate was maintained as in Scenario 1 (to keep the same overall percentage of fixed revenues the same between the two Scenarios). As such, the same fixed rates schedule as in Table 18 was maintained.

1.4.3.4 Wastewater Variable Rates

With fixed rates representing a significant portion of total rate revenues, the remaining rate revenue requirements are the responsibility of the variable rates to address. Based on the objective to moderate the impact to each customer class, the following variable rates per class were developed:

Customer Class	2018	2019	2020	2021	2022	Average Annual % Change	Cost Recovery Gap %
Calgary Residential Metered (per m3 Water)	$ 1.4852	$ 1.4852	$ 1.4852	$ 1.4852	$ 1.4852	0.00%	hold constant
Calgary General Service (per m3 Water)	$ 1.5552	$ 1.6341	$ 1.7131	$ 1.7920	$ 1.8709	5.07%	close 61% gap by 2022
Calgary Residential Multi Family Metered (per m3 Water)	$ 1.6636	$ 1.7414	$ 1.8191	$ 1.8969	$ 1.9746	4.67%	close 61% gap by 2022
Calgary Septage Hauled Wastewater	$ 22.4483	$ 24.3013	$ 26.1542	$ 28.0072	$ 29.8602	8.25%	close 33% gap by 2022
Calgary Effluent Meters (per m3 wastewater)	$ 1.7281	$ 1.8212	$ 1.9143	$ 2.0074	$ 2.1006	5.39%	close 61% gap by 2022

Table 25: Wastewater Proposed 2019-2022 Variable Rates

Based on these rate strategies, the Wastewater variable rate profiles per customer class across 2016-2022 are visualized below:

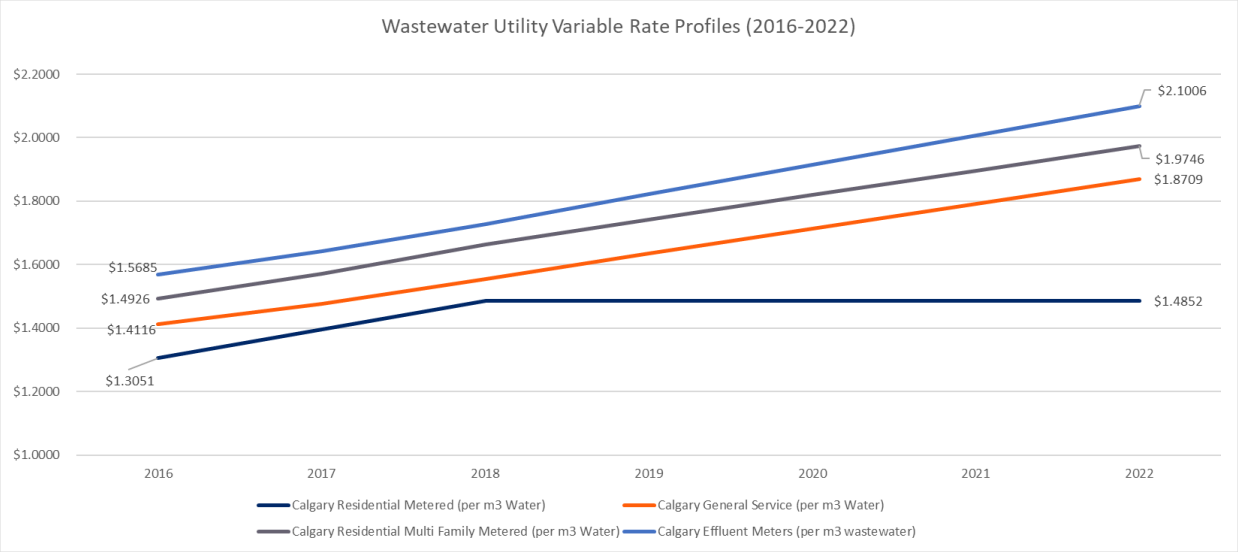


Figure 18: Wastewater 2016-2022 Variable Rates per Class

1.4.3.5 Wastewater Surcharge Rates

No changes to the Wastewater Surcharge Rates were developed for this Scenario. As such, the same rate projections were assumed as in Table 20.

1.4.3.6 Impact of Water and Wastewater Rate Strategies

Given the developed rate schedules as outlined, impact to typical customers within each customer class was analyzed. The following table summarizes the projected 30-day impact to average customers (based on historical consumption analysis and meter sizes) across the 2019-2022 business cycle:

Average 30-Day Bill Impact	2018			2022			Annual Bill Impact %
	Water	Wastewater	Total	Water	Wastewater	Total	
Residential Metered	$ 43.08	$ 50.44	$ 93.52	$37.79	$ 53.77	$91.56	-0.52%
General Service Large (100 mm)	$ 2,098.55	$ 2,249.89	$ 4,348.45	$2,163.10	$ 2,704.73	$4,867.83	2.99%
General Service Regular (25 mm)	$ 170.84	$ 173.14	$ 343.98	$165.10	$ 206.40	$371.50	2.00%
Multi-Family Residential (40 mm)	$ 369.14	$ 341.41	$ 710.54	$320.90	$ 403.76	$724.66	0.50%
General Service Irrigation (20 mm)	$ 183.66		$ 183.66	$196.40	$ -	$196.40	1.73%
General Service Effluent Metered	0	$ 15,671.75	$ 15,671.75	0	$ 19,047.24	$19,047.24	5.38%
Septage Hauling	0	$ 10,098.97	$ 10,098.97	0	$ 13,428.26	$13,428.26	8.24%
Bulk Water	$ 289.64	$ -	$ 289.64	$284.91	$ -	$284.91	-0.41%

Table 26: Average Customer Water and Wastewater Billing Impact Analysis

In addition, a review of the projected cost recovery performance per customer class was performed. In this scenario, the primary consideration was to moderate customer impact across both Water and Wastewater Services (per Table 26) while still improving customer fairness outcomes (relative to what 2018 rates would otherwise achieve if left unchanged). The following tables summarize the impact to projected customer cost recovery percentages based on the proposed rates:

Water

Class	2022 Projected Cost Recovery
Residential Metered	104%
General Service Large	94%
General Service Regular	101%
Multi-Family Residential	105%
Irrigation	81%
Bulk Water	100%
Residential Unmetered	154%*

Wastewater

Class	2022 Projected Cost Recovery
Residential Metered	118%
General Service	91%
Multi-Family Residential	92%
General Service Effluent	90%
Septage Hauling	67%
Residential Unmetered	169%*

Table 27: Projected 2022 Cost Recovery per Utility Service per Class

1.4.4 Evaluation of Alternative Rate Scenarios

As can be seen, the rate impact of Scenario 1 is more significant across all non-residential classes than Scenario 2. Of note, the expected rate increase for typical General Service Large customers is estimated to be over 5% per year. In turn, Residential Metered customers will see a modest rate decrease.

In exchange, there are improved projected cost recoveries per customer class. However, it can be further seen that there are still projected cost inequities with select customer classes. In particular, the Residential Metered class is forecasted to fund 110% of its allocated Wastewater cost of service in 2022. Additionally, although slight improvements were projected for each Water customer class relative to Scenario 2, 100% cost recovery was only projected for the Bulk Water class. The reasons for these continued differences in Scenario 1 was to ensure the establishment of a Sustainment Reserve equal to at least 120 days of O&M funding. Based on this, funding constraints limit the degree to which absolute cost recovery per class can be realized.

Based on this, the following evaluation[4] of the two scenarios was developed for each of the top five Rate Making Priorities:

Criteria	Scenario 1: Maximize Customer Fairness	Scenario 2: Moderate Customer Impact	Rationale
1. Revenue Sufficiency & Predictability			Both options target same fixed revenue % and 2022 sustainment reserve level
2. Accessible & Simple			Option 1 rate adjustments may be more difficult to defend
3. Rate Stability & Customer Impact			To maximize customer cost recovery, significant impact to rates is required
4. Customer Equity & User Pay Philosophy			Option 1 achieves slightly greater customer cost recovery vs. Option 2
5. Wastewater: Conservation			Both options provide same charges for treatment of wastewater loadings

Table 28: Evaluation of Rate Scenarios versus Priority Objectives

[4] **Scoring Legend**: Dark Green – strong support; Light Green – above average support; Yellow – neutral support; Orange – below average support; Red – weak support

As such, it is recommended that the Utilities pursue 2019-2022 rates based on ***Scenario 2: Moderate Customer Impact***.

1.4.5 Drainage Rates

It was understood that the Utilities had previously determined to retain the current flat rate structure across all Drainage customers for the 2019-2022 business cycle. Based on this strategy, it requires projecting the Drainage Service's overall rate revenue requirements. Then, each projected Drainage customer account is required to equally fund these requirements. Based on this approach, the projected fixed monthly rates per customer was determined as summarized in the following table:

RATE SCHEDULE (2019-2022)	2018	2019	2020	2021	2022
Forecasted Revenue Requirement	$ 70,902,944	$ 68,704,791	$ 77,961,293	$ 81,128,572	$ 83,928,603
Forecasted Billing Units (Accounts)	372,459	376,545	380,702	385,747	391,238
Forecasted Revenue Requirement per Billing Unit	190.36	182.46	204.78	210.32	214.52
Incremental CAP Rate Revenue Requirements	$ -	$805,243	$805,243	$ -	$ -
Incremental CAP Fee Requirements per Billing Unit per 30 Days		$ 0.18	$ 0.17	$ -	$ -
Total Rates (CAP included)	**$ 15.05**	**$ 15.80**	**$ 16.37**	**$ 16.78**	**$ 17.35**
Annual Rate Increase %		**4.99%**	**3.63%**	**2.45%**	**3.43%**

Table 29: Drainage Proposed 2019-2022 Rates

The rate schedule above is based on the approach to phase-in rates over the 2019-2022 business cycle. As such, it has been developed to arrive at a stable and constant rate increase per year, which was determined to be $0.57 per customer per month (except for 2019 and 2021 when the Customer Assistance Program funding is assumed to both start and end). This ensures that the percentage year-over-year increase is kept below 5%. It is noted that this rate of increase is lower than how Drainage rates have increased over the 2015-2018 business cycle.

1.5 Regional 2019-2022 Rates

This section summarizes the key changes to the nature of the rate-making approach with the Regional Customers and projected rate revenue requirements for both Water and Wastewater.

1.5.1 Key Changes to Rate-Making Approach

Based on review with the Regional customers through their engagement with the Cost of Service analysis, the following denote the key changes to the 2019-2022 rate-making approach (relative to that used for 2015-2018):

i. **Debt/Equity Ratio:** rates shall be determined based on a 60/40 ratio regardless of actual (per Alberta Utilities Commission (AUC) general guidelines);

ii. **Return on Equity:** rates shall be determined based on an 8.5% as per most recent guidance from the AUC;

iii. **True-Up:** update rate revenues on annual basis using actual financial results;

- *Contracted capacities shall not be subject to true-up; and*
- *Regionals are still required to commit to projected capacities across 2019-2022.*

1.5.2 Regional 2019-2022 Rates

Rates for 2019-2022 were developed based on the receipt of "likely flows" for both Water and Wastewater from each Regional customer. The rates were determined using the same Utility Basis as developed for the 2015-2018 business cycle. The format for how rates are determined is summarized as follows:

Rate Component	Water	Wastewater
Monthly Fixed Charge:		
Return on Rate Base	$ Return / Max Day Capacity	$ Return / WS Flow Capacity
Depreciation Expense	$ Depr / Max Day Capacity	$ Depr / WS Flow Capacity
Variable Charge:		
O&M Expense	$ O&M / Actual Consumption	$ O&M / Actual WS Flow

Table 30: Regional Customer Rate-Making Format

Based on the projected costs of service, the following rate revenue requirements, contracted capacities, likely flows, and rates for both the Water and Wastewater Services are summarized (note: pending final review and approvals with Regional customers):

	Detailed Projections			
	2019	2020	2021	2022
Calgary Outside City Metered	***$ 8,377,681***	***$ 8,860,260***	***$ 9,428,554***	***$ 9,996,908***
O&M	***$ 3,534,069***	***$ 3,751,999***	***$ 3,984,703***	***$ 4,224,418***
Depreciation	***$ 1,497,209***	***$ 1,590,726***	***$ 1,700,556***	***$ 1,814,314***
Return on Rate Base	***$ 3,346,403***	***$ 3,517,535***	***$ 3,743,294***	***$ 3,958,175***
Outside Metered Contracted Capacities:	2019	2020	2021	2022
Annual Consumption (m3) - not incl Water Loss	10,868,491	11,379,361	11,901,230	12,435,100
Max Day Capacity (m3/day)	56,456	59,104	61,952	64,800
Outside Metered "To-Be" Rate Projections:	2019	2020	2021	2022
O&M *(Variable Rate per m3)*	***$ 0.3252***	***$ 0.3297***	***$ 0.3348***	***$ 0.3397***
Depreciation (per m3/365 days)	$ 26.5198	$ 26.9140	$ 27.4495	$ 27.9987
Return on Rate Base (per m3/365 days)	$ 59.2743	$ 59.5142	$ 60.4224	$ 61.0830
Total Fixed Rate (per m3/365 days)	***$ 85.7941***	***$ 86.4281***	***$ 87.8720***	***$ 89.0816***

Table 31: Water 2019-2022 Regional Customer Rate Projections

	Detailed Projections			
	2019	2020	2021	2022
Calgary Outside City Metered	***$ 12,528,372***	***$ 13,623,685***	***$ 14,890,604***	***$ 16,106,554***
O&M	***$ 7,124,873***	***$ 7,538,419***	***$ 7,990,586***	***$ 8,464,641***
Depreciation	***$ 1,994,269***	***$ 2,223,747***	***$ 2,497,976***	***$ 2,743,184***
Return on Rate Base	***$ 3,409,231***	***$ 3,861,519***	***$ 4,402,042***	***$ 4,898,730***
Outside Metered Contracted Capacities:	2019	2020	2021	2022
Annual Contributed Wastewater Flow (m3) - not incl I&I	10,358,700	10,811,300	11,278,500	11,760,300
Outside Metered "To-Be" Rate Projections:				
O&M (Variable Rate per m3)	***$ 0.6878***	***$ 0.6973***	***$ 0.7085***	***$ 0.7198***
Depreciation (per m3/day)	$ 0.1925	$ 0.2057	$ 0.2215	$ 0.2333
Return on Rate Base (per m3/day)	$ 0.3291	$ 0.3572	$ 0.3903	$ 0.4165
Total Fixed Rate (per m3/day)	***$ 0.5216***	***$ 0.5629***	***$ 0.6118***	***$ 0.6498***

Table 32: Wastewater 2019-2022 Regional Customer Rate Projections

1.6 Recommendations

1.6.1 Summary 2019-2022 Rates

Based on the evaluation of the alternative rate strategies, it is recommended to implement Alternative 2: Moderate Customer Impact. Based on this strategy, the following proposed 2019-2022 rates are summarized:

1.6.1.1 Water Fixed Rates

Fixed Service Charges 30 Days per Meter Size	2019	2020	2021	2022	Average Annual % Change
15 mm	$ 15.3771	$ 15.2268	$ 14.8855	$ 14.7374	-0.97%
20 mm	$ 29.9829	$ 29.3284	$ 28.4829	$ 27.8305	-2.14%
25 mm	$ 37.0244	$ 36.6814	$ 36.1474	$ 35.8065	-0.92%
40 mm	$ 63.6610	$ 63.4946	$ 63.1372	$ 62.9730	-0.26%
50 mm	$ 87.4200	$ 88.0125	$ 88.4140	$ 89.0087	0.69%
75 mm	$ 174.2294	$ 174.5013	$ 174.5822	$ 174.8562	0.16%
100 mm	$ 246.1071	$ 249.3966	$ 252.4953	$ 255.7870	1.36%
150 mm	$ 417.7481	$ 429.1188	$ 440.2986	$ 451.6714	2.80%
200 mm	$ 671.3406	$ 689.2337	$ 706.9359	$ 724.8312	2.74%
250 mm	$ 1,074.9938	$ 1,093.3100	$ 1,111.4354	$ 1,129.7538	1.73%
Bulk Water	$ 29.9829	$ 29.3284	$ 28.4829	$ 27.8305	-2.14%

Table 33: Summary Water Fixed 2019-2022 Proposed Rates

In addition, it is recommended to maintain the existing 2018 rates for Residential Unmetered Customers across 2019-2022.

1.6.1.2 Water Variable Rates

Customer Class	2019	2020	2021	2022	Average Annual % Change
Calgary Residential Metered	$ 1.5947	$ 1.5242	$ 1.4537	$ 1.3832	-4.23%
Calgary General Service - Large	$ 1.3067	$ 1.3157	$ 1.3246	$ 1.3336	0.69%
Calgary General Service – Regular	$ 1.3983	$ 1.3868	$ 1.3752	$ 1.3637	-0.82%
Calgary Residential Multi Family Metered	$ 1.5471	$ 1.4845	$ 1.4218	$ 1.3591	-3.89%
Calgary General Service – Irrigation	$ 2.6560	$ 2.7209	$ 2.7858	$ 2.8507	2.50%
Calgary Bulk Water	$ 1.7058	$ 1.7023	$ 1.6988	$ 1.6954	-0.20%

Table 34: Summary Water Variable 2019-2022 Proposed Rates

1.6.1.3 Wastewater Fixed Rates

Fixed Service Charges 30 Days	2019	2020	2021	2022	Average Annual % Change
Monthly Fixed Charge (All Customers)	$ 26.8607	$ 27.6888	$ 28.1881	$ 29.0207	3.24%

Table 35: Summary Wastewater Fixed 2019-2022 Proposed Rates

In addition, it is recommended to maintain the existing 2018 rates for Residential Unmetered Customers across 2019-2022.

1.6.1.4 Wastewater Variable Rates

Customer Class	2019	2020	2021	2022	Average Annual % Change
Calgary Residential Metered (per m3 Water)	$ 1.4852	$ 1.4852	$ 1.4852	$ 1.4852	0.00%
Calgary General Service (per m3 Water)	$ 1.6341	$ 1.7131	$ 1.7920	$ 1.8709	5.07%
Calgary Residential Multi Family Metered (per m3 Water)	$ 1.7414	$ 1.8191	$ 1.8969	$ 1.9746	4.67%
Calgary Septage Hauled Wastewater	$ 24.3013	$ 26.1542	$ 28.0072	$ 29.8602	8.25%
Calgary Effluent Meters (per m3 wastewater)	$ 1.8212	$ 1.9143	$ 2.0074	$ 2.1006	5.39%

Table 36: Summary Wastewater Variable 2019-2022 Proposed Rates

1.6.1.5 Wastewater Surcharge Rates

Extra Strength Surcharges	2018	2019	2020	Average Annual % Change
Monthly Over Strength Charges ($ per m3 Water for each mg/L > Bylaw)				
TSS (300 mg/L)	$ 0.001147	$ 0.001147	$ 0.001147	0.00%
BOD (300 mg/L)	$ 0.001443	$ 0.001443	$ 0.001443	0.00%
FOG (100 mg/L)	$ 0.001947	$ 0.001947	$ 0.001947	0.00%
TP (10 mg/L)	$ -	$ -	$ -	-
TKN (50 mg/L)	$ -	$ -	$ -	-

Table 37: Summary Wastewater Surcharge 2019-2020 Proposed Rates

It is recommended that the Utilities establish 2021-2022 surcharge rates during a mid-cycle rate adjustment process. This is recommended to better enable the phased-in transition of surcharge rates for FOG, TP, and TKN.

1.6.1.6 Drainage Rates

RATE SCHEDULE (2019-2022)	2019	2020	2021	2022
Total Rates (CAP included)	**$ 15.80**	**$ 16.37**	**$ 16.78**	**$ 17.35**
Annual Rate Increase %	**4.99%**	**3.63%**	**2.45%**	**3.43%**

Table 38: Summary Drainage 2019-2022 Proposed Rates

1.6.2 Implementation Next Steps

Based on the analysis performed, there are additional efforts required to further review, analyze, develop, and implement. These are captured in the following table, including reference to customer engagement considerations.

#	Recommendation	Next Steps for Water Resources / Water Services	Customer Engagement Considerations
1	Confirm and transfer customers into updated Rate Classes	i. Identify and verify GS, MF, and SF customers who should be moved to different Rate Class • *Confirm plans to move existing customer accounts versus potential grandfathering situations* ii. Establish and confirm planned timing for transfer of identified customer accounts – *(i.e. phase in across 2019-2022)* iii. Work with Enmax to enact plan for customer account transfers iv. Update bylaw and ensure all net-new customers are designated per the updated customer class definitions	i. Focused information-based communications with verified GS, MF, and SF customer accounts who will be transferred: • *Why are we doing this?* • *What is the impact?* • *What is timing of this transfer?*
2	Introduce TKN and TP into Surcharge Rates Schedule	i. Plan and confirm timing for implementation ii. Confirm phase-in rates and bylaw limit versus treatment technical capabilities iii. Plan and implement over-strength sampling - measurement – billing process for TKN and TP iv. Update bylaw	i. Focused engagement for **existing surcharge customers** re: introduction of TKN and TP and what this will mean to them ii. Identify and sign up potential **new surcharge customers** for inclusion within the surcharge program based on their projected TKN and TP loadings

3	Update Hauled Wastewater Rates Move FOG from accepted pollutant in Wastewater collection network to penalty – receive in FOG receiving station	i. Develop holistic Septage Hauling / FOG strategy with consideration of: • Calgary region demand for septage ground water, and FOG • Target customers with higher FOG contributions (e.g. restaurants) versus others • Impact of anticipated FOG volumes to receiving station once FOG is transferred from surcharges to a penalty • Operational capacity for receiving station and digesters versus anticipated volumes and planning for any required capital additions • Go-to-market rates for Septage Hauling and potential for *"selling excess treatment capacity" – ensure that variable revenues > variable costs* ii. Determine FOG testing protocols and resourcing iii. Plan timing for implementation of transfer to penalty vs accepted pollutant iv. Update bylaw	i. Focused engagement for **existing surcharge customers** re: transfer of FOG from accepted pollutant to penalty and what this will mean to them ii. Identify and engage select **GS customers** with higher potential for FOG concentrations > bylaw limit: • *Ensure understanding of move to penalty, potential consequences, timing of implementation, and their operational alternatives*
4	Develop and Implement Customer Assistance Program	i. Confirm program's target objectives, target customer segments and acceptance criteria (i.e. which customers do we think will benefit from this program) budget, and administrative logistics (i.e. how will we operate it?) ii. Work with Enmax for implementation iii. Launch program and enroll customers who apply within accepted criteria	i. Communicate roll-out of program to all customers and application requirements / logistics ii. Transparent communication to Council / media / customers for why the program is being introduced and how the program will be funded – i.e. billing impact to all other customers who will be funding the program's budget
5	Discontinue issuing new irrigation meters for Residential customers	i. Ensure plan for discontinuation of Residential Irrigation class for new potential customers who express an interest in it ii. Confirm plan for transfer of existing Residential Irrigation customers versus grandfathering iii. Work with Enmax to implement changes to billing	i. Analyze each of the customer's historical consumption tendencies (total 50) and identify their historical cost: benefit performance ii. Contact Residential Irrigation customers and see if they want to be grandfathered / discontinued iii. Communicate discontinuation of program for all future Residential customers – focus on why
6	Design and Implement New Wastewater Billing Format • Clear Wastewater Return Factor • Distinct versus Drainage billing	i. Confirm plan for Wastewater and Drainage billing format to support 2019-2022 • *i.e. show return factor in calculation of billing charges* ii. Design new billing format with Enmax iii. Create communications to support new billing format change	i. Broad level communications to all customers ii. Details on how return factor used to calculate billings – not "double dipping" – and how return factor is determined iii. Clarification of billing terms and what each charge pays for iv. Separation of Drainage versus Wastewater Service

7	Support Regional Rates Analysis	i. Implement time tracking for short-list of specific administrative staff ii. Ensuring resourcing in place to support true-up process iii. Develop and establish process for Regional true-ups	i. Engage Regional Customers to ensure the new true-up process (both detailed scope of analysis, process steps, and key process milestones) is well understood in advance to the 2019 true-up
8	Finalize 2019-2022 Rate Schedule	i. Confirm appropriateness of capital financing plan ii. Confirm 2019-2022 rate schedule with Council iii. Work with Enmax to implement rates iv. Communicate updated rates to customers	i. Create story for "why" – support public announcement / media coverage ii. Plan for public communications of new rate schedule

Table 39: Summary Implementation Considerations

1.6.3 Considerations for Next Cost of Service

In addition, there are several opportunities for improvement / updates for the Utilities for the next Cost of Service (expected to be completed during the 2019-2022 business cycle). These include the following:

1. Confirm and Implement the 2023 Drainage Rate Structure:
    - Confirm strategy to implement a variable drainage rate structure for 2023;
    - Confirm variable rate design, including credit program, and rates phase-in plan with specific focus on large non-residential customers; and
    - Update and execute the implementation roadmap.
2. Establish Standardized Strength Customer Class:
    - Understand customer segmentation for select General Service customers with loadings less than Active Surcharge but greater than Residential;
    - Identify specific General Service customers who should belong to such a Standardized Strength class;
    - Identify protocols for customers who wish to challenge their belonging in such a Standardized Strength class;
    - Plan for potential implementation during 2023-2026 business cycle;
    - Update Wastewater Cost of Service to reflect the Standardized Strength customer class:
        - *This will be contingent on the Wastewater Service understanding target customers which should belong to such a customer class and what appropriate customer loadings for BOD, TSS, TP, and TKN may be.*
3. Improve Capital Planning Inputs for Regional Growth:
    - Update capital planning process to indicate the percentage of net-new growth infrastructure required to support Regional customers versus Inside-City customers in accordance with cost of service principles.
4. Evaluate targeted Irrigation customer rates versus combined Water and Wastewater rates:
    - It was noted that customers who choose Irrigation meters as an "add-on" to their existing Water and Wastewater account do so under the belief it will save them money by avoiding

Wastewater usage fees. As such, a policy should be developed to target what this potential savings may be, or what the targeted break-even volumes should be for an Irrigation "add-on" customer to benefit.

5. Understand Loadings from Septage Hauling customers and TKN / TP Loadings for Inside-City Active Surcharge Customers:
    - It was noted that the Utilities does not have recent loadings data for Septage Hauling customers. A review and possible segmentation of customers should be performed, as it was noted that some customers haul primarily ground water (while others haul septage). It is recommended to acquire customer-specific loadings data, as industry guidelines from Alberta Environment were used to estimate the loadings of Septage Haulers during this study.
    - Similarly, there was no recent data for TKN and TP for Inside City Active Surcharge Customers. It is recommended the Wastewater update this data for its targeted Active Surcharge Customers for over strength TKN and TP loadings.
6. Improve Land financial data / include in Rate Base:
    - Per AWWA and AUC guidelines, it is acceptable to include land as part of the Rate Base when determining rates for Outside City / Wholesale customers. There was insufficient information on the book value of land allocated to the Water and Wastewater Services to include it in this cost of service. Preferably, allocations of land against plant and linear infrastructure is required to support and justify its inclusion.
7. Evaluate Lowering Fixed Monthly Service Charges:
    - Fixed monthly fees were kept relatively at the same percentage of overall revenues for the 2019-2022 business cycle. This was primarily due to increase the level of revenue sufficiency and predictability for the Utilities. However, there is a strong desire from customers to adopt rates which further allocate costs to those customers who use higher amounts of water. If the Utilities' sustainment reserves are at an appropriate level relative to current revenue risks, there may be opportunities to push more of the rate revenue requirements onto the variable portions of the rates.
8. Improve Assignment of Chartfield Financial Activity ID's to Utilities:
    - During the Line of Service allocations analysis, it was noted that several financial activities as specified within the chartfield financial results do not align with the associated Utility to which it should be assigned. It is recommended that a review and update of the assignment of these activities. Pending this update, the new "map" of Dept ID's versus each Utility (as established for the Line of Service Allocations deliverable) should continue to be used to guide future cost of service analysis.

Appendices

Appendix A: Rate Objectives Definitions

Objective	Description
Deliver sufficient and predictable revenue	▪ To meet current and future regulatory requirements, and provide reliable services desired by customers, The Utility needs to receive sufficient and predictable revenue to recover its costs
Rate Stability	▪ Offer stability and predictability to The Utility and The Utilities customers
Adaptability	▪ Set rates structures that are dynamic, and provide flexibility to changing supply and demand
User Pay philosophy	▪ Rates are based on the philosophy that a customer's rates should reflect the cost of providing the service to the customer
Customer Equity	▪ Each customer class should pay their fair share based on the customer class usage pattern and service benefits offered
Accessible and Simple	▪ Rate structures should be transparent and easy to understand
Conservation	▪ Establish a rate that allows The City to continue to meet current and future regulatory requirements, while encouraging customers to adopt behaviours focused on water conservation, and protecting the watershed and river water quality
Customer Impact	▪ Extent to which customers will be impacted after implementing a rate structure
Affordability	▪ Customers should be able to afford the essential water and Wastewater services ▪ Consideration for disadvantaged customers
Ease of Implementation	▪ Degree of ease and costs to implement and administer a new rate structure (e.g. integration with City billing and information systems and customer data)
Economic Development Incentive	▪ Water and sewer service are set as an incentive for economic development ▪ Rates are comparable with those of regional neighbors ▪ Utility serves the municipality to attract non-residential growth
New Customer Contributions	▪ Growth pays for growth ▪ Utility rates feature intergenerational equity

Table 40: Summary of Rate Objective Definitions

Appendix B: Strategic Issues

Residential Metered, Multi-Family, and General Service Customer Classes

Prior to initiating detailed customer consumption analysis, previous analysis as provided by The City was reviewed. From this, it was understood that the Utilities have identified that over 40,000 customer accounts may be miscoded as per the present bylaw definitions. This was based on a snapshot sampling of customer accounts overlaid with specific building types, and was performed during the 2015 fiscal year.

Using historical consumption data, a series of analysis was performed on customer hydrographs. This was focused on analyzing both customer class summary-level and individual customer consumption behaviors. A comparison against comparable utility customer class definitions was also performed. Based on this analysis, the following key observations were noted:

i. Based on the individual hydrographs, Townhouses > 4 Units and Apartment Buildings tend to demonstrate less peaking profiles versus other Residential dwellings (i.e. single family detached, duplexes, triplexes, and fourplexes); and

ii. Duplexes, triplexes, and fourplexes also demonstrated slightly less peaking requirements versus single family detached dwellings.

From this analysis, it was recommended to adjust the definition for the Multi-Family Residential class to be for accounts with larger than 4 dwelling units and master-metered. This would result in triplexes and fourplexes and all individually-metered multi-unit dwellings moving to the Residential Metered. Additionally, it would result in Townhouses > 4 Units and Apartment Buildings now classified as General Service also getting corrected to the Multi-Family class. The rationale for this adjustment included:

- It maintains classifying all residential customers as residential (versus other options which consider moving some residential dwellings to General Service);
- It increases customer equity versus all other options by separating Townhouses > 4 Units and Apartment Buildings into a separate class versus Triplexes and Fourplexes, which were shown to have distinct consumption demands; and
- It requires less customer impact versus all other options identified.

Based on proceeding with the identified customer account transfers as described, an impact analysis was developed. It was assumed that this would require a transfer of 2,957 customers to new rate classes (2,143 existing residential dwellings now classified within General Service and 814 Duplexes, Triplexes and Fourplexes moving from Multi-Family to Residential Metered). However, given the immediate rate increase which Apartment Building customers would see in moving from General Service to Multi-Family, it was decided to make these corrections across the 2019-2022 business cycle (to manage the degree of the customer impact).

Drainage Rate Strategy

It was requested to define a Drainage Rate Strategy (with potential target introduction for 2023) that considers a range of tools, including rate structure, credit programs, and low impact development programs. To guide the evaluation of a desired Drainage Rate Strategy, a prioritized set of Drainage Rate-Making Objectives was developed. These reflected stated goals for the Drainage Service, which are focused on the protection of the watershed and river water quality, achieving greater customer equity, and achieving a greater level of clarity on required investments to meet desired levels of service.

Figure 19: Drainage Goals and Rate-Making Objectives

It was noted that the present rate structure consists of one flat rate for each customer. There is no variation by customer class, nor by any cost-causation factor, regardless of whether the customer account is residential, commercial or industrial. This has led to questions regarding customer equity. Additionally, the present structure doesn't well influence customer behavior to protect watershed or river water quality.

To recap the analytical focus and recommended outcomes for the Variable Rate Structure analysis, the following graphic was developed. Each element is further discussed in the following sections.

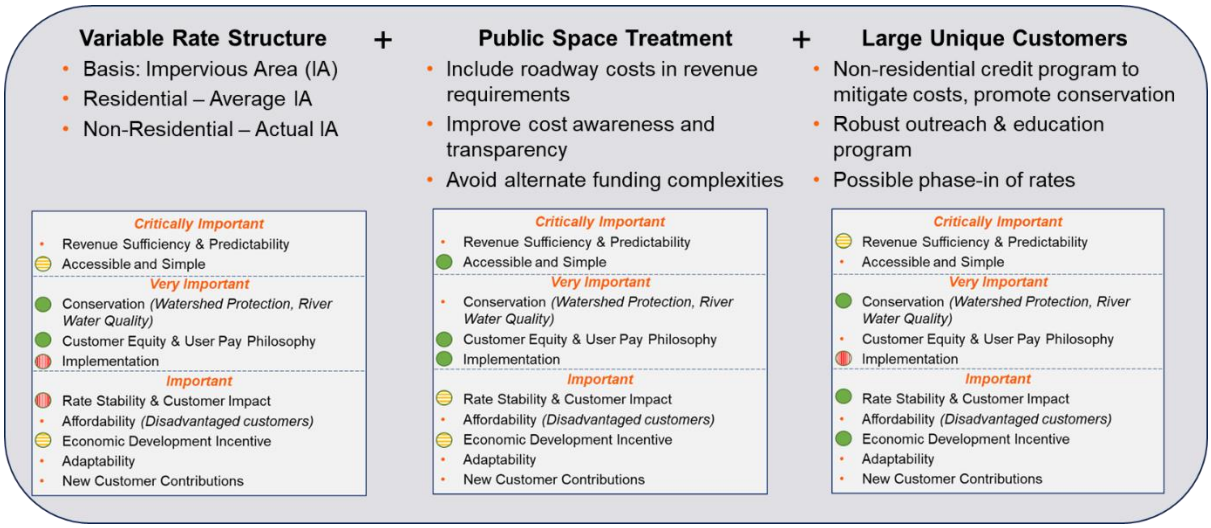


Figure 20: Recommended Drainage Rate Strategy

Variable Rate Structure Indicative Rates

Per the outcomes from the Variable Rate Structure review, the following rate structure recommendations were provided:

- Feature consistent customer classes among Drainage, Water and Wastewater Services;
- For Drainage, group existing customer classes into Residential and Non-Residential, with Multi-Family customers (as based on recommended changes to the current bylaw definition) included with the Drainage Non-Residential class;
- For Residential customers, feature a base rate based on average impervious area calculations;
- For Non-Residential customers, calculate rates individually based on actual measured impervious area; and

- Manage the phase-in on rates to mitigate the impact on Large Customers against desired customer equity outcomes.

Based on implementing this rate structure, the following indicative rates for Drainage Residential versus Non-Residential customers were calculated. This demonstrates an approximate 50% decrease in Drainage rates for Residential customers. Rates would decrease by approximately $6 per Residential customer per month. In addition, the average Non-Residential rate would increase approximately 300% (or approximately $54 per customer per month). This due from the higher allocation of rate revenue requirements based on relative impervious area projections. However, it is also noted that actual rates per individual Non-Residential customers could approach $10,000 per month based on the extent of their impervious area (e.g. malls).

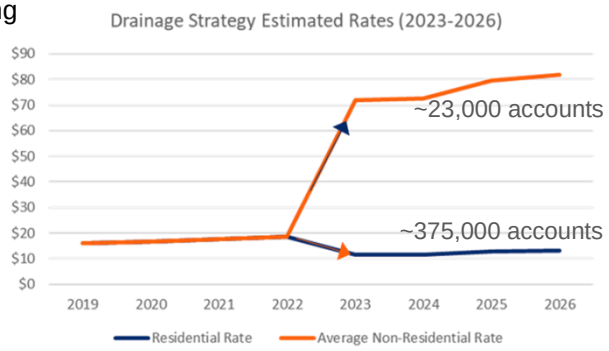


Figure 21: Indicative Drainage Variable Rates

Public Space Considerations

Additional consideration was focused on how to manage public spaces, as it was acknowledged that public / municipal properties represents a significant portion of measured impervious area (i.e. > 40%). Analysis was focused on whether the municipal owners of this public land (e.g. Roads) should be charged directly, rather than omitting and only charging community Residential and Non-Residential customers.

Based on these rate revenue requirements, the impact to indicative rates for both Residential and Non-Residential customers was evaluated. The following graphic illustrates this impact:

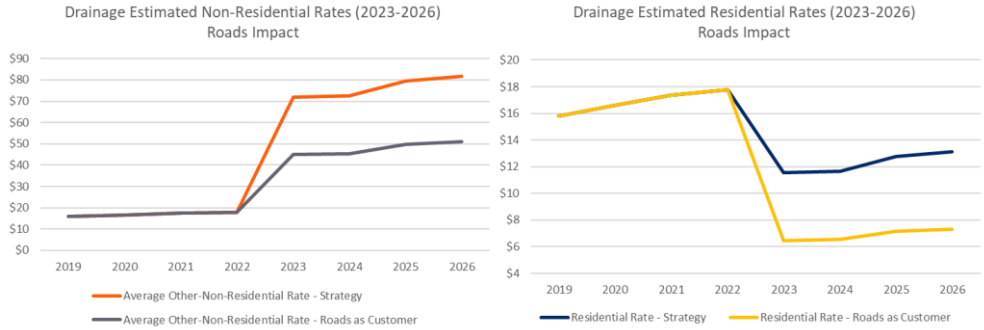


Figure 22: Impact of Roads to Drainage Variable Residential and Non-Residential Rates

From this analysis, including public spaces as Drainage customers would have a significant impact to the projected variable rates for both Residential and Non-Residential customers. Rates would decrease on the order of 35% - 40%. However, there would be a significant impact to the operating budgets for the municipal owners of these public spaces. Given this, there would be a corresponding upward pressure on property taxes to fund these same increases.

Based on the considerations above, it is recommended to maintain that Drainage rates continue to only be divided amongst benefiting end-customers. The rationale for this direction includes:

- As all benefit, this supports a User-Pay Philosophy and would not introduce additional complexity nor administrative costs;
- Pursuing internal transactions would be potentially complex, time consuming, and should likely be part of a larger city-wide policy and approach to interdepartmental transactions; and

- Including public spaces would simply result in increased property taxes for citizens, to which there would likely be significant political and community resistance.

Large Customer Considerations

It is acknowledged that transitioning to a variable rate structure (built on the premise that Non-Residential customers' rates would be based on individual impervious area measurements) can have a significant impact to large customers. It was estimated that the average Non-Residential rate would be of the order of $72 per customer per month, but with larger customers receiving a Drainage bill of the order of $10,000 per month.

To help mitigate the impact on Non-Residential customers it is recommended to introduce a credit program headed by a robust outreach and education program. A credit program can both mitigate the customer impact and promote watershed protection objectives through promotion of onsite drainage management practices. Value can be maximized by containing implementation and administration costs by limiting the credit program to Non-Residential customers and capping credits to help ensure Drainage Service revenue sufficiency. Additionally, it is recommended to design the credit program to put the burden of proof on the customer (e.g. engineering report) and help manage administration costs.

Additionally, it is recommended to consider alternative fee phase-in approaches to further mitigate customer impact. To support this, the Drainage Service could adjust Residential rates accordingly to ensure revenue sufficiency is maintained. Below are possible phase-in alternatives which can help mitigate the impact to large customers:

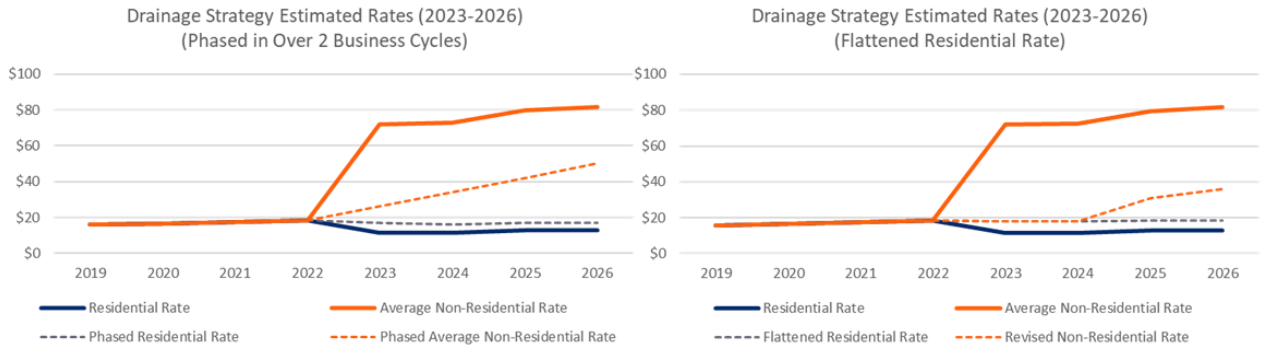


Figure 23: Alternative Drainage Phase-In Strategies for Large Customers

Implementation Roadmap

Finally, a review of the additional Variable Rate Structure detailed design, customer engagement, and implementation activities was performed. Based on the targeted launch for 2023 and the targeted Variable Rate Structure as proposed, a high-level implementation roadmap was developed for 2019-2022. The activities from this roadmap are summarized below:

Figure 24: Drainage Variable Rate Strategy Implementation Roadmap

Wastewater Over Strength Customers and Parameters

Standardized Strength Customer Class

It was noted that there are approximately 177 customers which are now classified as an "Active Surcharge" customer. As such, their Wastewater pollutant concentrations are regularly measured (approximately 3-4 times per year) and evaluated as to their contributed levels of surcharge substances relative to established bylaw limits. Customers with measured over strength concentrations in excess of established bylaw limits are subject to surcharges added to their Wastewater billings.

However, a typical practice for municipalities of sufficient size and diversity is to also establish a "Standardized Strength" class. This would typically be applied to other commercial and industrial customers (i.e. those not already included in the Active Surcharge Program) which place demands on the Wastewater Treatment process. These customers are typically found to exhibit concentrations greater than Residential customers, but also less than Active Surcharge customers. Typical customers to which this classification can be applied include restaurants, laundromats, bakeries, car washes, etc.

The creation of this class would improve the level of customer equity amongst Wastewater customers, as currently the costs to treat pollutants are spread evenly across non-Active Surcharge customers (which includes both Residential and Non-Residential customers). These cost allocations would be captured during a Mass Balance analysis of the Wastewater treatment plant loadings.

Give the level of effort and time required to establish this class, it is recommended this be further evaluated and developed during the 2019-2022 business cycle with a target implementation for 2023.

Suite of Over Strength Surcharge Parameters

As part of the scope of work, The City requested that the Cost of Service "review current charges and rate structures for over-strength Wastewater, and recommend a suite of over-strength parameters and associated charges appropriate for this service". Previous customer class analysis identified and recommended the establishment of a "standardized strength class". Additional analysis was focused on what strength parameters (pollutants) should be factored into the rate structure.

It was noted that plant influent concentrations are challenging plant influent design limits. In addition, it was noted that the Fish Creek facility has recently exceeded regulatory limits (2013 and 2014 events). Further, river water quality has been a growing focus and concern. In particular, this concern extends to both Total Kjeldahl Nitrogen (TKN) and Total Phosphorous (TP) which are not presently included in the Active Surcharge program.

An external scan was performed to determine what Wastewater loading parameters other utilities measure and set limits for. The results of this scan are summarized in the table below:

Parameter	Denver	Winnipeg	Edmonton	Philadelphia	Charlotte	Halifax	Calgary
BOD (mg/L)	255	300	300 – 3,000	250	-	300	300
TSS (mg/L)	260	350	300 – 3,000	350	250	300	300
TKN (mg/L)	40	-	50 – 200	-	-	-	50
TN (mg/L)	-	60	-	-	-	-	
TP (mg/L)	-	10	10 – 75	-	-	-	10
COD (mg/L)	-	-	Greater of 600 or 2X BOD – Greater of 6,000 or 2X BOD	-	500	-	600
FOG (mg/L)	-	-	100 – 6,000	-	-	-	100
NH3 (mg/L)	-	-	-	20	-	-	

Table 41: Comparison of Over-Strength Parameters

It was recognized that Calgary's limits align closely with other comparable Wastewater utilities (although both Winnipeg and Philadelphia have slightly higher limits for TSS at 350 mg/L). Another key insight was that "river cities" (i.e. Denver, Winnipeg, Edmonton) have a surcharge in place for Nitrogen and/or Phosphorous. Edmonton is the only other city that imposes a surcharge for FOG.

Fats, Oils, and Greases (FOG)

It is recommended that the bylaw and rate structure remove FOG as an accepted over strength parameter and instead moved as a parameter subject to fine / penalty for customers who release FOG into the Wastewater collection system. A review of industry leading practices also identified that it is preferable to impose Fines / Penalties for FOG entering the collection network. It is generally not desired for fats, oils, and greases to enter the Wastewater collection network. Reports of blocked Wastewater mains for other Wastewater utilities worldwide underpin this concern, as these contaminants serve to generate severe and costly blockages.

Further, it was noted that the Wastewater Service incurred costs of approximately $3.29 million (2010 data) to clear blocked mains from FOG. Charging for FOG may be implying the wrong message that the Utility is willing to accept this substance. Rather, the Utility (and most of its customers) would benefit from significantly reducing or eliminating FOG from the collection mains altogether. FOG is more specifically related to the food service and restaurant industries. The correct installation and use of FOG interceptors / traps is the ideal scenario to ensure FOG does not flow into the Wastewater collection mains.

Total Kjeldahl Nitrogen (TKN) and Total Phosphorous (TP)

In addition, it is recommended to incorporate TKN and TP into the Active Surcharge rates. It is noted that the current bylaw limits are similar as those of comparable communities, and others have already incorporated these parameters as part of their surcharge programs. It is noted that TKN and TP loading measurements are regular tested for at the plants, and through the completion of the cost of service the treatment costs per loading of each parameter was determined.

In addition, these parameters are already regularly measured from the effluent of the Outside City customers. Furthermore, it was noted that a historical sampling event of these parameters from Active Surcharge customers found that over half of the customers tested for levels in excess of current bylaw limits.

Affordability - Customer Assistance Programs (CAP)

As part of the scope of work, The City requested that the Cost of Service "provide some analysis and make recommendations on the inclusion of customer considerations that distinguish socio-economic demographics".

There is growing momentum amongst utilities to implement Customer Assistance Programs (CAPs) targeted for specific customer segments. The main drivers behind this momentum are concerns for public health (i.e. the belief that all customers should have access to clean and affordable water), and potential financial implications to the utility when customers can't afford their bills. Consequently, the objective any CAP is to provide essential water, wastewater, and drainage services to all customers at an affordable rate and alleviate the financial burden on the utility caused by customers in arrears.

From external research on Affordability, the main benefits of implementing a Customer Assistance Program include both social and business benefits. From a social standpoint, CAPs support community health and safety, build community engagement, and provide financial assistance to disadvantaged customers. CAPs support the Utility's business objectives as they can reduce the number of delinquencies and limit the impact of uncollectable revenue or debt. CAPs also improve the public acceptance of utility rates, reduce the administrative burden of managing "hard-to-collect" accounts, and support the Utility's public image.

To fully realize the benefits of a Customer Assistance Program, the program should be targeted to specific customer segment(s). These segments are typically focused on customers who are truly challenged with water affordability. To this end, it is more useful to focus on segment-related affordability data (i.e. income levels versus water bills) rather than just a community-wide affordability metric. There is a range of affordability approaches that target various customer segments. The most popular program is to provide an ongoing bill discount for customers who fit specified criteria.

- **Bill Discounts:** reduces bills on an ongoing basis, usually by a percentage or dollar amount. Customers must qualify or meet specific requirements to receive this type of assistance. Examples include bill write-offs and reduced fixed fees.
- **Flexible Terms:** relaxes requirements for bill payments including waived penalties, lower interest, or more flexible payment timelines. Examples include payment plans, connection loans, arrear management, levelized billing, or adjusted bill schedules.
- **Temporary Assistance:** reduced bills one time or on a short-term basis to help customers deal with an urgent or unexpected hardship. This could include recent divorce, death of a spouse, or recent unemployment. Examples include emergency or crisis assistance, grants, and one-time bill reductions.
- **Water Efficiency:** reduces bills by installing low flow appliances or repairing leaky pipes, thereby reducing water usage. Examples included rebates for conservation appliances and in-house repair programs.
- **Lifeline Rate:** offers a reduced rate for a basic block of consumption to all customers within a class. This rate is often associated with essential water usage.

An updated analysis of how typical Calgary Water and Wastewater bills for Residential Metered customers compare to community median income levels was performed. Based on this, it was estimated that the average Residential Metered customer in Calgary paid approximately $90/month for water and

Wastewater services combined in 2016. The following graphic illustrates the percentage of a typical Water and Wastewater bill relative to Calgary's median income, which in 2016 was noted as $106,498[5]:

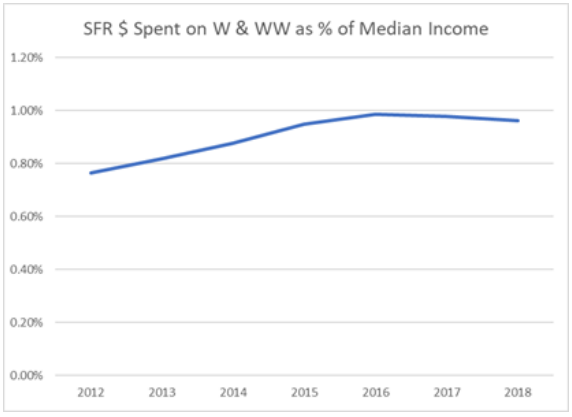


Figure 25: Percentage of Water and Wastewater Bill versus Median Income (2016)

From this graph, it was found that the average bill as a percentage of Calgarian's median income was increasing. Although increasing, the average bill was noted as less than the industry standard of between 3-4% (which is typically used to indicate if rates are affordable across the community);

While this analysis may suggest that Calgary does not have a water affordability issue, it omits those customers who are well below the median income levels. It is noted that approximately 25,000 Calgarians are approved for Transit's low-income pass alone. Similarly, the United Way states that approximately 127,000 Calgarians struggle to make ends meet. If an assumption that close to 10% of Water, Wastewater, and Drainage's residential customers may qualify for such a low-income assistance program, an initial and high-level estimate of between 30,000 – 40,000 customers may be appropriate.

From a review of comparable approaches, industry trends, and association thought leadership, the following comparison of the customer assistance program approaches are summarized:

Approach	Pro's	Concerns
Bill Discount	• Targets specific disadvantaged customers • Provides ongoing assistance as long as customers meet criteria • Can offset drawbacks from higher fixed portions of the rate design	• Administrative burden can be higher if a partnering opportunity doesn't exist with social agency for customer eligibility and enrollment management • Revenue sufficiency at higher risk – need to forecast and imbed into Cost of Service / Rate Design
Flexible Terms	• Does not require permanent subsidies • Can reduce administrative costs for the utility	• Does not address core issue of bill affordability • Can diminish power of conversation pricing
Temporary Assistance	• Targeted assistance helps customers in their greatest time of need • One-time nature can make the program relatively inexpensive	• Utility typically needs to partner with civic / social agency to administer • Assistance can become long-term unless limits are imposed
Water Efficiency	• Promotes conservation • Increases public education	• Can impact utility's revenue • Rebates for low-flow appliances may not benefit low-income customers

[5] Statistics Canada, http://www.statcan.gc.ca/tables-tableaux/sum-som/l01/cst01/famil107a-eng.htm

Lifeline Rate	• Ease of administration • Can promote water conservation	• Does not differentiate low-income customers with other customers (if applied across entire customer class) • Many low-income customers are large water users – so end up paying increased amounts in higher block rate

Table 42: Comparison of CAP Approaches

Typically, the most common customer assistance programs focus only on the utility's actual customers. For residents who receive water services through a master-metered account, as is often the case for Multi-Family Apartment Buildings, they are often not targeted by such programs due to the inability for the utility to directly serve and bill them as a direct customer. From the external research, it was noted that only Austin Texas has implemented a customer assistance program to accommodate low-income master metered residents. Since Austin's electrical utility does issue individual bills to its multi-family customers (as it has individual meters for many of its multi-family premises, as opposed to just a master meter for the building), the Water Service was able to "piggy-back" off this relationship to further the electrical utility's bill to this customer segment. To do this, the Water Service provides funding to the electrical utility to issue these discounts for those customers who fit the criteria (as already managed by the electrical utility).

From the external research, it was also noted that an important implementation feature is the selection of a potential social agency partner. As many community's already have social agencies focused on assisting low-income citizens and those experiencing temporary hardships, it is beneficial to consider partnering with these organizations for customer assistance program administration. Typically, the savings from partnering with such an entity can save significant administration costs.

Based on these options, focus was on analyzing the bill impact for a Bill Discount Program. It should be noted that additional program design and implementation planning efforts are required. To estimate this impact, the number of current participants within The City's Fair Entry Program were noted. Based on this and a range of potential bill discount percentages, the following summary bill impact analysis was completed:

	3,100 Participants		5,000 Participants	
	Yearly Program Cost	Monthly Bill Increase	Yearly Program Cost	Monthly Bill Increase
20% discount	$1,145,818	$0.26	$1,572,287	$0.36
30% discount	$1,493,727	$0.34	$2,133,430	$0.49
40% discount	$1,841,635	$0.42	$2,694,573	$0.62
50% discount	$2,189,544	$0.50	$3,255,717	$0.75

Table 43: High-Level Impact Analysis of Bill Discount Program

The above analysis included high-level assumptions for administration set-up and management costs through the Fair Entry Program. It also assumed that bill discount revenues would be equally shared across all remaining Water, Wastewater, and Drainage customers. With 5,000 participants receiving a 50% bill discount, the impact to all other customers would be approximately $0.75 per month. However, it is also noted that these estimates do not factor in master-metered "renters" who would also qualify for a low-income subsidy (which would most likely represent a much larger number of potential recipients of such a program).

Customers Who Use Water in Their Products

This strategic issue originated from The City's question on how to fairly treat customers who use potable water in their products (e.g. water bottlers, breweries). This question stems for the following observations for these types of General Services customers:

- These customers are using a natural and essential resource in their products (which The City produces) which are then sold to the market for economic profit; and
- It was noted that other jurisdictions in Canada (e.g. Ontario, British Columbia) have become focused on establishing appropriate charges for companies who draw groundwater for use in their bottled water businesses.

In summary, it is not recommended that the Water Service change rate-making strategies for customers who use water in their products. The main reasons for this recommendation are as follows:

1. There is no evidence of other jurisdictions that create a separate class for these customers;
2. Singling out these customers could introduce a competitive disadvantage when selling The City for economic development opportunities; and,
3. It holds political risk by potentially placing a value on raw water.

However, it is also noted that these customers should be encouraged to use effluent meters to accurately measure the contributed Wastewater discharged into the collection system (which the Utilities already supports). Given their use of water, it would be reasonable to conclude that they would have Wastewater return factors far less than the average of their class.

Line of Service Allocations

This strategic issue was intended to address how Water Resources and Water Services allocates operating expenses, internal recoverables, and general asset costs across the Water, Wastewater, and Drainage Utilities. This directs how total rate revenue requirements are calculated for each Utility, which provides the basis for the cost of service and rate-making for each Utility and customer class.

From discussions with UEP Finance, it was noted that a review completed in 2008 directed the current Line of Service Allocations. It was noted that a 40/40/20 split is used to allocate general costs across the Utilities (i.e. across Water, Wastewater, and Drainage respectively).

An internal review for each Water Resources and Water Services Division was conducted. This was focused on understanding the nature of the work performed and the Utility to which this work is directed. This was done via interviews with each Division Manager and identified subject-matter-experts, review of man-hours analysis, review of the projected capital plan, and review of chartfield financial results (for both Dept and Financial Activity ID's) for both 2015 and 2016. Based on this analysis, Divisional operating results were allocated to each Utility. It was found that a weighted average distribution of operating results across the Water, Wastewater, and Drainage Utilities was calculated to be:

- Water Service: 42.7%
- Wastewater Service: 44.9%
- Drainage Service: 12.4%

Based on subsequent considerations provided by UEP Finance, it was agreed to base the 2019-2022 Cost of Service with revised Line of Service allocations equal to 43/45/12.

Treatment for Large Customers

During this project, a question was raised on whether any large customers should be treated uniquely (i.e. have their own customer class). Specifically, it was acknowledged that significant work was focused on managing the Calgary Airport accounts. This work has been focused on bundling accounts (which now exist within the Airport boundaries) into a master servicing account (not dissimilar as a General Service or Multi-Family customer with a master meter). This work is to recognize the boundaries surrounding the Airport, given that it is federal land (and not technically part of The City of Calgary boundaries).

Based on the context and input from an external scan, it was recommended to treat the Airport like any other General Service Large or Multi-Family customer with a master meter. In these situations, the boundaries of infrastructure servicing requirements are well defined between the customer (which is responsible for infrastructure within its own property boundaries) and the Utilities (which is responsible up to the point of the boundary). In this way, the Utilities will adopt a standard approach and will minimize the amount of changes to the number of distinct customer classes.

Outside City Customers

A review of the Outside City customers was performed to identify recommended customer classifications (if appropriate). It was noted that historically the Utilities have treated Outside City customers as per follows:

- Regional Municipalities, including Airdrie, Chestermere, Cochrane, Strathmore, and Tsuu T'ina; and
- Outside City General Service customers, including Nexen, Spruce Meadows, Bearspaw, and Elbow Valley / Pinebrook.

From an infrastructure servicing perspective, it is noted Regional Municipal customers do not share in Distribution facilities (i.e. Distribution Network, Distribution Storage, or Distribution Pumping). As such, they are deemed to be wholesale customers, as they ultimately provide retail distribution services themselves to customers within their municipalities. In comparison, it is noted that General Service – Outside customers do share in these Distribution facilities. As such, it is equitable for these customers to be allocated their share of Distribution costs. Given this, it is apparent that there are significant differences in cost allocation requirements between these two Outside City customer classes.

Further, it is noted that General Service – Outside customers are not "growth" customers (like Regional Municipality customers). Given this, the Utilities can approach their projected system demands not unlike any other large General Service customer. For Regional Municipal customers, however, there are significant efforts required to understand longer-term growth and system demand projections to support their growing communities. As such, these activities require a distinct focus on the relevant revenue requirements and rate-making approach.

Given the above, it is recommended that the Utilities maintain unique customer classifications for both the Regional Municipalities and the Outside City General Service customers.

Residential Irrigation Customers

It was requested to evaluate the usage characteristics of the current Residential Irrigation customers. These are Residential customers who already have a Residential Metered water and Wastewater account. In addition, due to perceived irrigation requirements, these customers have obtained an additional irrigation meter. As such, outdoor irrigation usage is measured through the irrigation meter, while indoor use is measured with the normal Residential Metered account.

An evaluation of usage across 2015 – 2016 was performed based on monthly consumption data. From this analysis, it was noted that the vast majority of Residential Irrigation customers do NOT receive value from their irrigation meter (as opposed to their Residential Metered account, which would charge them for both water and Wastewater based on their usage). Based on the 2016 rates, it was determined that a customer would need to use 912 m^3 of water per year to make an irrigation meter worthwhile. In 2016, only 1 customer used at least this amount. Further, only 2 customers exceeded this amount in 2015. In comparison, it is noted that the average Residential Irrigation customer uses less than 200 m^3 per year.

Based on this analysis, Utilities should consider discontinuing the issuance of new irrigation meters to Residential Metered customers. This would include the grandfathering of existing Residential Irrigation customers. However, it is also advised that targeted communications with existing customers be initiated to raise awareness of their consumption habits versus irrigation rates and determine if they wish to continue their irrigation account.

Wastewater and Drainage Billing Format

A specific review on how the Utilities charges for Wastewater and drainage services was performed, as it was understood some customers have expressed confusion on billing clarity. Based on this review, the following billing format recommendations and simplified visualization were provided:

1. Terminology Recommendations:
    - Change “Drainage” to “Storm Drainage” or “Storm Water”
    - Choose “Sewer” or “Wastewater”
2. Transparency of Calculations:
    - Show the return factor in the Wastewater calculation
3. Billing Structure:
    - Include three billing categories to reflect each Utility Service (i.e. Water, Wastewater, and Storm Water)

Alternative Water and Wastewater Rate Structures

As part of the scope of work, The City requested that the Cost of Service “review different rate structures for both fixed and variable rates, including affordability rate structure”.

Rate Structure

There are several different rate structures that are used by utilities across North America. With each rate structure, there are different approaches and potential implications to consider. For comparison purposes, alternative rate structures and appropriate commentary are presented below:

Rate Structure	Commentary
Fixed Charges	• Typically used to recoup “non-consumption” related costs (i.e. billing, meters, fire protection) • Typically calculated based on a ratio versus the 15mm meter size • Revenue stability typically increases with the higher the fixed portion of the rate
Uniform Rate	• Each customer within a class receives the same volumetric rate regardless of usage • Easier to administer and higher stability; equitable if customers exhibit similar patterns
Inclining Block	• As customers use increasing amounts, a higher rate is charged • Promotes water conservation
Declining Block	• As customers use increasing amounts, a lower rate is charged

	• Promotes usage – supports certain industries / businesses
Seasonal	• Rates increase in summer in response to increased demand • Mitigates peaking consumption during summer; potential supplemental tool with restrictions
Lifeline	• Lower rate for a basic block of consumption (as previously discussed in Affordability section)

Table 44: Alternative Water Rate Designs

It was confirmed with the Steering Committee that the Utilities shall continue with the existing Uniform Rate Structure (with both a fixed and variable component), as rate objectives which would suggest either a Block or Seasonal Rate Structure were not prioritized as high as others.

Fixed versus Variable Rate

An external scan was completed to compare several North American utilities' percentage of fixed versus variable revenues. This analysis was based on Single Family Residential average usage of 16.5 m^3 and 5/8'' meter size (Residential class was selected at its revenues typically dominate the utility's overall operating revenues). Half of the utilities had fixed revenues greater than 30%. The results are below:

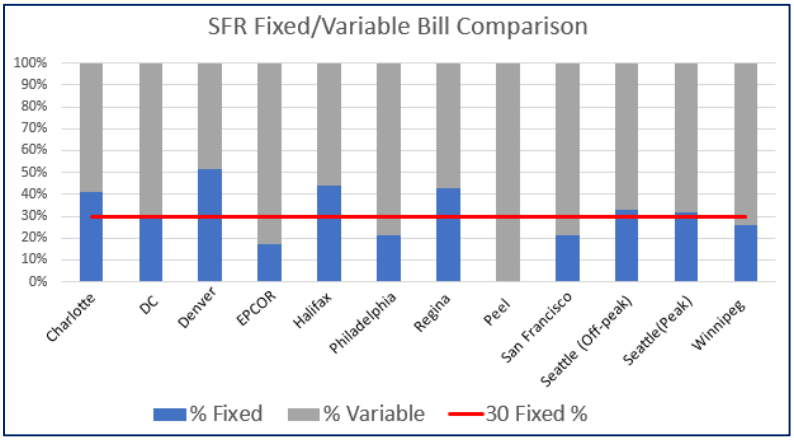


Figure 26: Fixed versus Variable Billing Revenue from Comparable Utilities @ 16.5 m3 Consumption

To analyze the desired level of fixed versus variable rates, an analysis of the utility's specific situation and priority rate-making objectives was considered. This also specifically considered financial risk, including available cash-on-hand (reserves), seasonal weather variability, level of irrigation users within its overall customer mix, contributed funding from developers to pay for growth, and local economic situation. From a recent fiscal policy review (2015) and financial results from 2016, the following observations are noted:

- Available cash-on-hand was lower than levels preferred as viewed from credit agencies;
- The Utilities had not consistently received off-site levies sufficient to fund growth, which put further rate pressure on current rate-payers; and
- 2016 featured a far more wet summer than previous seasons, which resulted in less irrigation use than previously noted. As a result, lower revenues from the variable portions of the rates were recorded which further stressed the Utilities' overall financial situation.

Additionally, input from a customer engagement study was considered. This noted that 95% of respondents surveyed agreed with the statement *"Customers should pay based on the amount of water they use".* It was also noted that customers generally don't well understand what specific costs are funded by the fixed portion of the rate. Together, this puts downward pressure on the fixed portion.

With respect to the prioritized rate-making objectives, the possible implications to consider with increasing or decreasing the fixed rates are also noted as follows:

↑ **Fixed Rates**	• Increased revenue sufficiency & predictability • Less incentive for conservation • Less equitable • Reduced administrative burden •
↓ **Fixed Rates**	• Decreased revenue sufficiency & predictability • Greater incentive for conservation • More equitable • Increased administrative burden

Figure 27: Advantages versus Disadvantages of Adjusting Fixed Rates

Based on these considerations, a detailed review of specific cost components to fund through the fixed portions of the rate was performed in the Rate Design phases of the project. It was recommended that the Utilities maintain approximately similar levels of the fixed versus variable rates to increase the extent of revenue predictability and stability across the 2019-2022 business cycle. This will also help enable the development of targeted sustainment reserve levels by the end of 2022. However, once these reserves are better established it is recommended that the Utilities consider opportunities to decrease the percentage of revenues to be achieved through the fixed rate to achieve a greater level of customer equity.

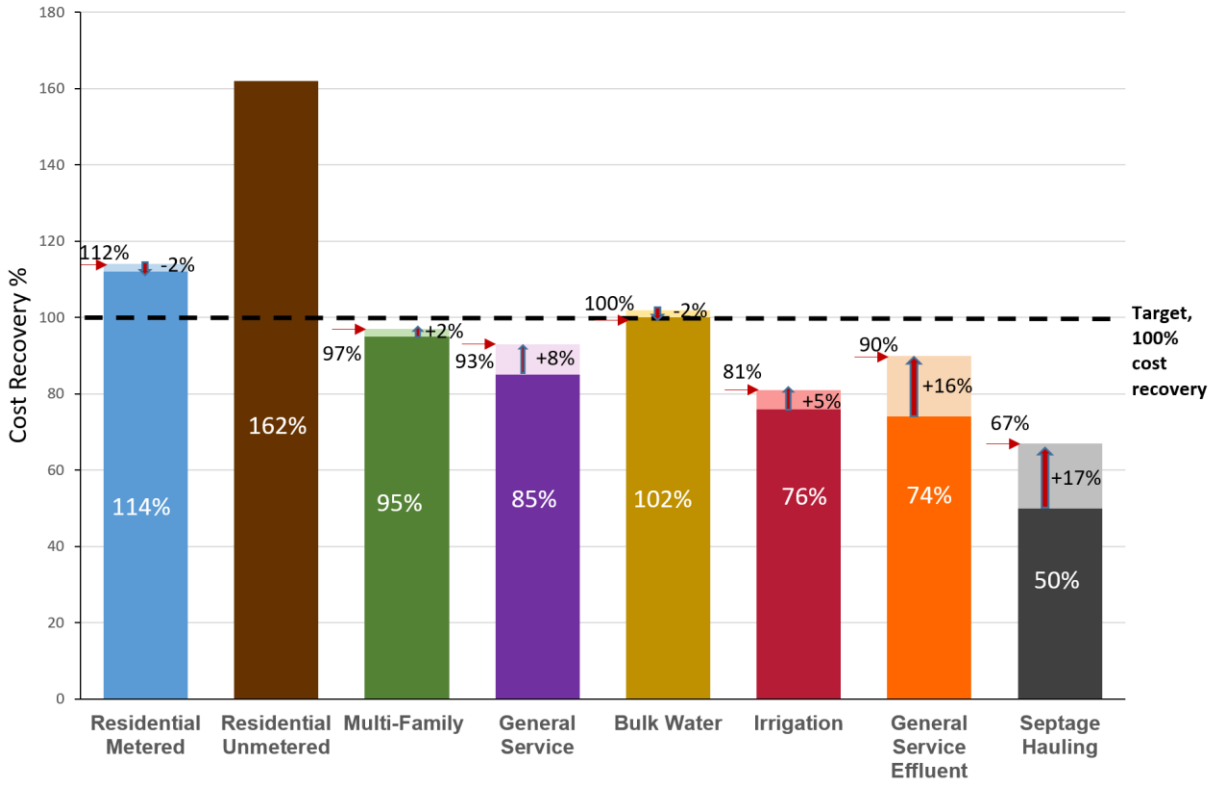
Cost Recovery Strategies for Water and Wastewater Lines of Service

Customer Classes	Cost Recovery Strategies	Change in Cost Recovery
Inside city customers		
Residential Metered	Moving closer to its allocated cost of service while moderating its overall rate impact.	Bring closer to 100% cost recovery by decreasing 2%.
Residential Unmetered	Maintain 2018 rates and continue to encourage customers to move to the metered class.	Maintain the existing 2018 rates for Residential Unmetered Customers across 2019-2022.
Multi-Family	Moving closer to its allocated cost of service while moderating its overall rate impact.	Bring closer to 100% cost recovery by increasing 2%.
General Service	Moving closer to its allocated cost of service while moderating its overall rate impact.	Bring closer to 100% cost recovery by increasing 8%.
Bulk Water	Achieving its full cost of service by 2022.	Bring closer to 100% cost recovery by decreasing 2%.
Irrigation	Moving closer to its allocated cost of service.	Bring closer to 100% cost recovery by increasing 5%.
General Service Effluent	Moving closer to its allocated cost of service while moderating its overall rate impact.	Bring closer to 100% cost recovery by increasing 16%.
Septage Hauling	Moving closer to its allocated cost of service while moderating its overall rate impact.	Bring closer to 100% cost recovery by increasing 17%.
Extra Strength Surcharges	Maintaining 2018 rates across 2019-2020 while the Water Utility plans for mid-cycle rate adjustments for 2021-2022.	Maintaining 2018 rates across 2019-2020 while the Water Utility plans for mid-cycle rate adjustments for 2021-2022.
Regional customers		
Regional Municipalities	Continue to cover 100 per cent of cost for related services.	Rates for regional customers cover 100 per cent of the cost for the services they receive.

Cost Recovery Strategies for Stormwater Line of Service

Customer Classes	Cost Recovery Strategies
Inside city customers	Maintain the current rate structure for all customers across 2019-2022 so that further work to investigate a variable stormwater rate may be undertaken.

Current and Proposed Cost Recovery for Customers



	Cost Recovery by 2022 using 2018 rates	Cost Recovery by 2022 using proposed strategies	Change in Cost Recovery
Residential Metered	114%	112%	-2%
Residential Unmetered	162%	162%	0%
Multi-Family	95%	97%	2%
General Service	85%	93%	8%
Bulk Water	102%	100%	-2%
Irrigation	76%	81%	5%
General Service Effluent	74%	90%	16%
Septage Hauling	50%	67%	17%

Integrated Civic Facility Planning Program Update & Policy

EXECUTIVE SUMMARY

The Integrated Civic Facility Planning (ICFP) program addresses Council and Administrative direction to coordinate The City's facility planning and delivery functions, optimize The City's facility portfolio, and focus on the value that investment in facilities can provide to citizens. A comprehensive Corporate Facility Planning & Delivery Framework ("the Framework", summary in Attachment 1; full document in Attachment 2) and associated Policy (Attachment 3) have been developed that will enable Administration to realize economies of scale, consider multi-use facility opportunities, improve services to citizens, work with other levels of government, and position the organization to be a suitable partner for the private sector. This Framework and Policy will replace the existing Corporate Workplace Framework Policy that was approved in 2003 (Attachment 4).

ADMINISTRATION RECOMMENDATION:

That the SPC on Utilities and Corporate Services recommends that Council:

1. Approve the Corporate Facility Planning & Delivery Policy (Attachment 3);
2. Receive for information and adopt in principle the Corporate Facility Planning & Delivery Framework (Attachment 2);
3. Rescind the Corporate Workplace Framework Policy (CS002) (Attachment 4);
4. Direct Administration to report back through the SPC on Utilities and Corporate Services with an update on the implementation plan status (Attachment 5) as needed.

PREVIOUS COUNCIL DIRECTION / POLICY

On 2018 June 25, Council adopted Administration's recommendation contained in UCS2018-0739 Integrated Civic Facility Planning Program 2017 Status Update Deferral that "Council defer the Integrated Civic Facility Planning Program 2017 Status Update report to no later than 2018 Q3."

On 2017 December 15, Council adopted Administration's recommendation contained in UCS2017-125 Integrated Civic Facility Planning Program 2017 Status Update Deferral that "Council defer the Integrated Civic Facility Planning Program 2017 Status Update report to no later than 2018 Q2."

On 2016 September 29, Council adopted Administration's recommendation contained in LAS2016-76 Integrated Civic Facility Planning Program 2016 Status Update report as follows: that "Council direct Administration to report back to Council annually through the Land and Asset Strategy Committee with an update on the Integrated Civic Facility Planning Program status no later than Q4 2017."

BACKGROUND

In Q4 2014 Council directed Administration to update the current Corporate Workplace Framework Policy, considering new workplace strategies, and deliver a corporate wide facility portfolio plan (LAS2014-50). In Q1 2015, Council directed Administration to coordinate The City's approach to facility planning to achieve economies of scale, build multi-use facilities when appropriate, consider opportunities to work with the private sector, and improve services to citizens (CPC2015-010).

Integrated Civic Facility Planning Program Update & Policy

In response to Council's direction, Administration formed the Integrated Civic Facility Planning (ICFP) program in Q2 2015 with the mandate to develop and facilitate a coordinated, corporate-wide approach to planning and delivering facilities. Set up as a corporate change initiative, ICFP established a cross-corporate governance structure and team focusing on three themes: a common vision, a common approach, and a common culture, to address structural barriers and gaps required to create an updated policy and framework.

INVESTIGATION: ALTERNATIVES AND ANALYSIS

At its core, civic facilities are developed by The City of Calgary to support the services that are provided to our citizens. As Council had directed, and is supported by global recognition that the facility infrastructure a city provides can play an important role in creating value and improving outcomes for citizens[1]. Citizen value such as creating complete and well-designed communities, developing service hubs, supporting private investment in new and existing communities, and thinking differently about how civic facilities shape our city. The Facility Management profession also states the initial capital investment in a facility is only 10% of the total cost of ownership, with the remaining 90% of costs reflected in the operations, maintenance, and capital renewal of that facility. Effective, up-front and long-range planning, coupled with efficient delivery, can avoid an average 10%-15% of the costs in the lifecycle of a building. It is with this multi-faceted focus on service delivery to citizens, citizen value and the reduction and avoidance of costs, that the ICFP program, in collaboration with service representatives from across The Corporation, developed The Corporate Facility Planning & Delivery Framework and Policy.

The program embedded learning and continuous improvement into the development of the Framework to best meet the needs of The City, stakeholders, and citizens. The program captured experiences and lessons learned by: (1) researching case study projects delivered by other municipalities, (2) incorporating lessons and experiences gained from previous City projects, (3) investigating existing practices used at The City, (4) capturing the process and decision-making challenges experienced by stakeholders, and (5) using rapid prototyping to develop approaches to solve problems quickly, implementing them, testing and then re-evaluating as required.

In addition, the Learning Projects have been foundational to the ICFP Program. These in-flight projects in Sage Hill (Symons Valley Centre), Varsity (Varsity Multi-Service Centre) and Thornhill (Thornhill Civic Centre), demonstrate the desired outcomes, help inform the Framework, test the governance model, and are instrumental in developing a common culture around the planning and delivery of City facilities. Key lessons learned to date include:

- There is limited ability to coordinate and co-locate when capital funding is already allocated.
- Developers are interested in working with The City but clear definition of facility requirements and single point of decision making are required to mitigate developer risk.
- Clear governance and decision-making authority are required to coordinate services.
- Consistent processes for planning and delivery are necessary to support collaboration.
- Operating models for multi-use facilities are required earlier in the planning process.

[1] Project for Public Spaces, Inc. (Produced under the auspices of he UN-HABITAT Sustainable Urban Development Network) (2015). Placemaking and the Future of Cities. This source is one among many that recognize the value.

Integrated Civic Facility Planning Program Update & Policy

The Corporate Workplace Framework Policy (CS002) (Attachment 4) was approved by Council in 2003 and set out a vision and structure for the planning and delivery of corporate workplaces. Since that time administration has actively worked to implement the framework through all facility planning and delivery decisions. However, over time several changes have occurred such as the services offered by The City (i.e. transfer of EMS to the province), the role of the City (i.e. the new Municipal Government Act and City Charter), the advent of new strategies and tools (i.e. Tomorrow's Workplace, working with the private sector, greater co-location of services etc.) and shifting expectations from Council and citizens regarding the outcomes facilities can support. The updated Corporate Facility Planning & Delivery Framework (Attachment 2) and Policy (Attachment 3) have been developed to respond to these changes and lessons learned and provide greater flexibility to respond to changes in the future. Overall, the new Framework and Policy will allow The City to:

- Integrate the facility needs of sixty-one City of Calgary service lines and coordinate with the private sector and other levels of government.
- Evaluate the best approach (single-use and multi-use) to create the best value for citizens.
- Analyze financial benefit and potential cost avoidance of both capital and operating expenditures on facility projects.
- Consider development options that include the private sector and co-locating with other levels of government or public entities.
- Evaluate the financial, social, environmental and cultural value of every facility option in alignment with the Framework goals.
- Develop and maintain a comprehensive Corporate Facility Portfolio Plan that will optimize the existing portfolio and identify what facilities The City should build, demolish, renovate, acquire, maintain and relinquish.
- Make decisions on the facility portfolio and facility projects cross-corporately to ensure service delivery requirements are met and corporate goals and citizen focused outcomes are achieved.

For a summary of the Framework highlights refer to Attachment 1, or for the full Framework refer to Attachment 2.

A Council policy (Attachment 3), the Corporate Facility Planning & Delivery Policy, has been developed as an enabling policy to support the execution of the Framework. The policy pulls key areas of the Framework together, including goals, principles, and procedural direction, to provide clear expectations between Administration and Council on why and how facility planning and delivery work will be conducted at The City.

Stakeholder Engagement, Research and Communication

The following engagement and research was conducted to support the development of the Framework:

- Establishment of a cross-corporate manager steering committee and a cross-corporate working teams to guide and contribute to all work completed within the program.
- Coordination with other key corporate stakeholders and initiatives including City Shaping (Green Line), Main Streets (Urban Strategy), Land Strategy (Real Estate & Development

Services), Corporate Infrastructure Investment Strategy (Infrastructure Calgary), One Calgary - Service Plans and Budgets, Calgary Police Services, and Community Services.
- Engagement with external partners such as Calgary Public Library, School Boards and Alberta Health Services at a portfolio level and on specific sites.
- Investigation of innovative facility delivery methods (e.g. development industry builds, mixed-use civic facilities, etc.) used by other municipalities to determine best practices and understand risk.

Strategic Alignment

This report, Policy and Framework are in alignment with Council Priorities for One Calgary 2019 – 2022: A Well Run City, A Prosperous City, A City of Safe and Inspiring Neighbourhoods, A City that Moves, A Healthy and Green City. Further, the program is in alignment with One Calgary and service-based budgeting, as well as a number of other Council and Administrative directions.

Social, Environmental, Economic (External)

The Framework will achieve social, economic, and environmental benefits including:

- Allowing for the strategic location and delivery of multi-use facilities that combine multiple civic services, create a sense of place and identity, enable social interaction, social cohesion, and achieve a higher level of design and accessibility.
- Potential avoided costs of up to 15% in both operating and capital expenditures, identifying opportunities to work with private industry and establishing consistent process.
- Reduction of the amount of land required for facilities, and the overall square footage of a facility will improve energy consumption per square foot and per service provided.

Financial Capacity

Current and Future Operating Budget:

The ICFP program was initiated with a one-time funding allocation which ends in 2018. Approximately $1M annually in operating funds are required to fund the resources required for ongoing planning work within Facility Management to support the delivery of the facility planning service line. This request will come forward through the One Calgary 2019-2022 budget. Over time, The Corporation will realize resource efficiencies as a result of this funding ask.

Current and Future Capital Budget:

Capital to commence the building of facility infrastructure was estimated as part of the Corporate Portfolio Planning work, both of these requests will come forward through the One Calgary 2019-2022 budget cycle. Future capital will be required for ongoing planning work and will be requested as part of ongoing City business and budget cycles.

Risk Assessment

Potential risks associated with successful implementation (see Attachment 5) of the Framework include long-term funding sustainability, data systems and data integrity, and organizational readiness. These risks are being mitigated in part by the ongoing effort towards service integration across the organization, as well as through the continuous improvement processes embedded in the Framework. If the Framework is not implemented and operations is not

funded, benefits including potential cost avoidance, portfolio optimization, and increased service efficiencies will not be realized.

REASON(S) FOR RECOMMENDATION(S):

Approval of a new Corporate Facility Planning & Delivery Policy will clarify and improve consistency of The City's practices for the planning and delivery of City facilities including governance practices, risk management, accountability, and reporting requirements. It will also streamline and simplify The City's administrative procedures. This will allow The City to realize economies of scale, consider multi-use facility opportunities, work with other levels of government, and make the organization a more desirable partner for the private sector.

ATTACHMENT(S)

1. Summary of Corporate Facility Planning & Delivery Framework
2. Corporate Facility Planning & Delivery Framework
3. Corporate Facility Planning & Delivery Policy
4. Corporate Workplace Framework Policy (Council Policy CS002)
5. Corporate Facility Planning & Delivery Implementation Plan

Corporate Facility Planning & Delivery Framework Summary

Vision: A 40-Year Outlook - Council has outlined a vision for City facilities that goes beyond bricks and mortar. Facilities not only support service delivery but facility investment helps build and shape Calgary communities.

Value: An Integrated Approach - A results based, integrated approach to planning and delivering facilities provides Calgarians with the confidence that investments made in The City's facilities are driving to outcomes that benefit citizens. Six goals have been developed to guide the work:

- Efficient and Effective Service Delivery
- Reduced and Avoided Costs
- Citizen Focused Facilities
- A Resilient Facility Portfolio
- Complete Communities
- Enhanced Employee Experience

For each goal, corresponding strategic actions have been suggested that can be leveraged as appropriate (Attachment 2, pg 22-27).

Strategy: Managing the Portfolio - To deliver on the goals and strategic actions the Framework a set of guiding principles and three supporting components have been developed that are essential for The City to collaboratively plan and deliver facilities.

Principles: Guiding principles set the foundation for the Framework and guide the implementation of the goals and strategic actions (Attachment 2, pg 31):

1. Value for Citizens
2. Outcome Driven & Evidence Based
3. Long-term & Strategic
4. Integrated & Collaborative
5. Consistent yet Flexible

Governance: Having clear accountability and transparency around who, how and why decisions are made, creates efficiencies and speeds up the decision-making process. The established governance model consists of two cross corporate bodies at the manager and director levels. The service owner with the mandate to plan and build facilities for The City, is accountable to these cross-corporate governance bodies to ensure that both corporate objectives and service line requirements are met.

Process: The Framework outlines the process required to ensure the integration of facility planning and delivery across the organization. The process is intended to be a repeatable, evidence-based approach that ensures objectives established in planning are carried through to delivery. The process considers planning at various scales: city wide (portfolio), site specific (program) and the investment required to deliver (project).

Strategies: The facility strategies are levers that can be used in the planning and delivery of facilities to obtain the goals outlined in the Framework. Each is aligned with one of the strategic actions and includes the objective, guiding principles, dependencies and strategy governance. This provides Administration with a principled based approach, including criteria for planning and delivery, and decision-making authority to determine when to implement a strategy. It will be determined during Framework implementation if these strategies will become Council Policy, Administrative Policy, or corporate strategy.

UCS2018-0525
ATTACHMENT 2

The City of Calgary

Corporate Facility Planning & Delivery Framework

ISC: Unrestricted

Ralph Klein Park

Acknowledgments

This Corporate Facility Planning & Delivery Framework is the result of collaboration across all departments at The City of Calgary and considerable investment of time and resources from many stakeholders. Particular thanks goes to the members of the Integrated Civic Facility Planning Manager Steering Committee for their unwavering dedication to collaboration and championship of this change. This work will allow The City to take an integrated and coordinated approach to how we plan and deliver facilities to support City services now and into the future.

Framework at a Glance

This Framework is the foundational document for the planning and delivery of facilities at The City of Calgary. It outlines the goals and strategic actions that The City of Calgary will pursue in regard to its facility portfolio in order to support service delivery to citizens. It also provides guidance on how these goals can be achieved through governance, process and strategy.

Facility Planning and Delivery Goals: Page 21

The Framework is anchored by six goals that have been developed through cross-corporate collaboration based on Council and leadership direction.

Facility Planning and Delivery Principles: Page 31

The five guiding principles set the foundation for the Framework and guide the implementation of the goals and strategic actions.

1. **Value for Citizens**
2. **Outcome-Driven & Evidence Based**
3. **Long Term & Strategic**
4. **Integrated & Collaborative**
5. **Consistent yet Flexible**

Facility Planning and Delivery Process: Page 33-35

A consistent approach to planning and delivering to achieve goals and maintain line of sight from initial vision to facility delivery.

Watch for
throughout the document

This symbol indicates an example of a case study from another municipality. These case studies, and many others, were referenced to support the development of the Framework.

Contents

Introduction

There is global recognition that the facility infrastructure a city provides goes beyond bricks and mortar and can play an important role in improving outcomes for citizens[1]. Recognizing the social, economic and cultural benefits facilities bring to communities, The City of Calgary is taking a new approach for how it plans and delivers its facilities.

In the past, City facilities were often planned independently according to their specific needs and service lines. In 2015, Council and The City's Administrative Leadership Team (ALT) provided direction to begin planning facilities as a Corporation, demonstrating the culture of One City, One Voice, and a more holistic view of The City's infrastructure needs. To support the coordination of facility planning and delivery, Facility Management created the Integrated Civic Facility Planning (ICFP) Program. The ICFP Program was given the mandate to update the Corporate Workplace Framework and Policy, which was developed in 2003 as the foundational document for how facilities are planned and delivered at The City. Since that time, there have been many shifts in The City's workforce, available technology and the organization itself, which have driven the need to update the Framework.

Developed through a collaborative cross-corporate approach, the updated Corporate Facility Planning & Delivery Framework includes input from City departments that rely on facilities as an integral piece of their service delivery. Participating stakeholders include members of Council and The City's Senior Administration. All stakeholders expressed support for the development of a conceptual framework that would integrate The City's long-term facility planning with Council's long-range priorities, One Calgary, and other strategic initiatives undertaken by City departments.

The Framework is designed to support increased efficiencies, partnerships, innovation and investment considerations into the planning and delivery of City facilities, while providing greater value for Calgarians. It outlines the processes, governance structure and strategies to support the integration of facility planning and delivery across The City, working together as a Corporation and in partnership with other public and private organizations. It is a critical first step in the development of a long-range, strategic portfolio plan that will identify what infrastructure should be invested in, divested or redeveloped. The development of the facility portfolio plan and its ongoing management will be guided by the contents of this Framework. This repeatable, evidence-based approach ensures that objectives established in planning are carried through to delivery and secures the benefits that facilities can provide to citizens.

WE ARE ONE CITY
ONE VOICE

Historic City Hall

The Calgary Context

The City of Calgary's Facility Portfolio at a Glance*

Facility: Permanent, temporary or portable building structures

15,000+[3]
EMPLOYEES

60+[4]
SERVICES

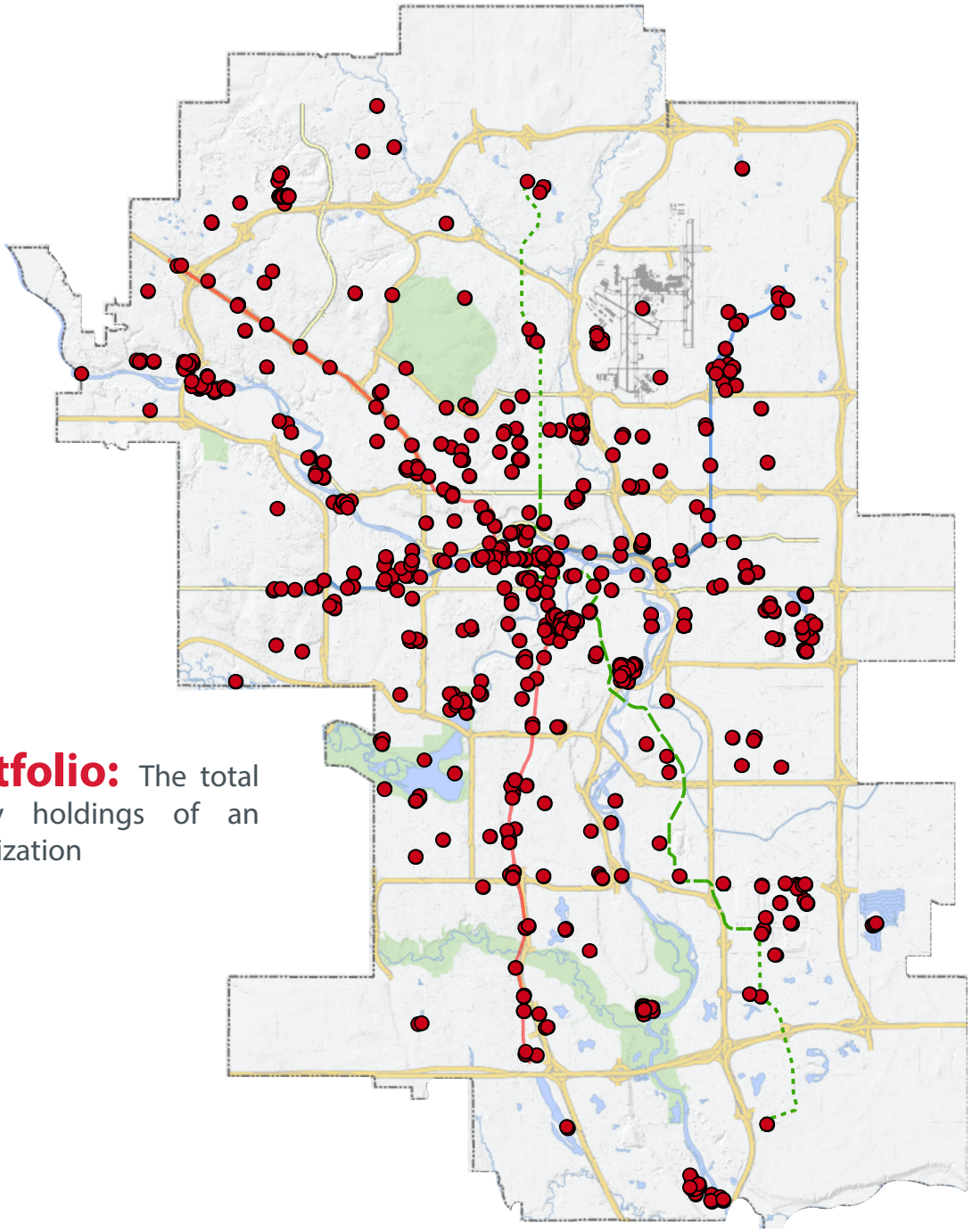
$ 3.35[2]
BILLION
CURRENT REPLACEMENT VALUE

1,100[5]
FACILITIES

1.5[6]
MILLION SQUARE METRES

2000+[7]
public events held in City facilities annually

*All numbers are rounded and approximate. See Appendix B for sources.



Portfolio: The total facility holdings of an organization

The City's facility portfolio includes hundreds of different facilities with a wide range of spaces that serve distinct functions for service delivery. For the purposes of this Framework, these spaces can be classified into four broad categories:

Workplace Accommodation
Houses administrative functions of The City, including services such as finance, human resources and information technology.

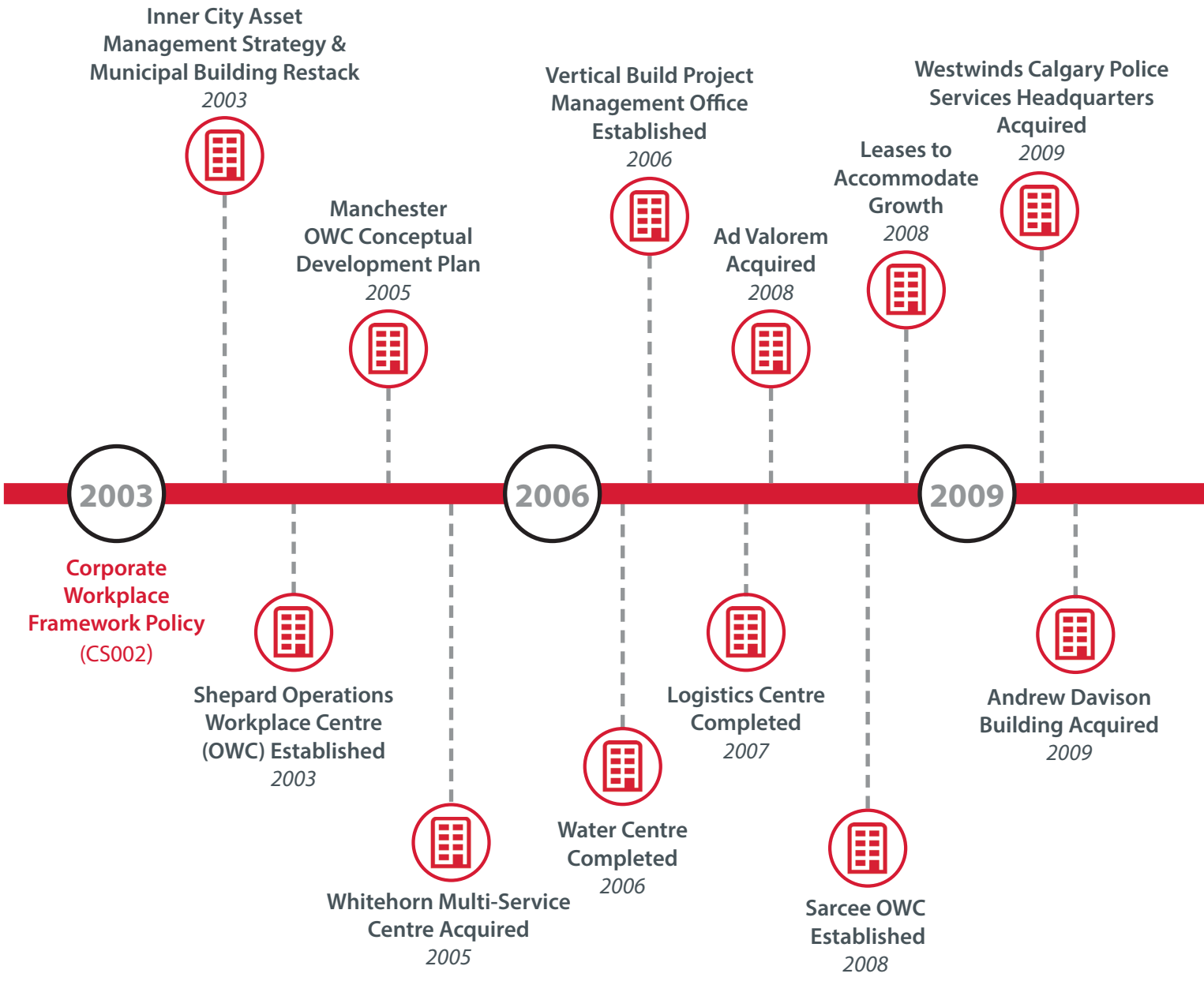
Processing
Houses services that have strict environmental or health and safety regulations and involve the processing of materials such as water and waste.

Community-Facing
Houses services that have a direct interaction with citizens such as aquatics and fitness, arts and culture, and emergency response.

Operations
Houses operational functions of The City including services such as street clearing, transit, and traffic operations.

Corporate Workplace Framework in Action

The City's Facility Portfolio Since 2003



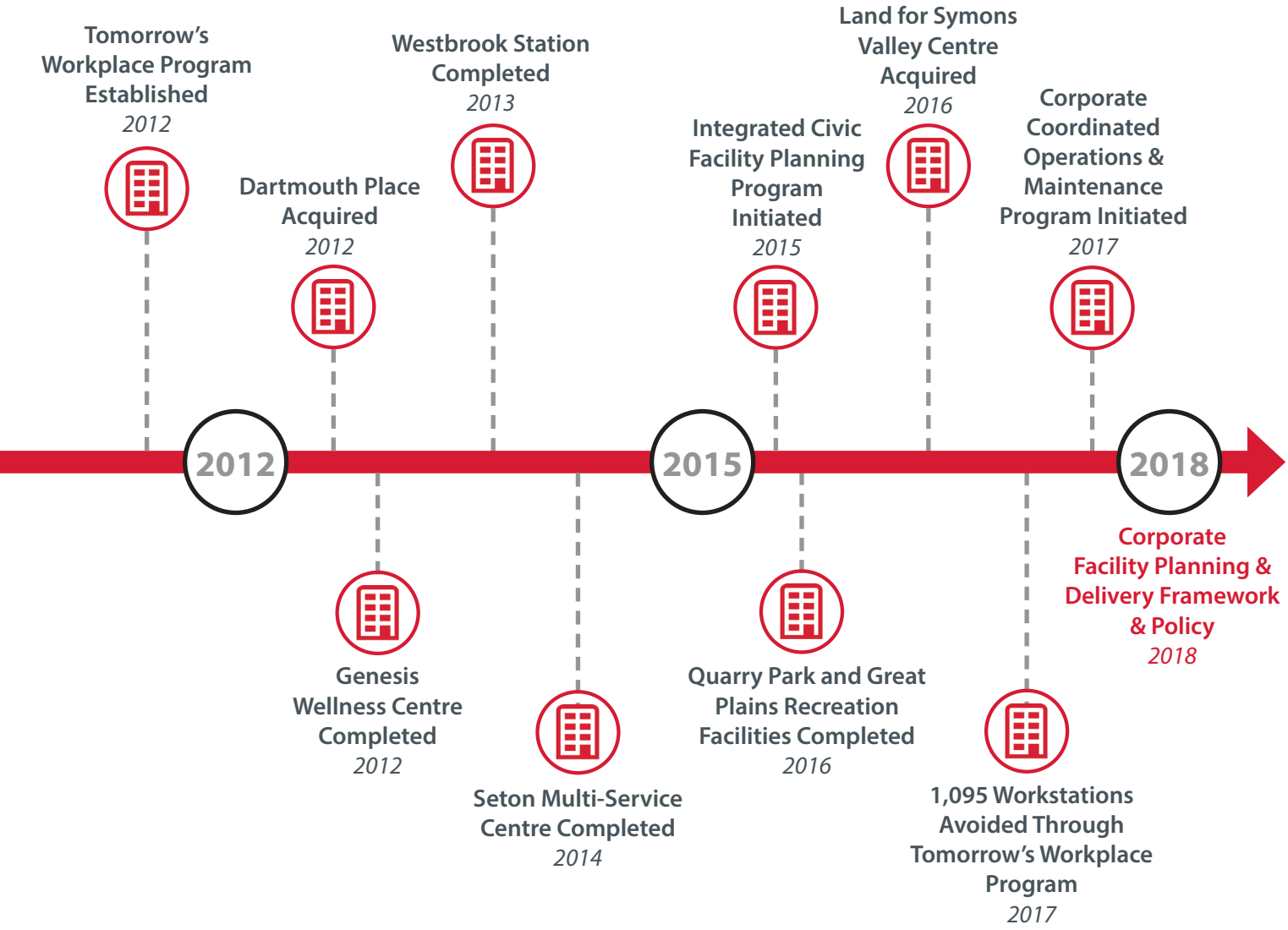
Technology Milestones

2005 Crowfoot Library, Calgary's 1st LEED Building
2006 Launch of Facebook
2007 Launch of 1st Generation iPhone
2011 Rise of the Sharing Economy
2013 Creation of WELL Building Standard

Workforce Milestones

2007 Rise of the co-working movement
2014 Calgary's lowest office vacancy rate (9.9%)[9]
2015 Millennials become largest % of workforce[10]
2017 Unemployment rate reaches 10.2%[11]
2017 Calgary's highest office vacancy rate (27.7%)[9]

This time line indicates a selection of major activities within The City of Calgary's facility portfolio that were completed under the guidance of the Corporate Workplace Framework Policy that was approved in 2003.



Calgary Milestones

2006 Calgary population reaches one million
2008 Global financial / economic crisis
2012 Bow Building opens
2012 West LRT opens
2013 Major river flood event
2015 Calgary named world's 5th most livable city[12]
2015 Oil prices drop / energy industry downturn
2016 Calgary admits 21, 420 permanent residents[13]
2017 Total value of building permits $4.6 billion[13]
2017 Green Line LRT approved

Rocky Ridge Recreational Facility

Vision:
A 40-Year Outlook

Imagining the Future

City services work together more collaboratively than ever before due to the successful adoption of the Corporate Facility Planning & Delivery Framework during the 2019-2022 business cycle. Implementation of the Framework's goals and strategic actions enables these services to exceed the expectations of Calgary's culturally diverse population. The new practices for integrated facility planning and new approaches to delivering City facilities result in the right infrastructure, a sustainable and resilient portfolio and flexible and adaptable working environments to support the highest levels of service possible.

Applying the Framework across The City's portfolio, has enabled City departments to streamline and re-orient their service delivery models to better reflect the needs and desires of citizens. The City has deliberately placed shared facilities throughout the city, used emerging technology and strategically located City departments in close proximity to the services they provide so that citizens have more choice in receiving services where, when, and in the formats they prefer.

Calgary's population reaches 1.715 million by 2041

The Internet of Things has enabled a function-driven, human-centric user experience for citizens and employees as they interact with the facility portfolio

Facility projects and decisions contribute to shaping Calgary communities and the strategic outcomes of The City, including imagineCalgary and the Municipal Development Plan (MDP). The City has proactively identified gaps in service delivery capacity, and made strategic investment in locations that are community and citizen-focused. City facilities are welcoming to the public and contribute to the urban design of the city. By strategically locating and co-locating services, synergies and economies of scale create savings that are passed on to Calgarians, easing the tax burden while maintaining the infrastructure needs of our dynamic city and its changing population.

Learning Projects implemented during the development of the Corporate Facility Planning & Delivery Framework provide benefits to the community and The City. Building on lessons learned from these projects, and by identifying opportunities to work with the private sector, several shovel-ready projects have been lined up with developers, many that align with The City's Transit Oriented Development (TOD) strategy.

The Green Line opens in 2026, further connecting south east communities with the rest of the city

Increased automation of transactional tasks has shifted the workforce to knowledge-based work

Although Calgary's demographics and The City's workforce continue to shift, facilities are more flexible and adaptable to accommodate these kinds of changes. The collaborative and flexible workplace environments, combined with the workspaces and technology that enable City employees to stay productive, have further established The City as one of the most desirable places to work in Calgary. The City's workplace infrastructure is planned to accommodate future growth and employees feel safe, happy and comfortable in their functional and flexible surroundings.

The increased use of renewable energy and the rise of Smart Buildings have made City facilities efficient and sustainable.

70% of the world's population live in cities by 2050, as people seek compact, convenient, transit-oriented urban living

An understanding of service requirements from across the organization, in context of solid and trustworthy supply information, has enabled the creation and ongoing management of a Portfolio Plan. This planning allows The City to optimize the portfolio, make strategic land purchases and build a long-term view of asset management based on a coordinated corporate direction. Program plans have been developed for multi-service facilities in strategic locations across the city and several mixed-use facilities have been opened that feature service lines including Fire, Affordable Housing, Permit counters, as well as workplace accommodation spaces. In addition, advanced planning has created opportunities for The City to partner with other civic services like the Calgary Public Library, Alberta Health Services and local school boards to create service centres that meet a broad range of citizen needs.

CASE STUDY: SOCIAL HOUSING + MULTI-SERVICE

Osdorp Mixed-Use Centre & Housing[14]

Amsterdam, Netherlands

Project Overview: Part of a larger urban renewal project, this mixed-use facility redeveloped the existing affordable housing in the area and integrated additional social, educational and health services in a largely lower-income, new immigrant dense community. The primary services offered include:

- Pre-school and elementary school
- Social housing
- Rentable classrooms that serve as community space
- Sports facilities & gym
- Community kitchen
- Child care
- Indoor & outdoor gathering places

Lessons Learned:

Relationships and collaboration between different government functions:

- Early planning and collaboration was essential to project success
- Both internal and external collaboration is key for complete communities

Co-location of affordable housing and other civic services:

- The community has greater accessibility to services
- Revitalization of the area and transit oriented development is supported
- Efficiencies for ongoing facility and service operations are realized

Christian Richters

Supporting the Corporate Vision

For The City of Calgary, facilities support the efficient and effective delivery of services to citizens and the collective vision of Calgary as a great place to make a living, a great place to make a life. The City of Calgary delivers on this vision through a culture of One City, One Voice, and the guidance from The City's Accountability Model and Council's Guidelines for Administration. The Corporate Facility Planning & Delivery Framework is aligned with these in the following ways:

City of Calgary's Accountability Model

Vision: Council has outlined a vision for City facilities that goes beyond bricks and mortar. Facilities not only support service delivery but facility investment helps build and shape Calgary communities.

Value: A results-based, integrated approach to planning and delivering facilities provides Calgarians with the confidence that investments made in The City's facilities are driving to outcomes that benefit citizens.

Strategy: The Framework provides the governance, processes, and strategies required to implement Council's direction. It enables rigorous, principled management and decision making.

Council's Guidelines for Administration[15]

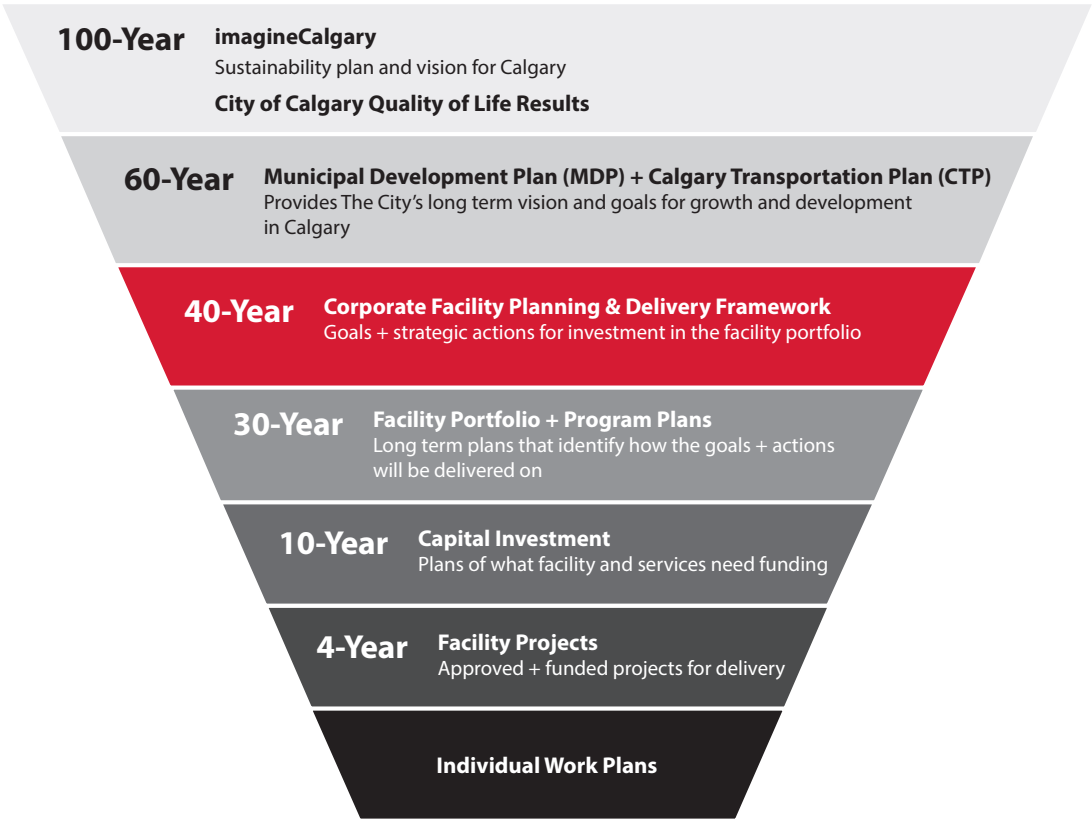
Integrated Service Delivery	Collaborative approaches bring service owners together to plan, enabling the opportunity for multi-service facilities to support integrated service delivery to citizens.
Engaged Leadership	A collaborative governance model brings expertise from across service lines to participate in decision making that supports the needs of the service and the strategic objectives of The City.
Trust and Confidence	A transparent, industry-based, repeatable, and principled approach to facility planning and delivery builds confidence with decision makers and potential partners, both public and private.
Investment and Value	A process is designed to define value early on and establish measures that provide the guideposts for ensuring the best value for capital investment in the facility portfolio.
Cooperative Alliances	A governance model supports the effective stewardship of City assets through internal coordination, while allowing collaboration with external partners, both public and private.

Strategic Alignment

Relevant City plans, policies, and strategies were reviewed to ensure the Framework's goals, actions and strategies were based on Council-approved policies and aligned with The City's long-term strategic direction. Primary ones included:

ImagineCalgary	All goals and strategic actions (pg 22) are directly tied to 15+ ImagineCalgary targets.
Municipal Development Plan	Goal to support Complete Communities (pg 26) and efficient and effective service delivery (pg 22).
Calgary Transportation Plan	Strategic actions to provide City services in transit oriented development (TOD) zones (pg 26)
City Shaping Framework	Facility Portfolio Planning (pg 34) plans for providing spaces and programs in alignment with the City Shaping Framework.
Calgary Affordable Housing Strategy	Strategic actions to provide affordable housing in multi-service facilities (pg 26).
10-Year Economic Strategy	Strategies that support collaboration with the private sector, prepares more projects for funding, and leverages investment to make Calgary an attractive place to live.
Cultural Plan for Calgary	Actions that support the outcomes of the Cultural Plan (pg 24, 25).
Engage! Policy	Goal, strategic actions (pg 24) and process (pg 34) identifies public engagement as a core input to facility investment decisions.
Preliminary Resilience Assessment	Goal and actions that support a resilient portfolio (pg 25).

As a long-term directional document, the Corporate Facility Planning & Delivery Framework has been structured to be flexible and functional to support The City for the next 40 years.



Spring Gardens Administration Building

Value:
An Integrated Approach

Working Together Flexibly

The Framework is based on the premise that all City of Calgary facilities are planned in collaboration across all City services. This enables the organization to avoid redundancy and duplication of efforts, increase economies of scale, and ensure that all facilities are considered under a consistent set of goals, and the same planning and delivery principles.

In addition to collaboration and integration, flexibility is critical. The flexibility of the portfolio means that planning is able to consider a multitude of different combinations of services and space types (Operations, Processing, Workplace Accommodation or Community-Facing) to deliver on service requirements and achieve goals. By working together flexibly, The City can:

1. Take a comprehensive, portfolio view to optimize facility assets
2. Determine what services could co-locate for greatest service and citizen benefit
3. Assess when a single-use or multi-service facility is most appropriate

Integration and collaboration require that all parties agree to the goals and principles by which they will work together. The remainder of the Framework, developed in collaboration with representatives from across The Corporation, outlines this agreement.

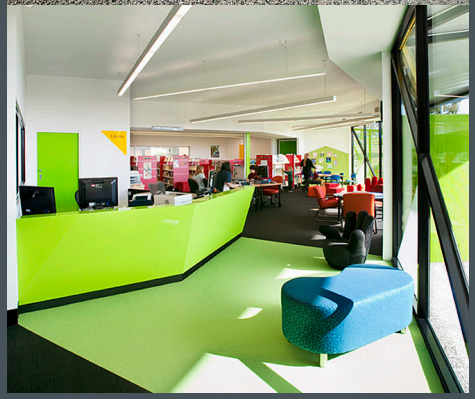
CASE STUDY: BUILDING COMMUNITY

Churchill & District Intergenerational Community Hub[16]

Churchill, Australia

Project Overview: A multi-service facility on a local scale, comparable to many of Calgary's neighbourhoods. The facility includes the following services:

- Maternal / child care / daycare
- Municipal service counter
- Pre-school
- Municipal library
- Adult education programming
- Indoor / outdoor community meeting space
- "Hot offices" for employees and community members



Lessons Learned:

Importance of civic partnerships and anchor tenants:

- A collaborative process with a clear vision was critical to align partners
- Leveraging a strong anchor tenant was key to driving activity to the site
- Community engagement can help guide business cases and partnerships

Attention to design is a factor of success:

- Strong design enabled the integration of services and operations
- The facility is flexible to accommodate future uses and evolving service needs
- The facility is a vibrant focal point of the community

Goals

The goals of the Framework guide all facility decisions made at The City of Calgary. They are linked to each other and centered around the facility portfolio's core role: supporting the efficient and effective delivery of services to citizens.

On the following pages, each goal is listed with corresponding strategic actions. These actions can be leveraged on projects as appropriate in order to achieve their respective goal. These are not exhaustive lists of actions, but rather, respond to specific Council and leadership direction or provide guidance on how best to achieve the goals. By employing the strategic actions and striving to achieve these goals on all facility planning initiatives, The City will realize superior service delivery outcomes and be flexible to changing needs.

Goals of the Corporate Facility Planning & Delivery Framework

Goal 1: **Efficient and Effective Service Delivery**

City of Calgary facilities are planned to support the efficient and effective delivery of services to citizens. Supporting service delivery is the central goal of the Corporate Facility Planning & Delivery Framework, and all other goals support and enable facilities to deliver services where, when, and how citizens need them.

ACTIONS IN ACTION

Sage Hill Pop-Up Library

45,841
Number of people who have visited the pop-up library since opening in June 2017

69,099
Number of books checked out since opening

Action
The Calgary Public Library leased space for a pop-up library during the development of the Symons Valley Centre.

Community Benefit
Library services were available to the community 48 months in advance of the full development of the Symons Valley Centre.

Strategic Actions
Plan facilities collaboratively across all service lines.
Develop facilities with flexibility to respond to evolving City services.
Co-locate compatible City services to improve integrated service delivery.
Use service targets and factors such as population, transportation infrastructure, and demographic changes as triggers for facility infrastructure development.
Lease spaces from third parties to meet short term service needs when greater outcomes can be achieved through long-term facility and site development.
Develop an evaluation model to illustrate progress towards administrative and legislative service targets and continuously improve the ability for facilities to respond to service delivery needs.

Goal 2: **Reduced and Avoided Costs**

The City of Calgary plans its facility portfolio with the objective of achieving the best value for money while demonstrating value to citizens.

Strategic Actions
Manage the facility portfolio on an ongoing basis to identify opportunities to optimize facilities and reduce the total cost of ownership.
Plan for the timely disposition of assets that no longer meet service needs or are at end of life.
Increase utilization of facilities through planning and design to maximize value of the asset.
Plan and build facilities in partnership with the private sector when appropriate to share both risks and benefits.
Co-locate compatible City services to reduce costs by standardizing and sharing spaces and building systems.
Lease spaces in City facilities to generate revenue and offset costs where there is a public benefit or where a future need for space is planned.
Plan projects in advance of capital budget requests to capitalize on grant and funding opportunities from other levels of government or the private sector.
Evaluate options such as leasing, building, renovating, and purchasing to make the best use of public funds.

ACTIONS IN ACTION

Operations Workplace Centres Portfolio Plan

10
OWC sites that support the service needs of Roads, Parks, Supply, Fleet, and Transit, among others

60%
OWC buildings in poor condition in 2018

Action
To support sustainable funding for OWCs, a 10 year plan is in development that will focus on optimization.

Service Benefit
Advanced planning leads to reduced risk and more funding options. Critical services are supported by facilities over the long term.

Goal 3: **Citizen Focused Facilities**

City of Calgary facilities are planned and designed with the citizen front of mind to support how they receive services, how they interact with facilities in their communities and how facilities contribute to quality of life.

ACTIONS IN ACTION

New Recreation Facilities Project:
Rocky Ridge, Great Plains, Quarry Park, Seton

11
Number of engagement opportunities provided for the community

4
Number of new facilities developed

Action
Each of the facilities are distinctly designed to reflect the needs of the surrounding community.

Community Benefit
The facilities provide great spaces to play, learn, grow and connect and are critical for developing active, cultural, vibrant and complete communities.

Strategic Actions
Engage citizens to create spaces and places that work for their communities.
Plan facilities by collaborating across The Corporation to understand how citizens want to access services.
Consider demographic changes in the long-range planning of the portfolio to meet future needs of citizens.
Evaluate proposed changes to the portfolio based on impact to citizens.
Develop facilities with flexibility to respond to changing needs of citizens.
Locate and co-locate City services with other services to provide better access and convenience for citizens.
Design City of Calgary facilities so they are easily recognizable to citizens.
Include publicly accessible outdoor spaces such as parks and plazas on City sites.
Create publicly accessible indoor spaces and multi-purpose rooms for use by community groups where needed.
Partner with other levels of government and community groups to enhance the usability of facilities for citizens.

Goal 4: **A Resilient Facility Portfolio**

Future planning for the facility portfolio will contribute to the economic, environmental, social, and cultural resiliency of Calgary.

Strategic Actions
Evaluate the operational impact of increasing portfolio size on service delivery, facility operations and operating budgets.
Generate revenue from leased spaces to fund the operations of community amenities such as plazas, community rooms, etc.
Plan in advance so shovel-ready projects are ready when funding becomes available.
Develop facilities with flexibility to respond and adapt to changes in City services and maintain service continuity.
Locate and co-locate City services so that business continuity is supported during planned and unplanned events.
Work with the Calgary Emergency Management Agency to plan facilities in locations that minimize impacts from natural and human-initiated disasters.
Plan and deliver facilities and sites that contribute to the environmental well-being of Calgary.
Use facilities to reflect the culture of the community and address issues directly impacting the community.

ACTIONS IN ACTION

Emergency Operations Centre

40
Approx. number of times the Emergency Operations Centre has opened since 2012

4824
Square metres

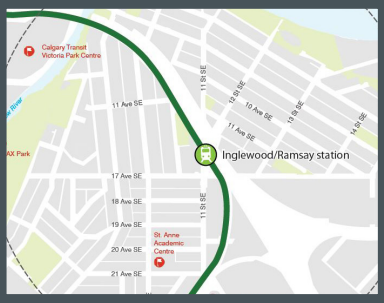
Action
The City of Calgary co-located multiple services and critical infrastructure to a new, highly effective EOC.

Service Benefit
This award-winning facility is resilient to environmental impacts and protects critical infrastructure to support business continuity and citizen safety.

Goal 5: **Complete Communities**[17]

City of Calgary facilities contribute to the Municipal Development Plan (MDP) objective of Complete Communities by aligning facility planning and delivery with city growth and community planning objectives in new and established communities.

ACTIONS IN ACTION



Inglewood-Ramsey Green Line City Shaping

28
Planned units of affordable housing above a Fire Station adjacent to a Green Line station

Exploring opportunities of working with private sector on other development

Action
Integrated planning is underway for a multi-use facility at a TOD site that will support Complete Communities.

Community Benefit
City Shaping initiatives are achieving long-term goals of equity and improving social well-being.

Strategic Actions

Plan facility sites within the context of the surrounding community to support the aspirations of updated City of Calgary planning and cultural documents, both statutory and visionary, including the MDP and imagineCalgary.
Plan, develop or redevelop City facilities in major community activity centres.
Improve vibrancy of city streets by designing City facilities that contribute to dynamic and activated street fronts.
Plan facilities along the primary transit network to support increased ridership, transit use, and the growth of Transit Oriented Development.
Enhance communities through good design and consideration of environmental, cultural, and community context.
Locate and co-locate City services with other services to diversify the amenities available in communities.
Consider opportunities to create space for other private or non-profit businesses and services that are required in the community (e.g. child care, retail space, etc.).
Where possible, include affordable housing in multi-service facilities.
Develop partnerships with school boards and other public entities to share services and spaces.

Goal 6: **Enhanced Employee Experience**

Facilities developed by The City contribute to the well-being and performance of City of Calgary employees by focusing on health and safety and proactive planning for the evolution of work practices, technology, and the changing demographics of the workforce.

Strategic Actions
Locate and design facilities to support an employee's ability to provide service to their customers.
Ensure health and safety of citizens and employees is a primary factor in facility decision making.
Provide options for how and where employees work, considering work location and workstyles.
Provide spaces to support a collaborative and dynamic workforce.
Increase the indoor environmental quality of City facilities to improve employee well-being.
Consider adjacency of services and functions to allow for efficiencies.
Locate facilities to provide employees with multiple modes of transportation to work and between work sites.
Develop facilities that represent and support The City of Calgary's corporate culture.
Collaborate with Information Technology to provide spaces and technology that support employee productivity.

ACTIONS IN ACTION

Flexible Work at The City
(Tomorrow's Workplace)

530
Number of shared mobile workstations in City facilities (as of 2018)

15,000
Number of visits to the Flexwork Hub in the opening year

Action
The City's workplace strategy is focused on providing choice and flexibility for employees.

Service Benefit
Employee statisfaction increases as they have the ability to choose where they work. The City can grow without growing by creating flexible work environments.


Water Centre

Strategy:
Managing the Portfolio

Components of Effective Management

The shift to coordinated planning and delivery of all City of Calgary facilities requires more than vision. In order to successfully navigate the complexity of the organization and the diversity of service lines within it, a set of guiding principles and three supporting components have been developed: Governance, Process and Strategies. These component parts provide the "how" of the Framework and support Administration in the ongoing and effective management of the facility portfolio.

GOVERNANCE

When and how are decisions made?
What information is required?
Who is accountable?

PROCESS

How do stakeholders work together? What is the consistent method that is flexible to changing strategy and outcomes?

STRATEGIES

What levers are available to achieve the Framework goals?

CASE STUDY: WORKING WITH DEVELOPERS

King & Victoria Multi-Modal Transit Hub[18]

Kitchener, Ontario, Canada

Project Overview: As a large-scale transformational project, this combination of public infrastructure and private development features:

- VIA and GO rail station
- Local and regional transit terminal
- LRT station
- Market residential
- Public and private office space
- Restored historical building
- Retail and public parking
- Outdoor public spaces

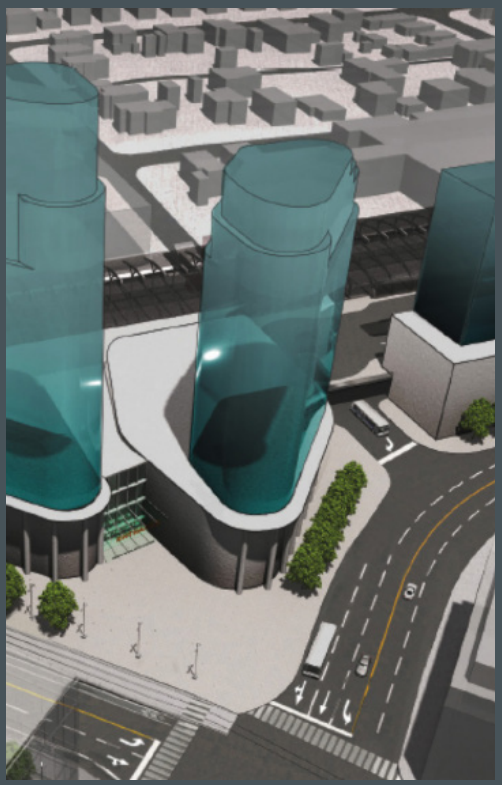
Lessons Learned:

Importance of long-term planning and vision:

- Time allowed internal stakeholders and needs to be discussed fully
- External stakeholders were clear on the vision and municipal needs from the onset

Requirements of working with a developer:

- Understanding of profit and market potential helped define desirability for partners
- Clarity of scope, vision and government funding created certainty
- Long-term leases and government funding secured a return on investment



Guiding Principles

The guiding principles set the foundation for this Framework and guide the implementation of the goals and strategic actions.

Principle 1: **Value for Citizens**

Planning for the facility portfolio will focus on value for citizens through the ongoing optimization of the portfolio. This will ensure The City is delivering the right assets at the right time to meet service needs, maximizing the utilization of asset holdings, and disposing of surplus assets in a timely manner to reduce operational and maintenance costs.

Principle 2: **Outcome Driven & Evidence-based**

Facility decisions will be driven by outcomes that directly relate to the goals outlined in the Framework. Evidence-based decisions should be made to support the best and highest use of City facilities through appropriate benchmarking and data collection based on professional facility management industry measures and an evaluation model that supports ongoing management and continuous improvement.

Principle 3: **Long-term & Strategic**

Planning will be proactive, long-term and strategic to establish a vision for the facility portfolio and ensure projects are aligned with that vision over time. This simplifies decision making, allows The City to estimate budgets more effectively, and creates certainty when working with private sector partners and other levels of government. Long-term planning will be coupled with short- and mid-range plans that respond to the changing needs of The City and citizens.

Principle 4: **Integrated & Collaborative**

Facility planning and delivery will be coordinated with internal and external stakeholders to leverage resources, capitalize on the range of expertise available, and meet corporate objectives. An integrated approach to facility planning and delivery means City of Calgary services will coordinate budgets and resources to create efficiencies in the provision of services to citizens.

Principle 5: **Consistent yet Flexible**

The City of Calgary will follow a consistent and repeatable process for how analysis is done and decisions are made. Systematic processes allow The City to better manage risk, make better investment decisions, create clarity around roles and responsibilities to reduce redundancies, and make The City a better partner for the private sector. Processes will also allow for flexibility to respond to rapid technological, societal and organizational changes.

Governance

Governance is a critical factor in the success of integrated facility planning and delivery. Governance bodies make strategic facility portfolio, program and project decisions to ensure opportunities and risks are well managed and aligned The City's vision and priorities as well as service plans and budgets. Having clear accountability and transparency around who, how and why decisions are made creates efficiencies and speeds up the decision making process.

The governance structure that has been developed as part of this Framework is cross-corporate, enabling all City of Calgary service lines to have representation and be involved in a collaborative planning process. The objective of this model is to manage the balance between corporate strategy and outcomes, and the effective and efficient delivery of services to citizens.

Corporate Facility Planning & Delivery Governance Model

Council	Represents the Council stewardship of The City's assets. Acts as the final approver of budget and policy.
Executive Sponsor Deputy City Manager	Accountable for corporate adherence to the Framework.
Director Level Committee	Holds Facility Management (FM) accountable for delivering the Framework, recommends changes and updates to the Framework and arbitrates on decisions related to facility infrastructure as required.
Service Sponsor Director, Facility Management	Accountable for adherence to the Framework and the execution of facility portfolio, program and project plans in accordance with the Framework.
Cross Corporate Steering Committee (Manager Level)	Accountable for ensuring alignment of facility projects to Framework goals and service requirements. The decision-making committee for Stage Gate approval on all facility plans and the first level of approval for plans and prioritization.

Legend:

City of Calgary Council Committee | **FM Service Accountability** | **Cross-Corporate Delegated Authority**

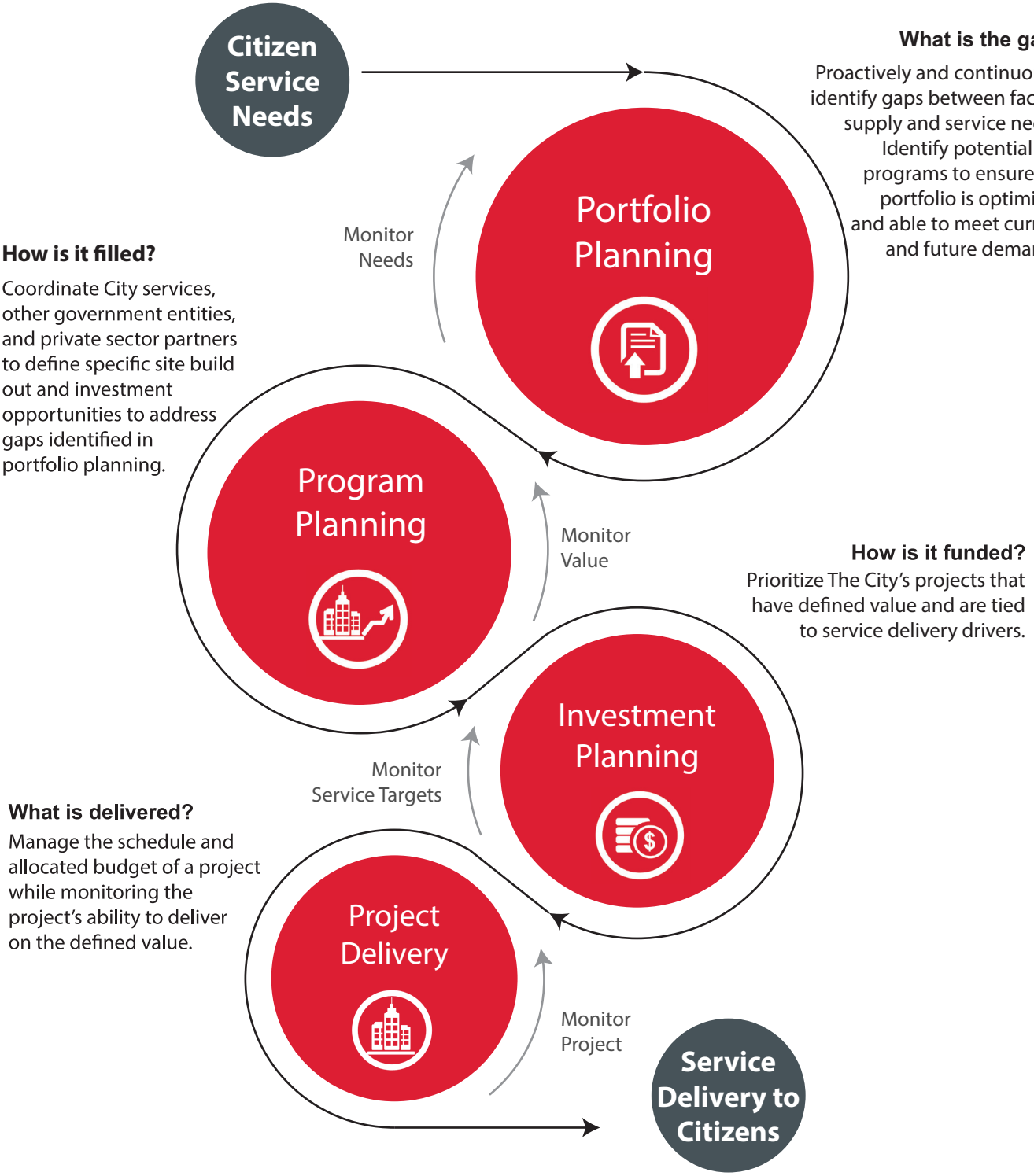
This model enables

- A portfolio view of The City's facility assets
- A forum for discussions across the organization
- More transparency with approved performance measures
- Clear accountability and delegation for faster decisions
- Flexibility to respond to changing direction
- Interdisciplinary teams to deliver on goals
- The inclusion of external stakeholders (e.g. regional planning, other levels of government, civic partners)

Process

A consistent approach to planning and delivering facilities is necessary to achieve the goals and principles within this Framework and maintain line of sight from initial vision to when the facility is delivered. The process is not always linear and it refines City objectives and service requirements through planning at various scales: city wide (portfolio), site specific (program) and the investment required to deliver (project).

The diagram below shows the cyclical nature of the process with the following pages providing more detail on each component part.



How the Process Works

Process	Portfolio Planning	Program Planning	Investment Planning
Output	**Facility Portfolio Plan**	**Facility Program Plan**	**Facility Investment Plan**
What is it?	A city-wide view of the facilities The City has and needs. Identifies and recommends how to fill the gap by building, renovating, demolishing, selling, and/or leasing over the long-term. The portfolio is continuously monitored and adjusted to obtain value and meet service needs.	A site-specific master plan that outlines The City's long-term vision for a site, how and when it will be built, what and when services will be provided and how the site will be operated.	A comprehensive list of projects that are required to support service delivery along with service triggers that identify when it is best to provide funding.
Planning Horizon	**1-30 Years**	**1-20 Years**	**1-10 Years**
What is being done?	• Setting the long-term vision for the facility portfolio and sites • Identifying gap between supply and demand • Identifying appropriate locations for service delivery • Identifying what facilities should be multi-service or single-use • Identifying City requirements before funding is requested	• Developing a site masterplan • Developing a phased implementation plan • Establishing partnerships with levels of government and the private sector for construction, funding, and operations • Setting out terms of partnership and agreements for the delivery and operations of a site	• Corporately prioritizing facility investment • Advocating to other levels of government and private sector for funding • Efficiently and effectively managing capital funds
What is the result? Why does it matter?	• Capital cost efficiencies through shared land and space • Economies of scale by planning for multi-service facilities • Harder working facility infrastructure that supports multiple City outcomes • Maximized land value and ability to work with the private sector early in the process • Council has opportunity to provide input into vision	• Shovel-ready projects planned in advance of funding • More accurate cost estimates • Site phasing to achieve larger vision, support service delivery and respond to funding availability • Ability to work with regional partners and other levels of government • Council and community have the opportunity to provide input	• Right projects funded at the right time based on service need and service triggers • Ability to respond to federal and provincial funding when available. • Ability to advocate for new public and private funding sources • Reduction in risks to partnerships with private sector

Project Planning	Project Design	Project Delivery
		
Facility Project Charter & Plan	**Drawings & Specifications**	**A Completed Facility**
A project charter and detailed plan that outlines the best approach to delivering the project on time and on budget.	Facility designs that meet the functional requirements of City services, align with the Municipal Development Plan, and support The City's urban design objectives.	The construction of a facility that supports the delivery of City services and contributes to the goals outlined in the Framework.
1-5 Years	**1-5 Years**	**1-5 Years**
• Setting up the project manager and team to successfully manage the scope, budget and schedule of the project • Determining delivery options: internal or private sector • Establishing project governance	• Defining a facility's functional program in collaboration with all stakeholders • Designing to support site vision, service delivery and operations • Adhering to design standards and specifications	• Delivering quality facility projects on time and on budget • Establishing quality controls
• Agreement and alignment with stakeholders to streamline decisions • Well-managed procurement to deliver the project • Identification of other mechanisms for project delivery other than construction (i.e. real estate transactions)	• Effective space to deliver efficient services • Standards and specifications to streamline partnerships and allow developers to deliver City facilities • More efficient operations of facilities through standardized design	• Expectations are managed through transparent project management processes and standards • Budgets and time are well managed through project monitoring and controls

Strategies

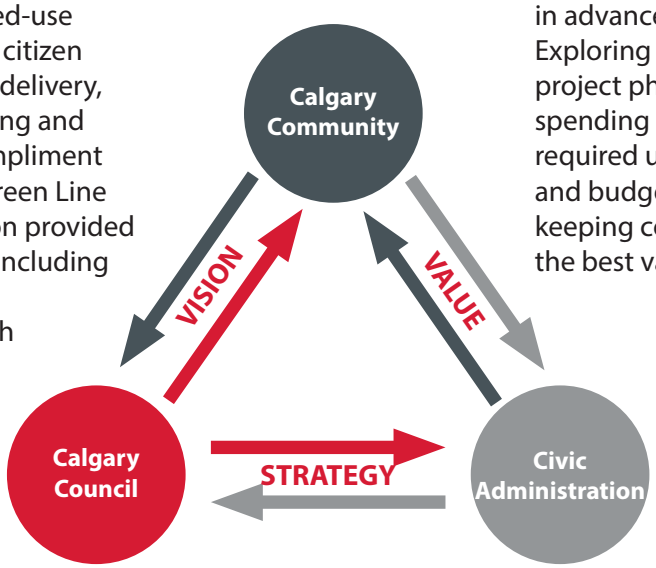
A series of strategies have been developed that tie to the Framework goals and illustrate how The City will deliver on the strategic actions. Each strategy has been developed with a set of principles, decision making criteria, strategy governance and dependencies to support implementation. The strategies are intended to provide a principled approach for which to analyse, recommend and govern actions on a given project. The appropriate strategy or combination of strategies will be employed to achieve the Framework goals on individual facility projects.

As technology, the environment, Council direction, and the needs of citizens change over time, strategies will be adjusted or new ones developed. The Framework allows governance and process to respond in a consistent way even as strategies shift. Below are a selection of strategies and their intended objectives:

Location	• Identify the optimal locations to support service delivery • Determine long-term strategic locations for The City
Co-Location	• Identify co-location clusters • Identify what services need to and can go together • Determine whether multi-service or single-use is most appropriate
Renewal and Disposition	• Identify facilities that no longer meet service needs • Reduce overall total cost of ownership • Determine whether to replace, renew or dispose of facilities
Developer Funded and Delivered Facilities	• Identify facilities that could include private uses • Identify when developer involvement could enhance an opportunity • Identify where The City can contribute to investment in a location
Strategic Acquisitions and Holdings	• Identify when a strategic acquisition for a facility is appropriate • Determine the feasibility of strategic acquisitions
Leasing Versus Owning	• Determine when to lease and when to build facilities • Determine when leasing contributes to a larger outcome
Generating Revenue Through Leasing	• Identify where it is appropriate to have spaces for lease in facilities • Identify where public benefit can be created
Urban Design	• Outline the importance of design in City facilities • Define how The City supports good urban design
Workplace	• Define how The City plans its workplace and supports employee productivity • Determine how office space will be managed

Proof of Concept: Thornhill Civic Centre

Vision: The existing facilities were no longer meeting the needs of the growing community. This vibrant, mixed-use community hub will enhance citizen quality of life, expand service delivery, contribute to avoided operating and capital expenditures, and compliment the vision of the upcoming Green Line TOD. Community collaboration provided input into proposed services including Recreation and outdoor spaces, retail, child care, health services, library, etc.



Value: Critical information gathering and planning has been completed in advance of the TOD time line. Exploring the opportunity and project phasing avoids risk to capital spending as full capital funding is not required up-front. Cost estimation and budgeting will be more robust, keeping costs known and delivering the best value to citizens.

Strategy: Both internal and external stakeholders were involved in exploring needs, analyzing social, economic and environmental influences, visioning and developing a conceptual design. Early collaboration and collective understanding ensures operational efficiency and ongoing integration of services well after construction is complete. Detailed operational requirements will be discussed during the planning phase as they will be critical to design.

Strategic Actions Used:

- ✓ Plan facilities collaboratively across all service lines
- ✓ Develop facilities with flexibility to respond to evolving City services
- ✓ Plan projects in advance of capital budget requests to capitalize on grant and funding opportunities
- ✓ Partner with other levels of government and community groups to enhance the usability of facilities for citizens
- ✓ Locate and co-locate City services with other services to diversify the amenities available in communities

Fire Station No. 35

The Framework in Action:
Development and Evaluation

Development of the Framework

The Corporate Facility Planning & Delivery Framework is based on industry practices adapted to work with The City's policies, structure and business planning, and capital budgeting process. The Framework was developed through a collaborative cross-corporate approach that embedded learning and continuous improvement into the process.

The following diagram outlines the development and implementation streams of the Framework.

The use of Learning Projects to understand the nuances of complex projects that involve multiple stakeholders, both internal and external, has been critical to developing this Framework. Below is a selection of the Learning Projects undertaken during the development of the Framework.

Corporate Lessons Learned	A review of past projects' successes and areas for improvement including New Recreation Facilities program, Louise Station, Genesis Centre, Country Hills Multi-service Centre, and Operations Workplace Centre program.
Varsity Multi-service Centre	The redevelopment of an existing City site to enhance Fire operations and include other internal and external partners to support a complete community. This project also looks to optimize the land for future uses.
Public Access at Royal Vista Fire Station	A review of the public use of spaces in facilities not traditionally open for community use to assess operational impacts.
Revitalize Established Community Facilities Study	An assessment of existing facilities in established Calgary communities to understand their potential for redevelopment into multi-service sites.
Symons Valley Centre	The development of a multi-service greenfield site in conjunction with multiple internal and external stakeholders. A phased program that responds to service needs while maintaining the larger vision for the site.
Thornhill Civic Centre	A large scale, multi-stakeholder redevelopment project on a major future Green Line TOD.
Portfolio Planning for One Calgary	Portfolio planning to demonstrate the collaboration necessary to coordinate capital budget requests on multi-service projects.

Evaluation

The Corporate Facility Planning & Delivery Framework lays the groundwork not only for what The City will do but the evaluation of the system and the facilities delivered.

Evaluation will be in alignment with Results Based Accountability and focus on the broader impact of the investment made by The City in facilities, enabling greater alignment among the many services provided by The City. Having a focused and manageable set of measures and indicators establishes a common language that supports the Framework goals, promotes collaboration, and allows the measurement of progress.

Impacts from facility programs and projects will be projected before and measured after implementation to demonstrate the benefits of investment. Critical to the evaluation model is acknowledging that, because of the complexity of service requirements and the diversity of the facility portfolio, not every facility will achieve every goal. Progress towards the goals should be a cumulative effort, demonstrated across The City's facility portfolio as a whole. In addition, lessons learned throughout facility planning and delivery will be incorporated to support the long term continuous improvement of the Framework and the processes and governance within it.

To complete the evaluation model, the following actions will take place:

1. Develop a method for reporting on performance to different governing bodies
2. Establish indicators and measures based on the Framework goals and actions and the RBA methodology
3. Establish baseline data as a benchmark for progress
4. Commence measurement
5. Report progress towards goals

There are a number of dependencies that need to be addressed before a comprehensive evaluation program can be implemented. These dependencies are closely tied with the operations and asset management functions for the facility portfolio. They include complete, consistent, and reliable data for all City facilities, processes and stewards to manage the ongoing maintenance and collection of data, performance measures for services, and the implementation of the strategies.

Accountability

Facility Management (FM) has the corporate mandate to plan, build and operate The City of Calgary's facility portfolio. As the representative service owner, Facility Management is accountable for managing the collaborative, integrated processes as outlined in the Framework, and ensuring the right representation is involved in decision making. Governance has been structured to hold the Facility Management Service Sponsor responsible and the Deputy City Manager accountable for the execution of the Framework.

Manchester Building A
Logistics Centre

Appendix

Appendix A: Glossary of Terms

Accountable: The party that owns the ultimate result. Accountability can not be delegated.

Administrative functions: A set of tasks or activities that support the management of the business or organization.

Asset: Machinery, property, buildings, information technology hardware and software code, and other items and related systems that have a distinct and quantifiable business function or service, and a financial value and economic life greater than one year. [19]

Building systems: The network of mechanical structures that contribute to the operation of a facility, such as HVAC, plumbing, electrical, etc.

Business continuity: An ongoing process supported by senior management and adequately funded to ensure that the necessary steps are taken to identify the impact of potential losses and maintain viable recovery strategies and recovery plans for the continuity of services and operations, or continuity of government, following a disruptive event.[20]

Collaboration: A process that involves a mutually beneficial relationship between parties that builds on shared outcomes.

Co-locate: The placement of two or more items, services or buildings in a singular or adjacent area to compliment or benefit all.

Complete Communities: Complete communities are vibrant, green and safe places, where people of varying ages, incomes, interests and lifestyles feel comfortable and can choose between a variety of building types and locations in which to live and where daily needs can be met. Complete communities include a range of housing and community services, schools and recreation facilities. The diversity within complete communities provides more choices, so that residents have the opportunity to live and remain in their own neighbourhood as their housing needs change over their lifetime.[16]

Corporate facility portfolio plan: A long-range (one to 30 years) facility plan encompassing the entire City portfolio of owned and/or leased space and outlines what facilities The City will build, renovate, demolish, sell, and/or lease over the long-term. It aligns to the goals outlined in the Corporate Facility Planning and Delivery Framework and responds to Council's priorities and the organization's service requirements. The portfolio plan informs short-term (four year) tactical plans including the prioritization of, and funding for, facility related programs and projects.

Developers: Private sector, real estate developers and real estate builders who purchase raw land or existing buildings, provide vision, and bring capital to delivering residential, retail, office, industrial, etc. projects for sale or lease to the market.

Economies of scale: The advantages of implementing a plan with a wider scope versus a narrow scope. For example, co-locating several services in one facility will lower the operational costs each service is required to pay because it is split among more partners.

End of life: The optimal point in a facility's lifespan where the operational systems and physical structure are expected to fail and are no longer providing value or function for the cost to maintain it.

Evaluation model: A focused and manageable set of measures and indicators that establish a common language to support goals, promote collaboration and allow the measurement of progress.

Evidence-based decision making: Decisions are made based upon clear and concrete evidence developed through sound research and information gathering practices.

Facility or Facility infrastructure: Permanent, temporary or portable building structures, such as offices, garages, parkades, warehouses and recreational facilities intended to shelter persons and/or goods, machinery, equipment and working space. Includes heritage buildings that are used for administrative or operational purposes and leasehold improvement. Also referred to as a building.[21]

Facility Disposition: The strategic disposal of facility assets to avoid increasing maintenance costs, manage

investment or to relocate services to a preferred location.

Facility investment: The strategic allocation of funding for the planning, build, design and/or maintenance of City facilities in key areas that optimize service delivery to citizens.

Facility portfolio: The total facility holdings of The City of Calgary.

Facility program: A site-specific plan that outlines The City's long-term vision for a site, how and when it will be built, what and when services will be provided, and how the site will be operated.

Flexible: A quality of an entity/idea/process that allows it to change and adapt to meet both anticipated and unanticipated needs. Flexibility and adaptability aid in resiliency.

Framework: Basic structure and system for the planning and delivery of facilities made up of vision, goals, governance, processes, and strategies.

Governance: Authority levels and accountability to enable the achievement of stated goals in alignment with corporate objectives.

Guiding principles: The norms or ethics that guide the way The City plans and delivers facilities.

Integrate: The act of coordinating resources, services and programs to address common goals, to reduce duplication of efforts and improve efficiency and effectiveness.

Multi-service facility: A facility with two or more different uses or services provided within, such as a recreation facility with a library, Alberta Health clinic and a coffee shop.

Optimization: Making the best or most effective use of a resource. In context of this Framework, it refers to delivering the appropriate facility assets at the right time according to service needs, maximizing the utilization of asset holdings, and disposing surplus assets in a timely manner to reduce operational and maintenance costs.

Resiliency: The capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kind of chronic stresses and acute shocks they experience.

Responsible: The party that delivers the result. Responsibilities can be delegated for execution**.**

Service owners: The individual responsible for planning and monitoring a service, and for collaborating across organizational lines to represent and continually improve the service.

Single-use facility: A facility with only one use or service provided. In some instances, single-use facilities are the most appropriate option for certain services in a given location.

Stage gate: A process to manage risk and add value through structured decision-making, allowing the review of a project or initiative by the right people, asking the right questions at the right time.

Strategies: A defined approach, plan of action or policy designed to achieve overall aims or objectives. It includes a clearly defined objective, principles by which decisions are made, and the governance required to support decision making.

Transit-Oriented Development (TOD): A compact, mixed-use community within walking distance of a transit stop, that mixes residential, retail, office, open space and public uses in a way that makes it convenient to travel on foot or by public transportation instead of by car.[16]

* Some terms in this glossary were adapted from The City of Calgary's *Recreation Master Plan 2010-2020* and the *Glossary of Project Management Terms* from The City of Calgary's Project Management Hub.

Appendix B: Endnotes

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- Excludes Calgary Housing Company, Civic Partners, Leaseholds, Libraries and Provincially owned facilities.
- Names of all facilities referenced throughout document are from the Corporate Structures List

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First Issued June 2018

Council Policy

Policy Title:	**Corporate Facility Planning & Delivery Policy**
Policy Number:	**Assigned by the City Clerk's Office**
Report Number:	**UCS2018-0525**
Adopted by/Date:	**Council / Date Council policy was adopted**
Effective Date:	**Date adopted or later as directed by Council**
Last Amended:	**Date of the last amendment, if any**
Policy Owner:	**Facility Management**

1. POLICY STATEMENT

1.1. The City of Calgary plans and delivers its facility infrastructure collaboratively across The Corporation to avoid redundancy and duplication of effort, increase economies of scale, and ensure that facility decisions are evaluated under the same set of goals (see Schedule 1) and principles (see Schedule 2).

1.2. The City of Calgary uses a consistent, transparent process for the planning and delivery of facilities. This enables Administration to take a comprehensive, portfolio view to optimize facility assets, determine what services can locate together to maximize service and citizen benefit, assess if a single-use or multi-service facility is most appropriate, and consider opportunities to work with the private sector, non-profit agencies, external organizations or other levels of government.

2. PURPOSE

The purpose of this Council Policy is to:

2.1. Define the goals and principles for the planning and delivery of The City's facility infrastructure.

2.2. Foster transparency and accountability through the definition of roles and responsibilities.

2.3. Provide flexibility for Administration to professionally plan and deliver The City's facilities assets.

2.4. Establish consistent practices for planning The City's facility portfolio, allowing for greater management of risk and supporting innovative strategies for delivery.

3. DEFINITIONS

3.1. "Asset" means machinery, property, buildings, information technology hardware and software code, and other items and related systems that have a distinct and quantifiable business function or service, and a financial value and economic life greater than one year. The asset referred to in this Policy is buildings or facilities.

3.2. "City" or "The City" means The City of Calgary, a municipal corporation pursuant to the *Municipal Government Act* (Alberta).

3.3. "Corporate facility portfolio plan" refers to a long-range (one to 30 years) facility plan encompassing the entire City portfolio of owned and/or leased space and outlines what facilities The City will build, renovate, demolish, sell, and/or lease over the long-term. It aligns to the goals outlined in the *Corporate Facility Planning and Delivery Framework* and responds to Council's priorities and the organization's service requirements. The portfolio plan informs short-term (four year) tactical plans including the prioritization of, and funding for, facility related programs and projects.

3.4. "Council" means the Council for The City constituted pursuant to the *Municipal Government Act* (Alberta).

3.5. "Council Policy" means a policy passed by resolution of Council.

3.6. "Facility" or "Facility Infrastructure" refers to permanent, temporary or portable building structures, such as offices, garages, parkades, warehouses and recreational facilities intended to shelter persons and/or goods, machinery, equipment and working space. Includes heritage buildings that are used for administrative or operational purposes and leasehold improvement. Also referred to as a building.

3.7. "Facility Portfolio" refers to the total facility holdings of The City of Calgary.

3.8. "Facility Program" refers to a group of projects, subprograms and program activities related to the outcome for a specific site. A facility program plan outlines The City's long-term vision for a site, how and when it will be built, what and when services will be provided, and how the site will be operated.

3.9. "Framework" refers to the basic structure and system for the planning and delivery of facilities made up of vision, goals, governance, processes, and strategies.

3.10. "Goals" refers to the clearly defined and agreed to objectives of developing and redeveloping City of Calgary facilities (see Schedule 1).

3.11. "Guiding Principles" refer to the norms or ethics that guide the way The City plans and delivers facilities (see Schedule 2).

3.12. "Multi-service facility" refers to a facility with two or more different uses or services provided within.

3.13. "Optimization" is defined as making the best or most effective use of a resource. In context of this Policy it refers to delivering the appropriate facility asset at the right time according to service needs, maximizing the utilization of asset holdings, and disposing surplus assets in a timely manner to reduce operational and maintenance costs.

3.14. "Service/Services" refers to services delivered by The City of Calgary as outlined in Three Conversations, One Calgary: The City's Strategic Plan for 2019-2022 (C2018-0224).

3.15. "Service owner(s)" refers to the individual responsible for planning and monitoring a service, and for collaborating across organizational lines to represent and continually improve the service.

3.16. "Single-use facility" refers to a facility with only one use or service provided.

3.17. "Strategic actions" refers to the actions that can be taken to contribute to an overall goal or outcome.

3.18. "Strategies" refers to a defined approach, plan of action or policy designed to achieve overall aims or objectives. It includes a clearly defined objective, principles by which decisions are made, and the governance required to support decision making.

4. APPLICABILITY

4.1. This Council Policy applies across all directly delivered City of Calgary services and other services delivered in a multi-service facility.

5. LEGISLATIVE AUTHORITY

5.1. This Council Policy complies and is aligned with requirements under the *Municipal Government Act* (Alberta)(MGA) and other applicable legislation.

5.2. The City's facilities must align with Part 1, Section 3, of the MGA, municipal purposes: The purposes of a municipality are (a) to provide good government, (a.1) to foster the well-being of the environment (b) to provide services, facilities or other things that, in the opinion of Council, are necessary or desirable for all or a part of the municipality, (c) to develop and maintain safe and viable communities, and (d) to work collaboratively with neighbouring municipalities to plan, deliver and fund intermunicipal services.

6. PROCEDURE

6.1. Roles and Responsibilities

6.1.1. City Council

City Council is responsible for:

(a) Approving the Corporate Facility Planning & Delivery Policy and future amendments;

(b) Receiving facility planning and delivery progress reports; and

(c) Providing input and consultation on facility portfolio and program plans.

6.1.2. City of Calgary Administration

City of Calgary Administration is responsible for:

(a) Adhering to this Policy;

(b) Establishing cross-corporate governance bodies to provide direction and approval on facility plans and projects and support collaboration between all service owners; and

(c) Coordinating development of new and innovative approaches to planning and delivery of facilities.

6.1.2.1. Facility Management

Facility Management, the representative service owner and business unit, is accountable to implement, coordinate, and support the consistent management of this Policy and related procedures as outlined in the *Corporate Facility Planning & Delivery Framework.* This includes, but is not limited to:

(a) Acting as the Policy Owner for this Policy;

(b) Facilitating the collaboration of City services to ensure facilities meet service requirements and opportunities for multi-services facilities are identified;

(c) Coordinating the planning and delivery of the corporate-wide facility portfolio plan and facility program plans and projects on behalf of The City and in accordance with the Policy goals and principles;

(d) Delegating responsibility to other service owners for the planning, development or management of facility projects as determined by the appropriate corporate facility governance body;

(e) Developing tools, templates, and processes to support the *Corporate Facility Planning & Delivery Framework*;

(f) Facilitate, support and report to the governance bodies responsible for making decisions on The City's facility portfolio;

(g) Sustaining and continuously improving the *Corporate Facility Planning & Delivery Framework;*

(h) Reporting on the status of facility plans and projects to the appropriate governance bodies; and

6.1.2.2. City of Calgary Service Owners

City of Calgary service owners are responsible for:

(a) Identifying and understanding each services' customers and customer needs;

(b) Identifying service requirements and drivers of service change;
(c) Contributing to facility planning and design activities so service delivery requirements are met;

(d) Providing functional requirements for service delivery and operational needs;

(e) Providing short, mid-, and long-range service plans;

(f) Delivering and operating the service;

(g) Forecasting workforce levels in the short, mid-, and long term; and

(h) Contributing to the evaluation of the facility within the context of service delivery to citizens.

6.1 Strategies

6.1.1 Facility strategies will be developed in alignment with the goals outlined in this Policy (see Schedule 1) and the strategic actions referenced in the *Framework*. Administration will determine the approving body for each strategy based on the strategy's content and impact.

6.2 Process

6.2.1 The process defined in the *Corporate Facility Planning & Delivery Framework* provides guidance for how Administration will plan and deliver facility infrastructure. Modifications are expected as part of continuous improvement through lessons learned and will not require amendments to this Policy.

6.3 Evaluation

6.3.1 An evaluation model and reporting procedures will be developed in alignment with the goals and principles within this Policy. Regular reporting periods will be determined as part of this model.

7 **SCHEDULES**

7.1. Schedules:

7.1.1. Schedule 1 – The City of Calgary Facility Planning & Delivery Goals
7.1.2. Schedule 2 – The City of Calgary Facility Planning & Delivery Principles

7.2. Schedules form part of the Council policy. Future change(s) to the schedule(s) require a decision from Council.

8. **AMENDMENT(S)**

Date of Council Decision	Report/By-Law	Description

9. **REVIEWS(S)**

Date of Policy Owner's Review	Description

SCHEDULE 1

Goals for the Planning and Delivery of City of Calgary Facilities

The following six goals guide all facility decisions made at The City of Calgary. Potential strategic actions that will help achieve the goals are included in the *Corporate Facility Planning & Delivery Framework.*

1. **Efficient and Effective Service Delivery:** City facilities are planned to support the efficient and effective delivery of services to citizens.

2. **Reduced and Avoided Costs:** The City plans its facility portfolio with the objective of achieving the best value for money while demonstrating value to citizens.

3. **Citizen Focused Facilities**: The City of Calgary's facilities are planned and designed with the citizen front of mind to support how they receive services, how they interact with facilities in their communities, and how facilities contribute to quality of life.

4. **A Resilient Facility Portfolio**: Future-forward planning for the facility portfolio will contribute to the economic, environmental, social, and cultural resiliency of Calgary.

5. **Complete Communities**: City of Calgary facilities contribute to the Municipal Development Plan (MDP) objective of Complete Communities by aligning facility planning and delivery with city growth and community planning objectives in new and established communities.

6. **Enhanced Employee Experience:** Facilities developed by The City contribute to the well-being and performance of City of Calgary employees by focusing on health and safety and pro-actively planning for the evolution of work practices, technology, and the changing demographics of the workforce.

SCHEDULE 2

Guiding Principles for the Planning and Delivery of City of Calgary Facilities

The following guiding principles will be used during the planning and delivery of City of Calgary facilities:

1. **Value for Citizens:** Planning for the facility portfolio will focus on value for citizens through the ongoing optimization of the portfolio.

2. **Outcome Driven & Evidence-based:** Facility decisions will be driven by the goals approved within this Policy. Evidence-based decisions will be made to support the best and highest use of City facilities through appropriate benchmarking and data collection based on professional facility management industry measures and an evaluation model that supports ongoing management and continuous improvement.

3. **Long-term & Strategic:** Planning will be proactive, long term and strategic to establish a vision for the facility portfolio and ensure projects are aligned with that vision over time.

4. **Integrated & Collaborative:** Facility planning and delivery will be coordinated with internal and external stakeholders to leverage resources, capitalize on the range of expertise available, and meet corporate objectives.

5. **Consistent yet Flexible:** The City of Calgary will follow a consistent and repeatable process for how analysis is done and facility decisions are made. Processes will also allow for flexibility to respond to the rapid technological, societal and organizational changes.

THE CITY OF CALGARY
Proudly serving a great city

COUNCIL POLICY

Policy Title: Corporate Workplace Framework Policy
Policy Number: CS002
Report Number: OE2003-78
Approved by: City Council
Effective Date: 2003 November 3rd
Business Unit: Corporate Properties and Buildings

BACKGROUND

The Corporate Workplace Framework provides a policy framework to guide decisions regarding workplace infrastructure.

PURPOSE

The Corporate Workplace Framework was developed at the request of Council in order that workplace infrastructure is developed in the context of a long-range plan. This policy provides vision, principles and structure to aid in the decision making process regarding workplace infrastructure.

The policy responds to growth of The City, changes to service delivery and the need for accountability and fiscal responsibility.

POLICY

See attached Policy Document

PROCEDURE

All new workplace infrastructure requirements and renovations to existing workplace infrastructure shall adhere to the vision, principles and structure of this policy. Detailed administrative procedures are currently being developed by Council and Administration to guide implementation.

AMENDMENTS

None

2010 revision- policy number change from AMCW002 to CS002 due to department reorganization.









THE CITY OF CALGARY

Corporate Workplace Framework

Corporate Workplace Framework

THE CITY OF CALGARY

The process of developing the Corporate Workplace Framework incorporated a stakeholder participation strategy that provided a number of opportunities for input. Participating stakeholders included members of Council and The City's Senior Administration.

All stakeholders expressed a strong desire and support for the development of a conceptual framework that integrates The City's long-term workplace infrastructure strategies with Council's long-range priorities and strategic initiatives undertaken by City departments.

There was significant support for developing a customer-focused framework that has as its goal – To position The City as a leader in developing and managing workplace infrastructure. The Guiding Principles contained within this policy document state the broad intended results of the Corporate Workplace Framework.

Catalyst	Council's request for putting workplace infrastructure into a long-term plan Growth of the City, re-organization of City departments Changes to service delivery, new accountability, a variety of related City initiatives, alternative funding opportunities Planning process initiated with City departments for office space, operational requirements and protective services facilities Need for accountability and fiscal responsibility
Purpose	Develop a strategic workplace infrastructure framework to help guide the growth and development within The City of Calgary and facilitate the coordination of workplace infrastructure policies, programs and capital investment between City departments Ensure Council stewardship is reflected in workplace infrastructure strategies Balance The City of Calgary corporate values: • Strengthening the workforce • Responsible asset management • Provision of quality services
Process	Engage members of Council Engage Stakeholders Engage Senior City Administration and inform City employees

The Corporate Workplace Framework Executive Summary

The Corporate Workplace Framework provides a policy framework that defines and guides decisions for workplace infrastructure. What The City does today, will ultimately provide much-needed infrastructure for tomorrow.

The City of Calgary recognizes that a proactive approach to planning and developing City real estate assets will yield improved service levels to our customers and will ultimately result in better utilization of human, physical and financial resources.

The City of Calgary will become an industry leader in the provision of workplace infrastructure through the implementation of the Corporate Workplace Framework. The Corporate Workplace Framework supports the Corporate Vision of *"Working together to create and sustain a vibrant, healthy, safe and caring community."*

The City of Calgary assigns a high priority to the responsible management of its assets. The Corporate Workplace Framework promotes a strong connection between The City's long-term goals, the physical environment and workplace infrastructure[1] that supports those goals.

The Corporate Workplace Framework emphasizes the connections between policy thrusts and strategies as each relates to long-term workplace infrastructure. The Corporate Workplace Framework guides growth and development within The City of Calgary. It provides a basis for actions and decisions in order to better manage the increasing demands for workplace infrastructure over time to more effectively respond to Council's agenda, improve the delivery of quality service and aid in strengthening the workplace.

1. Workplace infrastructure includes land and facilities such as offices, furniture, warehouses, garages and temporary structures. Workplace elements include the, lighting, temperature, ventilation and other related equipment.

The Corporate Workplace Framework has four primary purposes:

- **Vision** – e stablishes a vision for long-term workplace infrastructure that supports and enhances the delivery of City services;
- **Policy** – creates tools for decision making regarding workplace infrastructure by developing a policy framework, guiding principles, and strategies;
- **Implementation** – establishes a collective direction for implementation of the Corporate Workplace Framework; and
- **Success** – creates measures of success for achieving objectives of the Corporate Workplace Framework by setting targets for performance based on improved levels of service delivery.

The organizing principle of the Corporate Workplace Centre is around three interrelated workplace centres: a **Public Service Workplace Centre**; an **Operations Workplace Centre** and a **Protective Services Workplace Centre**. The workplace centres are a powerful tool for focusing The City's service delivery more effectively to achieve higher operational efficiencies and synergies between and within City departments.

Corporate Properties and Buildings(CPB) will undertake the responsibility to implement the Corporate Workplace Framework.

Policy Direction

The City will become a leader in the provision of highly functional workplace infrastructure by establishing a responsible asset management approach to implementing the Corporate Workplace Framework. This will be accomplished through seven supporting principles:

- ***Safe, secure and healthy work environments***
- ***Highly functional, equitable work environments***
- ***Optimize working relationships***
- ***Best solutions based on corporate values***
- ***Open and integrated process***
- ***Sustainability***
- ***Evaluation***

The Corporate Workplace Framework is Visionary, Strategic and Long-term

The Corporate Workplace Framework is a visionary, long-term strategy that integrates workplace infrastructure with city initiatives.

A Vision for the Future… Calgary, in the year 2024.

Population in Calgary continues to increase at a rapid rate. Because of the foresight of Council some 20 years ago, a common vision and direction are now established for workplace infrastructure. Our City departments work together more collaboratively than ever before and are not only meeting but also exceeding the expectations of our culturally diverse population through the implementation of three workplace centres. The three workplace centres established by the Corporate Workplace Framework are working to provide the right infrastructure, flexible and adaptable working situations and collaborative atmospheres to support the highest levels of service possible.

Through the establishment of the Workplace Centres, we have streamlined and re-oriented our service delivery models across all City departments to better reflect the needs and desires of our citizens. By conceptualizing services under three distinct but interrelated Workplace Centres, the Framework has made it easier to focus on services specific to City departments and identify both synergies and conflicts. We now offer choice by providing services where, when and in the formats citizens want through the deliberate placement of shared facilities throughout The City, the use of communications technology and by strategically locating City departments in close proximity to the services that we provide. We recognized early on that effective use of our public facilities involved increasing the utilization of our facilities within the communities we serve. Community groups, essential services and public services staff now share the use of our public facilities to provide programs and services for citizens at all times of the day and evening. As a result, synergies and economies of scale create savings that are passed on to Calgarians helping to manage taxes despite the need to maintain a growing infrastructure.

Connecting people by using innovative communications technology and increasing the utilization of existing and new facilities, workplace infrastructure is no longer an issue. Some of our 15,000 employees work at home, some work within established Workplace Centres and some of our employees work directly in the communities they serve. Our collaborative and flexible workplace environments, combined with adequate space employees need to do their work, have helped create an environment for City employees that has made The City one of the best places to work in Calgary, making it easy to attract quality staff.

We have made some wise infrastructure decisions based on a solid understanding of service delivery from the perspective of those using the service. We have City buildings that are welcoming to the public. Our facilities are well managed and maintained and owned by The City. Our workplace infrastructure accommodates future growth and employees feel safe, happy and comfortable in their functional and flexible surroundings. We understood the importance of sustainable buildings and infrastructure in minimizing

impacts on social and environmental systems early on, and we continue to balance our fiscal priorities with our responsibility to make the right decisions for tomorrow. The City is considered a responsible asset manager.

Despite the City's ongoing growth, our Police, Fire and Protective Services, are able to respond to emergency situations more efficiently and quickly than even 20 years ago because of the advances in technology. Our emergency field workers are able to liaise with main headquarters from anywhere in The City at anytime. By sharing workplace infrastructure the number of communication systems required has decreased and workloads for office personnel are managed despite the growth of The City. Our fire fighters, and police officers are also more involved and connected to both the inner-city communities and outlying suburbs. The cost savings from our protective services working together and sharing workplace infrastructure, under the Protective Services Workplace Centre, are invested in infrastructure to bring emergency services personnel directly into the communities.

The long-term strategy established some time ago has also allowed for synergies and improved processes with new partners. For example, The City and the local health region are working together to provide shared facilities within existing communities. Local libraries, public health and diagnostic centres are linked through technology and in some cases, located together within sectors of our City to better serve the community-based health needs of our changing population.

Operationally, we are also connecting with and serving the needs of our citizens better than ever before. Our regional public works yards are fully operational serving established and new residential communities. Our public works yards embrace the urban design of the local communities each resides in and are an integral part of increasing the utilization of our facilities by supporting community programs and services. All our City departments share financial resources and are operating with a strong and healthy budget. Each works together to dispatch trucks to gravel our roads, fill our pot holes, maintain our playgrounds and recreational facilities, clean our water and process our waste. Through collaboration, the regional public works yards have streamlined operations resulting in a reduction in overall costs. Our budgets go further and provide opportunities to reinvest in service delivery.

The three Workplace Centres continue to guide the vision for the Framework. All facilities and associated infrastructure support new, collaborative service delivery models. Because employees have the facilities and equipment they need, service to the public has improved significantly. Through our workplace centres, we have created sustainable budgets by maintaining a long-term view of workplace infrastructure. We have maximized our infrastructure, and therefore our human and financial resources. We continue to improve the quality of life of our citizens through smart infrastructure decisions, which have enhanced our service delivery.

Four Cornerstones of the Framework

The City will be accountable for ensuring workplace infrastructure capacity to meet long-term service delivery requirements by making appropriate decisions based on civic priorities.

The City will use an integrated approach to implementing the vision for and the provision of the type of workplace infrastructure that will better support the service needs of all City departments by providing workplaces that are highly functional, safe and welcoming.

The Corporate Workplace Framework positions the City as a leader in the responsible management of its workplace infrastructure that supports excellence in service delivery.

A proactive approach to planning and developing City assets will yield improved levels of service to our customers and will ultimately result in better utilization of human, physical and financial resources. This policy incorporates four "cornerstones" which are the basis or foundation for guiding action:

Council Stewardship

Calgary has experienced strong population growth over the last decade growing by 223,067 persons between 1999 and 2009. Population growth is expected to continue over the next decade in a strong and steady but slightly moderated pattern.

As a result, The City is not able to fully respond to evolving workplace demands and is now coming to the close of the latest development cycle without the benefit of having been able to build up a strategic reserve. The ability of The City to maintain current service levels and to attract and retain public service workers may be compromised if a long-term workplace infrastructure strategy is not developed and adopted as a policy for all City departments within The City of Calgary.

Previously, The City took a proactive approach to creating infrastructure that had the capacity to meet long-term needs. In fact, much of The City's growth, since the 1990's has been accommodated because of decisions made in the late 1970's and early 1980's.

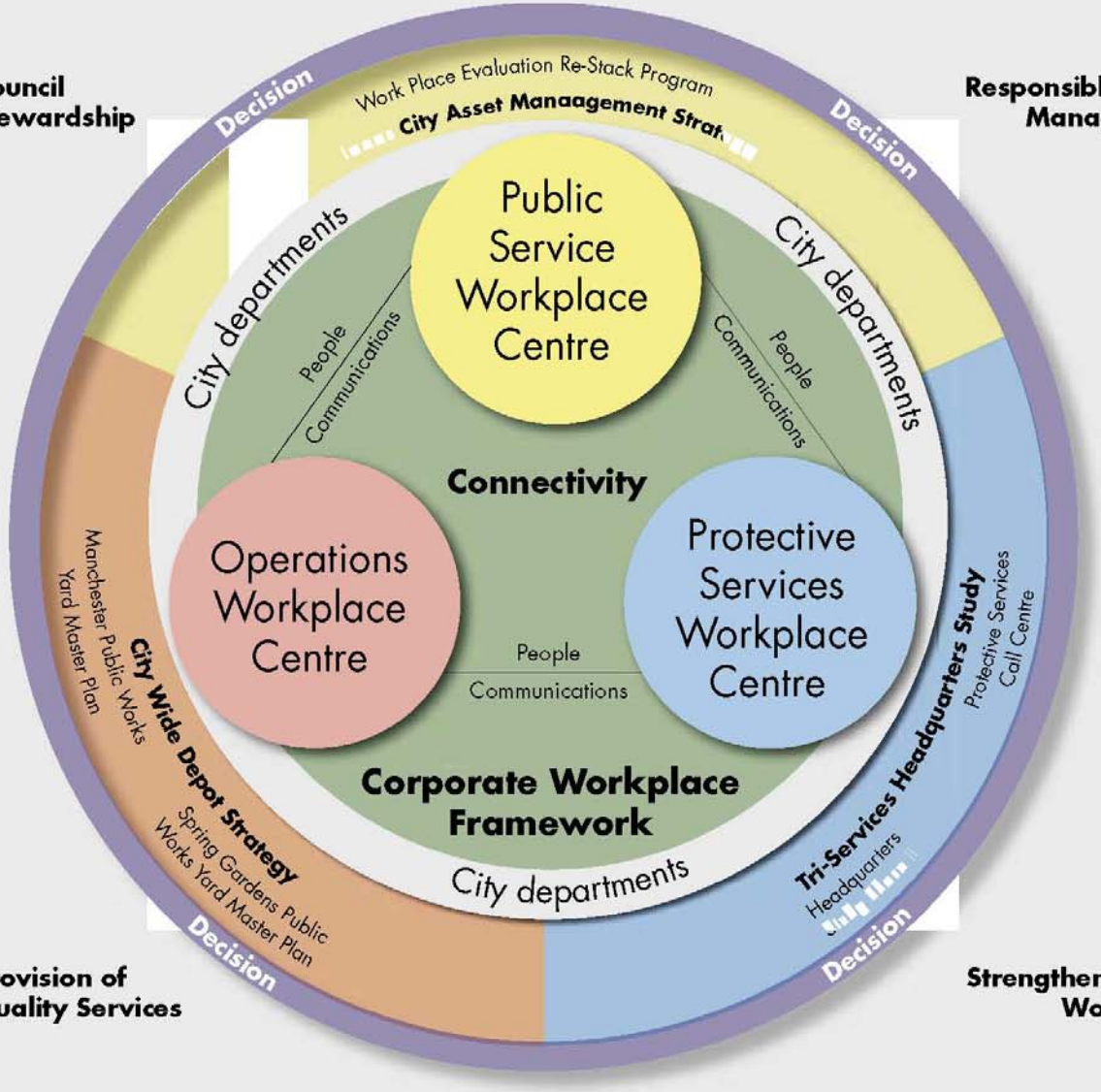
The time is right for Council to approve a proactive approach to creating a new vision of the type of workplace infrastructure that will better support the infrastructure needs of all City departments for accommodation. This approach will yield the most value for The City's finite capital resources.

Responsible Asset Management

All City departments must ensure the best value for available funds. This means working together to achieve a proactive approach in implementing a framework that looks at the big picture", sharing budgets and physical resources, reducing redundancies and creating efficiencies in the provision of services to the public.

Now is the time for The City to be a leader in implementing a new vision for the type of workplace infrastructure that will better support the service needs of all City departments by focusing on highly functional workplaces.

Corporate Workplace Framework: A long-term vision for workplace infrastructure



The City will support the long-term recruitment and retention goals in part through the creation of workplaces that are supportive and enriching for City employees.

The City will ensure all workplace infrastructure is flexible enough to allow the continuation of a high level of services and support changes to delivery models over time.

Strengthening the Workforce

The City's Corporate Workforce Strategy in Administration Space seeks to support long-term recruitment and retention goals in part through the creation of workplaces that are supportive and enriching for City employees. There is also a need to ensure consistency and equity. The City organizational structure emphasizes a strong City mandate to provide leadership in strategically planning and managing workplace infrastructure.

The Corporate Workplace Framework, which encompasses long-term workplace infrastructure strategies, was developed within the context of other strategic plans relating to Calgary's urban structure, transportation and its people in supporting the corporate vision of working together to create and sustain a vibrant, healthy, safe and caring community."

Provision of Flexible, Quality Service

City departments are defining alternative service delivery methods that are changing the type of facility support required for City employees to do their work. Technology is also having a major impact on the manner in which The City of Calgary delivers services, and on the workplace environments that support such service delivery.

Increased public contact and expectations for easier access to City services impacts the type and location of accommodation infrastructure. As service delivery models change to reflect the desires of our citizenry, the infrastructure must be flexible enough to support those desires.

The requirements for flexible spaces that meet the needs of a changing workforce are a key driver to the Corporate Workplace Framework. How The City positions its accommodation strategy for change will be key to sustaining service delivery models. A proactive approach to planning and developing City real estate assets will yield improved service levels to our clients and will ultimately result in better utilization of human and financial resources.

The Role of the Corporate Workplace Framework

Workplace Centres: Supporting long-term workplace infrastructure needs

The vision for the Corporate Workplace Framework is a conceptual structure for the development of three “centres of excellence”. It promotes a strong connection between The City’s long-term goals, the physical environment and workplace infrastructure that supports those goals.

Currently, workplace infrastructure, as is the case with many organizations, is based on organizational structure and position within the Corporation. The fundamental challenge for The City of Calgary is to create flexible workplace infrastructure that is based on “function” as it relates to service delivery to citizens.

The organizing principle of the Corporate Workplace Framework is around three workplace centres. Policies, programs and capital investments are grouped under three interrelated workplace centres: a **Public Service Workplace Centre**, an **Operational Workplace Centre** and a **Protective Services Workplace Centre**. The workplace centres are based on the functional services each provides.

The workplace centres are a virtual concept providing powerful tools for focusing The City’s service delivery more effectively to achieve higher operational efficiencies and synergies between City departments. Through collaboration, shared human, technological and financial resources, the three workplace centres ensure an environment where people can be their most creative and excel, where barriers to innovation are minimized, and workplace infrastructure supports the development and seamless implementation of new ideas and services.

Although the Corporate Workplace Framework is organized into three components, none should be read in isolation of the other. Each centre has a role to play in supporting the long-term infrastructure needs of The City of Calgary. Through these “centres of excellence”, the three workplace centres create a workplace environment that supports a wide range of employment and business development opportunities.

Work functions as they relate to the services The City provides, will determine the workplace infrastructure.

Workplace Centres: Supporting long-term space accommodation needs

Public Service Workplace Centres will primarily accommodate City functions that have a strong public interface or that support the symbolic public functions such as City Council.

The hub for this workplace centre is the existing Municipal complex, which includes City Hall, the Municipal Building, the Administration Building and other buildings in the downtown core. Over time, as The City grows, this Centre will be the hub from which public related function emanates, including services located in the communities throughout The City.

Operations Workplace Centres accommodate the majority of City departments that have an important "behind the scenes" role in servicing The City including citywide City departments such as Waste & Recycling Services, Water Services, Roads, Parks, Fleet Services, and Finance and Supply. This concept groups common and complementary functions together providing a well-integrated work environment.

While the hub for this workplace centre will be located at the Manchester Centre, additional works yards will be added to the existing public works yards to ensure services are distributed equally across The City. Services can be provided most efficiently and cost effectively when close to the need.

Protective Services Workplace Centres accommodate the emergency and citizen response functions for The City's Protective Services. The centre will highlight the economies of scale that can be realized through joint effort and partnering. The outcome of the consolidation of services will further promote collaboration through a sharing of resources at an administrative level, allow strategic streamlining of communications and information management, providing increased opportunities to enhance recruitment potential and ensuring the most effective option for enhancing productivity and community service.

The Guiding Principle: To position The City as a leader in asset management

This policy incorporates seven Supporting Principles, which guide decisions and state the broad intended results of the Corporate Workplace Framework. In the context of this policy statement, workplace infrastructure refers to land and its facilities such as offices, warehouses, garages and temporary structures.

The City will be accountable for the management of its assets by considering the objectives and goals of The City and applying those to all assets when making decisions. The ultimate goal is to provide the infrastructure including technology to both improve and sustain service delivery.

The premise of the Corporate Workplace Framework is to create highly functional workplaces based on requirements and service delivery models and not organizational structures. The concept of the workplace centres will create workplace infrastructure conducive to recruiting and retaining the highest quality staff possible and providing flexible work environments to support changing corporate culture, including:

- Increased flexibility to respond to diverse organizational needs today and facilitate changes over time,
- Decreased physical barriers to motion and communication including reducing distance between and within City departments creating workplace infrastructure that supports advanced use of technology including touchdown space and interconnectivity,
- Enhanced interaction and teamwork opportunities that encourage information exchange and shared decision-making,
- Increased access to learning and other support spaces conducive to employee well-being.
- Enhanced informal spaces in the workplace that encourage people to move and circulate throughout facilities, increase the frequency of informal contact, and support opportunities for impromptu meetings.

The City will consider four key areas in all infrastructure decisions: social, fiscal, environment/sustainability, and people and incorporate a clear “decision making” model based on these factors.

The outcome of this process is an effective, efficient method for decision-making that will allow City departments to focus on service delivery and their core business, provide a more direct approval process with a single point of accountability for assets and include budgets as part of a comprehensive planning tool.

By combining resources, re-allocating assets, improving processes and adopting best industry standards, the Corporate Workplace Framework will position The City of Calgary to become a leader in responding to the current demands for quality services, sustainable infrastructure and innovative ways to use technology to link City resources. This policy will ensure a high quality of life for all citizens.

The City will become a leader in the provision of highly functional workplace infrastructure by establishing a responsible asset management approach to implementing the Corporate Workplace Framework.

Supporting Principles

Safe, secure and healthy work environments

Working environments are an important component of the human resource strategy for any organization. This strategy, as articulated in the People Plan is an integral part of The City's goal of becoming an employer of choice. The City will, through its workplace infrastructure, reduce the number of occupational safety and health hazards and provide safe and healthful working conditions.

Ensuring a healthy workplace will involve an ongoing review of the elements associated with workplace infrastructure – the environment and equipment – and will be a priority under the Corporate Workplace Framework. The environment includes reviewing noise, indoor air quality, lighting, temperature, ventilation and other related equipment as well as all outdoor workplace environments.

Highly functional, equitable work environments

The City will create workplace environments that by design are flexible and based on the premise of a highly functional environment that supports changes in service delivery over time. As an employer, The City will ensure that workplaces are welcoming and provide the best infrastructure and elements to support the kind of high levels of service that City departments provide and Calgarians expect.

The City will review each situation within the context of the job function and the requirements to complete the work tasks on a daily basis. City employees at both an operational and administrative level require comfortable, safe and welcoming workplace environments in order to be at their most creative and productive. The City acknowledges that there is considerable variance across and within City departments regarding the quality of the working environment and will ensure the infrastructure supports the delivery of service.

Optimize working relationships

The City will provide leadership to effectively tie the delivery of service with workplace infrastructure over time by considering opportunities for sharing or collaborating of all City resources including land, buildings, people and budgets. Wherever possible, The City will

strive to optimize the accommodation of each Business Unit and the interrelationships between them to ensure appropriate adjacencies and improved efficiencies and communications, and to support the delivery of quality services to Council and the public.

Best solutions based on corporate values

The three workplace centres will create a physical environment that supports a wide range of employment and business development opportunities. The City will examine innovative approaches to maximizing service delivery and workplace utilization and ensure that all workplace infrastructure yields maximum operational value based on functionality and best industry practices in relation to corporate values and policies.

The City will strive to optimize workplace infrastructure by capitalizing on opportunities for sharing resources such as space and people thereby positioning The City to reduce future risk. The City will use its assets to develop and leverage its current and future asset base.

Open and integrated process

The City recognizes that decisions are improved by engaging stakeholders where appropriate, and is committed to transparent and inclusive processes that are responsive and accountable. The City will use an integrated process with all City departments that examines all opportunities for any given project as each relates to workplace infrastructure. The purpose of this process will be to balance identified opportunities with the goals of the Corporation, its customers and the operational objectives of each City department within The City.

Sustainability

The City believes in responsible stewardship of our natural, human and financial resources so that we can provide our services without compromising the environmental, social or economic systems within which we operate. The City will incorporate the concept of sustainability as it relates to workplace infrastructure, just as urban development, roads and other key areas are incorporated into the concept of sustainable communities.

Sustainable principles seek to minimize the impacts that our buildings have on our environment. The sustainable objective is to have a neutral impact: returning to the environment what we take from it and using resources in a balanced and continuously sensible and renewable fashion. The results of pursuing sustainable principles have direct benefits for operational costs and human productivity. These will occur with improvements to indoor air quality, access to daylight and once the individual responsiveness of workplace settings become common practice.

Consideration of these impacts will be central to decisions made on workplace infrastructure and will incorporate other sustainability policies approved by Council as well as all appropriate legislation.

Evaluation

The City will use performance indicators as a means to ensuring results and will define methodologies, establish baselines, review benchmark data and set targets for each measure. All workplace changes will be evaluated after implementation and measured against improvements in the delivery of services to our citizens.

Performance indicators help link today's actions with the achievement of priorities and ensures accountability. Performance indicators are an integral part of the implementation of the Corporate Workplace Framework.

Proactive Implementation of the Corporate Workplace Framework

The Corporate Workplace Framework provides a policy framework that defines and guides decisions for workplace infrastructure over the next 20-30 years. What The City does today will ultimately provide much-needed infrastructure for tomorrow.

The Corporate Workplace Framework ensures leadership in workplace infrastructure and recommends a policy outline for evaluating long-term accommodation options and facilitates the coordination of policies, programs and capital investments using four key result areas:

- **Service Delivery** – supports the provision of quality services by understanding the interrelationships between people, processes and places.
- **Strategic fit -** consistency with The City's established corporate direction. (Refer to policies such as Calgary Municipal Development Plan, Calgary Transportation Plan, or the Corporate Workforce Strategy in Administration Space).
- **Affordability and value** – fiscal responsibility and accountability are maintained by adhering to The City's financial plan and that decisions provide the best value based on established corporate direction.
- **Flexibility** – ongoing changes in both the operational and administrative structure of The City can be accommodated and supported over time.

The Corporate Workplace Framework responds to Council's agenda, supports the delivery of excellent public services, strengthens the workplace, and is aligned with the City's Corporate Values, which are:

- Be **H**onest and tell the truth;
- Pursue **E**xcellence;
- Be **A**ccountable;
- Be **R**esponsive, compassionate, and fair; and
- **T**reat others with respect.

All City departments will use the Corporate Workplace Framework when planning for and developing new facilities, purchasing new lands or renovating existing buildings to ensure programs and capital investment are used for the benefit of the Corporation and the public.

The Corporate Workplace Framework will be implemented over time through the establishment of a planning process. This process is guided by the strategy documents developed for each of the workplace centres: The Inner City Asset Management Strategy; The Tri-Services Headquarters Study and The Citywide Depot Strategy.

If a project or program is considered a priority for The City and is consistent with the vision established by the Corporate Workplace Framework, each project or program is then further defined by a planning study and supported by a business plan.

Corporate Properties and Buildings will undertake the responsibility to manage and implement the Corporate Workplace Framework by:

- Designing around whole products and services
- Establishing clear direction and goals
- Pooling of critical, scarce resources
- Maximizing cooperation and efficiency
- Ensuring a high level of service delivery is maintained through affordable infrastructure

Establishing a single point of ownership is key to implementing the Corporate Workplace Framework. Clarifying who is responsible for what actions will provide clear accountability for all workplace infrastructure projects.

Implementation of the Corporate Workplace Framework needs to consider various methods of reducing financial impact on the corporation. This can be achieved by examining alternative delivery models, resulting in a self-supporting business operation.

Decision Making Model

Corporate Stewardship
(Council / Administration)

Corporate Workplace Framework
(Policy decisions)

Capital Budgets

Planning & Implementation Process

Public Service Workplace Centre	Operations Workplace Centre	Protective Services Workplace Centre
Inner City Asset Management Strategy	**City-Wide Depot Strategy**	**Tri-Services Headquarters Study**
Workplace Evaluation Re-Stack Program Other Future Master Plans	Manchester Public Works Yard Master Plan Spring Gardens Public Works Yard Master Plan	Headquarters Study (Phase II) Protective Services Call Centre

Needs Definition Requirements

Recommendations

Implementations of Workplace Infrastructure Strategies

City Departments' Business Plans

Planning and Feasibility Studies

The City of Calgary Corporate Properties and Buildings

Mission Statement

"To exceed all internal and external client expectations by providing comprehensive professional services and solutions."

"To provide clients with the means to carry out their work in a manner effective to their business needs."

"To maximize the value of The City's workplace infrastructure."

While all City departments within The City of Calgary provide a service to a selection of internal and external clients, only a small number of Business Units are engaged in providing a service to all of The City of Calgary Business Units.

Corporate Properties and Buildings is one of those Business Units that not only provides a service to external City clients, but also has a responsibility to every single employee and contractor within The City to ensure that they are able to deliver the best service to their clients. The operations of Corporate Properties and Buildings have as a strategic foundation, The City of Calgary's Vision and Mission as well as its own.

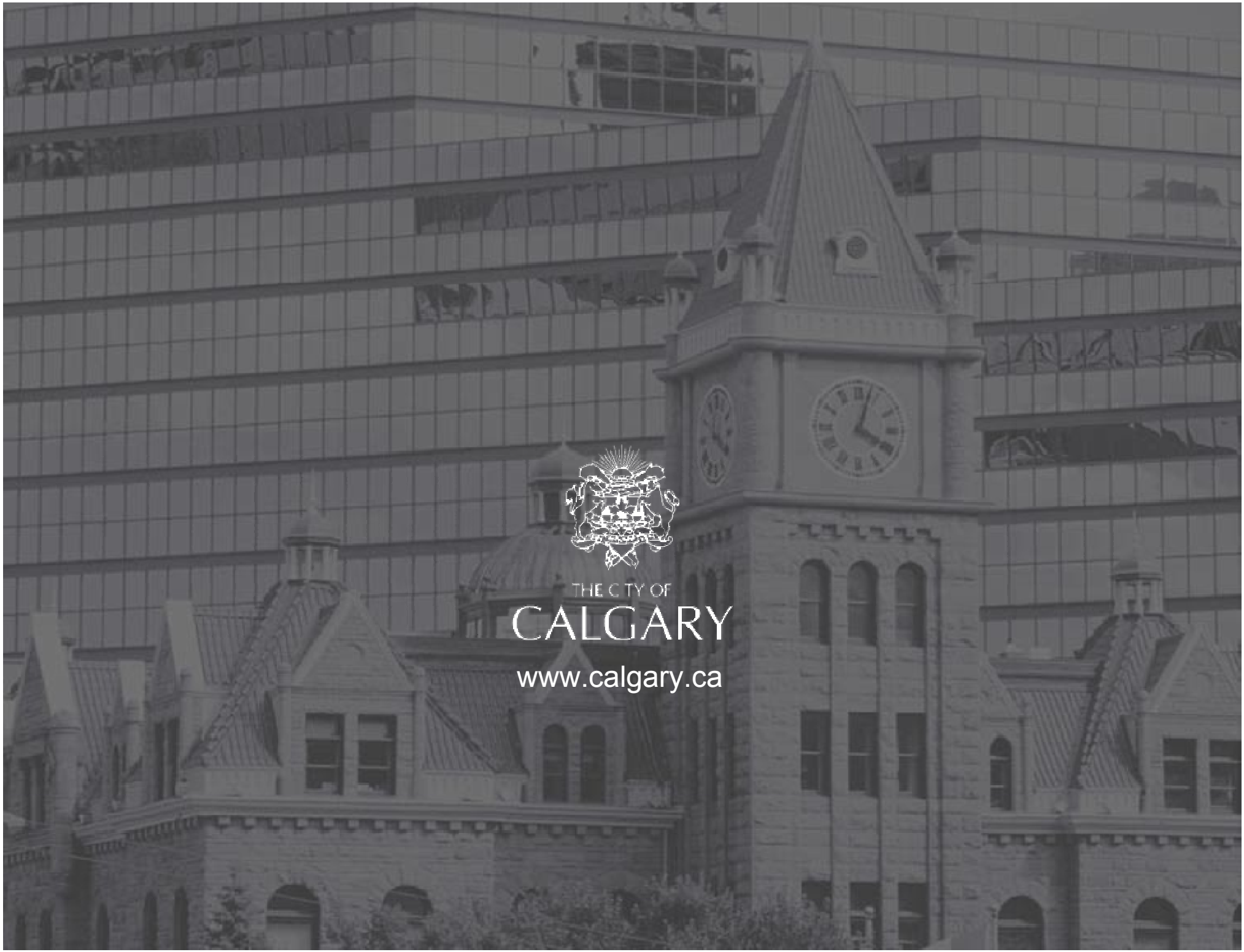
Corporate Properties and Buildings is a multi-dimensional Business Unit that provides all workplace infrastructure services for City lands, capital projects and property management services including ongoing asset management to other City departments.

Other City Policies in Support of the Corporate Workplace Framework

Municipal Development Plan (2009)
Calgary Transportation Plan (2009)
Corporate Workplace Strategy in Administration Space (2008)
CPB Sustainability Principles (2009)
Sustainable Building Policy(2005)
Brownfield Strategy (2007)

The Corporate Workplace Framework will comply with all legislative requirements.

For inquiries please contact:
Corporate Properties and Buildings
Corporate Accommodation Planning
(403) 268 - 2512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Corporate Facility Planning & Delivery Framework Implementation

Approval of the Policy will allow Administration to move forward with implementation and embed its goals, actions and processes as standard operating procedure for the planning and delivery of facilities. The Corporate Facility Planning & Delivery Framework and Policy represent a significant change for the organization, as such this plan integrates change management, communications and engagement throughout the implementation. The plan has been developed with implementation taking place in four waves:

Wave 1 Test: In 2017 September, the ICFP Steering Committee endorsed Wave 1 implementation to prototype the processes developed in preparation for the One Calgary capital budget (2019-20122). Wave 1 focuses on coordinated portfolio planning and identifying potential multi-service facilities that can be planned and delivered as part of the One Calgary budget. Key accomplishments include:

- Collection of base information to deliver a comprehensive portfolio plan
- Identification of priority facilities sites during the next business cycle in alignment with Green Line, Main Streets, Transit Oriented Development and Growth Management
- Coordination of ten development areas and supporting business cases for One Calgary
- A collaborative process that has coordinated the facility planning efforts of 20 different services lines
- The first iteration of the 1 – 30 year Corporate Facility Portfolio Plan (targeted for completion in Q4 2019) which will be a set of short, mid, and long-range plans that will optimize the existing portfolio and identify what facilities The City should build, demolish, renovate, acquire, maintain and relinquish
- Implementation of the Policy

Wave 2 Iterate and Complete Dependencies: Targeted to commence in Q1 2019, Wave 2 is based on capital budget approvals, focused on removing dependencies and roadblocks from implementing key strategies, and solidifying processes. It includes implementation of program planning and coordinated design and delivery for approved One Calgary Facility Projects as well as implementation of an evaluation model. Key components include:

- Finalization of collaborative governance tools, such as standard terms of reference
- Completion of detailed process, tools and analysis methodologies
- Completion of strategies and required dependencies
- Implementation of the program planning processes developed from the Learning Projects

Wave 3 Integrate into Standard Operating Procedure: Targeted to commence in Q1 2020 Wave 3 is focused on implementing the Framework as standard operating procedure and allowing The City to effectively and consistently coordinate with the private sector and other levels of government. It also includes:

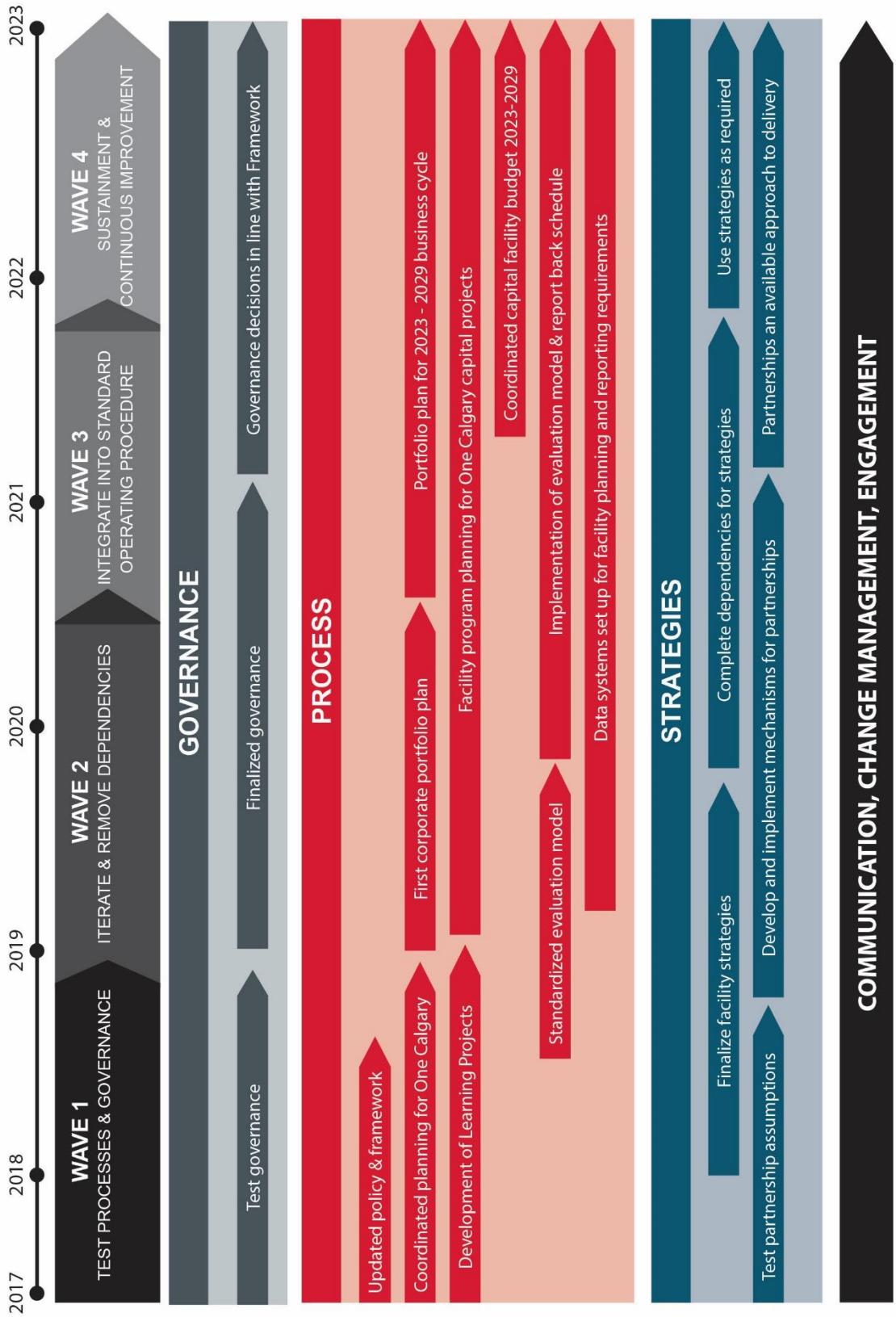
- Collaborative planning and delivering of City facilities, resulting in an increase in multi-service sites
- Coordinated budgeting for mid-cycle adjustments

Wave 4 Continuous Improvement and Sustainment: The Framework defines and guides decisions for facility infrastructure over the next 40 years. Ongoing continuous improvement will occur so that:

- Strategies can be refreshed or new ones developed
- Processes can be updated based on lessons learned
- The Framework can respond to new technologies and facility management best practices

Administration will track lessons learned on projects and document standards, processes, tools and strategies. Future updates to the Framework, specifically the goals, actions, principles and governance will be done through a collaborative corporate-wide approach. Amendments to the Corporate Facility Planning & Delivery Policy will be approved through Council.

Corporate Facility Planning & Delivery Framework Implementation Plan



Proposed Framework – Transacting with Non-Profit Organizations below Market Value

EXECUTIVE SUMMARY

The purpose of this report is to respond to Section 2 of Notice of Motion C2018-0509, where Council directed Administration to develop a framework for the disposition of land at less than market value to non-profit organizations (the "Framework").

Through this Framework, Administration is recommending that unless otherwise directed by Council through a Notice of Motion, Administration will continue to transact on real property with non-profit organizations in alignment with Real Property Bylaw 52M2009 (the "Bylaw").

It is proposed that, in circumstances where direction from Council is received to explore opportunities to dispose of real property to non-profit organizations, Administration will present a Non-Profit Method of Disposition Report to Council for consideration. Based on the information and options provided within the Non-Profit Method of Disposition, Administration will look to Council to provide direction on the preferred option.

ADMINISTRATION RECOMMENDATION:

The SPC on Utilities and Corporate Services recommend that Council approve the proposed Framework as detailed within this Report and in Attachment 2.

PREVIOUS COUNCIL DIRECTION / POLICY

On 2018 April 23, Council adopted Notice of Motion C2018-0509 among other matters, directed Administration to provide a framework for disposing of land at less than market value to not-for-profit organizations, and to report back to Council through the Standing Policy Committee on Utilities and Corporate Services, no later than Q3 2018.

BACKGROUND

Real Estate & Development Services ("RE&DS") is a City business unit whose lines of service include the acquisition, disposition, occupation, and development of City owned real property. Administered and managed through the Bylaw, RE&DS is authorized to transact real property on behalf of The City.

Often, RE&DS is contacted by interested parties seeking to acquire City owned land for various purposes, and on occasion, these interested parties include non-profit organizations. Currently, the Bylaw does not address the delegation of authority to dispose of real property with one party differently than another. Thus, if not already directed through policy or approved strategy, such as the Affordable Housing Strategy, Administration will seek Council's direction and approval on transactions which do not follow standard process as outlined throughout the Bylaw.

As directed by Notice of Motion C2018-0509, RE&DS has developed this Framework in an effort to provide consistency when transacting with non-profit organizations. The current process for the disposition of City owned real property is summarized in Attachment 1.

Proposed Framework – Transacting with Non-Profit Organizations below Market Value

INVESTIGATION: ALTERNATIVES AND ANALYSIS

RE&DS, being the authorized business unit to transact on real property on behalf of The City, is committed to being responsible with The City's real property assets, and thus, is guided by the following key principles of good land management;

- The City is a good steward of real property and manages its holdings as corporate assets;
- RE&DS provides professional real estate services and advice to its corporate partners and to Council;
- City owned real property will be leveraged to provide the maximum value for The City and for Calgarians;
    - This is typically achieved through public marketing and the sale of real property at market value
- RE&DS maintains its financially sustainable, non-mill rate supported programs through transactions of real property.

By virtue of these key principles, RE&DS is proposing the following 4 step framework when transacting with non-profit organizations. A visual summary of the proposed Framework is shown in Attachment 2.

Step 1: Notice of Motion

When a non-profit organization is interested in acquiring or occupying City owned real property for less than market value and/or through a direct negotiation with said organization, RE&DS recommends that Council direct Administration, through a Notice of Motion. Administration will work with members of Council and report back with a Non-Profit Method of Disposition Report which shall include the appropriate information and options for Council to make an informed decision.

Step 2: Non-Profit Method of Disposition Report

Upon direction through a Notice of Motion, Administration shall prepare a detailed land report, that will include the following information/analysis for Council's deliberation;

1. Background of Non-Profit Organization:
    a) Who they are, and what they do
    b) What is their proposed use of the real property
    c) Perceived alignment to corporate and community values and outcomes
2. Site Assessment:
    a) General information of the property
    b) Corporate Land Management Framework circulation comments and results
    c) Estimate of market value
    d) Highest and best use analysis
3. Social, Environmental, Economic Impact Analysis
4. Alignment with corporate and strategic objectives
5. Options
    a) Publically market the property and transact at market value (appropriate if the property is determined to be a standalone parcel)

Proposed Framework – Transacting with Non-Profit Organizations below Market Value

b) Direct negotiate with non-profit organization at market value (appropriate if the property is determined to be a remnant parcel)
c) Direct negotiate with non-profit organization at book value plus administration fees and all associated transaction costs
d) Direct negotiate with non-profit organization at nominal value plus administration fees and all associated transaction costs
e) Do not proceed with a transaction with the interested non-profit organization

6. City Contribution Analysis
   a) Value comparison:

	Market Value	Book Value	Nominal Value
Additional Associated Costs i.e. Administration fees, survey costs, Road Closure/Land Use application fees…etc.			
Municipal Contribution to Non-Profit Organization			
Total Consideration			
Total Contribution			

   b) Lease vs. sell analysis (where appropriate)
   c) Alternative opportunity analysis (is there a more appropriate location)

7. Summary of annual contribution under this Framework

	Market Value	Transacted Value	Municipal Contribution to Non-Profit Organization
e.g. UCS2018-XX1 (address)	$1,000,000.00	$10	$999,990.00
e.g. UCS2018-XX2 (address)	$500,000.00	$100,000.00	$400,000.00
Total Contribution for 2018			$1,390,000.00

Step 3: Report Back & Decision

Administration to report back to Council through SPC on Utilities & Corporate Services with a Non-Profit Method of Disposition Report within the timeframe specified within the Notice of Motion.

Council shall elect an option outlined in the Non-Profit Method of Disposition Report, or, propose an alternate option not outlined in the report.

Step 4: Transaction

Upon Council direction, Administration shall proceed based on the option approved by Council through the Non-Profit Method of Disposition Report.

Proposed Framework – Transacting with Non-Profit Organizations below Market Value

If the direction by Council is for Administration to proceed with a transaction with a non-profit organization, Administration shall prioritize the transaction through the RE&DS standard prioritization matrix and assign an agent as soon as possible. The transaction may be approved through delegated authority in the Bylaw by the Deputy City Manager, unless otherwise directed by Council.

The proposed process is summarized in Attachment 2.

Valuation

Upon direction by Council through a Notice of Motion to prepare a Non-Profit Method of Disposition Report, Administration shall follow its current valuation process to determine the Market Value of the property; an internal review or an independent appraisal shall be prepared and endorsed by Administration's Valuation Review Committee.

Stakeholder Engagement, Research and Communication

N/A

Strategic Alignment

Administration is developing a Corporate Land Strategy, which will document how it delivers Real Estate and Land Development & Sales services within an overall corporate approach. It is intended that the Framework will form the basis of a section of this strategy.

Additionally, Administration is developing an Affordable Housing Disposition Strategy, which is intended to advance a framework that will leverage City owned land for the purposes of encouraging the development of affordable housing. The Framework herein is intended to focus on non-profit organizations where affordable housing is not a primary line of business.

As the details of the Corporate Land Strategy and Affordable Housing Disposition Strategy are developed and key internal stakeholders are engaged, the process presented here will be reviewed for alignment and consistency with the comprehensive land management approaches.

Social, Environmental, Economic (External)

No implications identified for the purposes of this report, however, if the proposed Framework is approved, Social, Environmental, and Economic implications will be analyzed on a case by case basis through the Non-Profit Method of Disposition Report.

Financial Capacity

No implications identified for the purposes of this report, however, if the proposed Framework is approved, budgetary implications will be analyzed on a case by case basis through the Non-Profit Method of Disposition Report.

Proposed Framework – Transacting with Non-Profit Organizations below Market Value

Risk Assessment

If the proposed Framework is not approved, inconsistencies will remain when transacting with non-profit organizations at below market value. Frustrations will continue to occur between Council, Administration, and non-profit organizations. This risk can be mitigated by either approving the proposed Framework, or creating a framework that works for the parties involved.

REASON(S) FOR RECOMMENDATION(S):

The proposed Framework is intended to provide a consistent approach to transacting directly with non-profit organizations below market value as well as mitigate potential social, legal, financial and reputational risks.

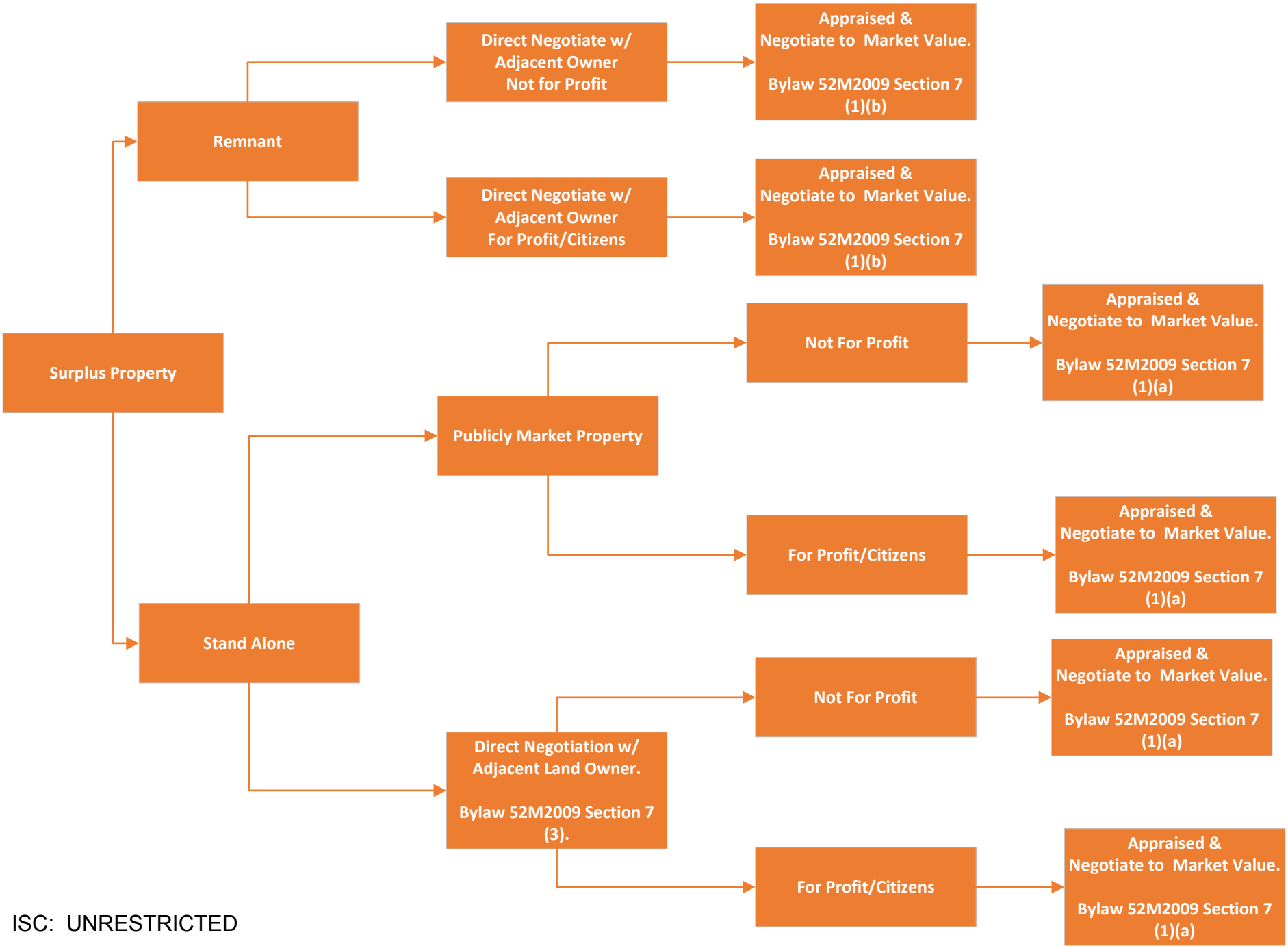
Administration has developed this framework with the understanding that Administration can provide information but should not be the authority to decide whether the disposition of land should be transacted below market value; this decision should reside with Council.

ATTACHMENT(S)

1. Attachment 1 – Current Disposition Process Flow Chart
2. Attachment 2 – Proposed Non-Profit Framework Flow Chart

Current Disposition Process Flow Chart

UCS2018-0912
ATTACHMENT 1



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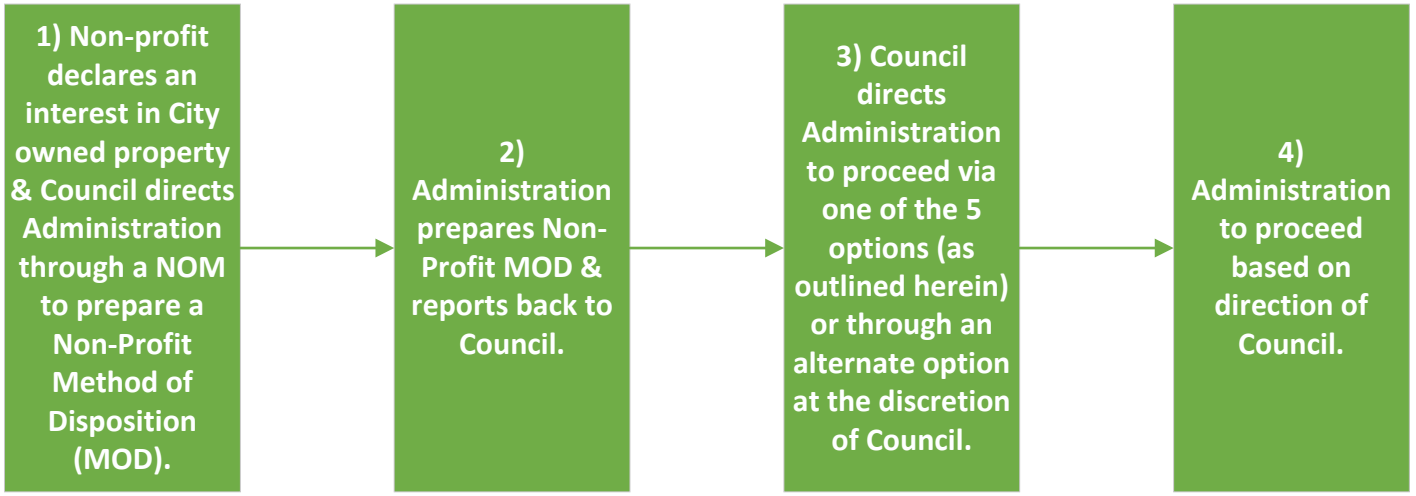
Proposed Non-Profit Framework Flow Chart



Options:

1) Publically market the property and transact at market value.

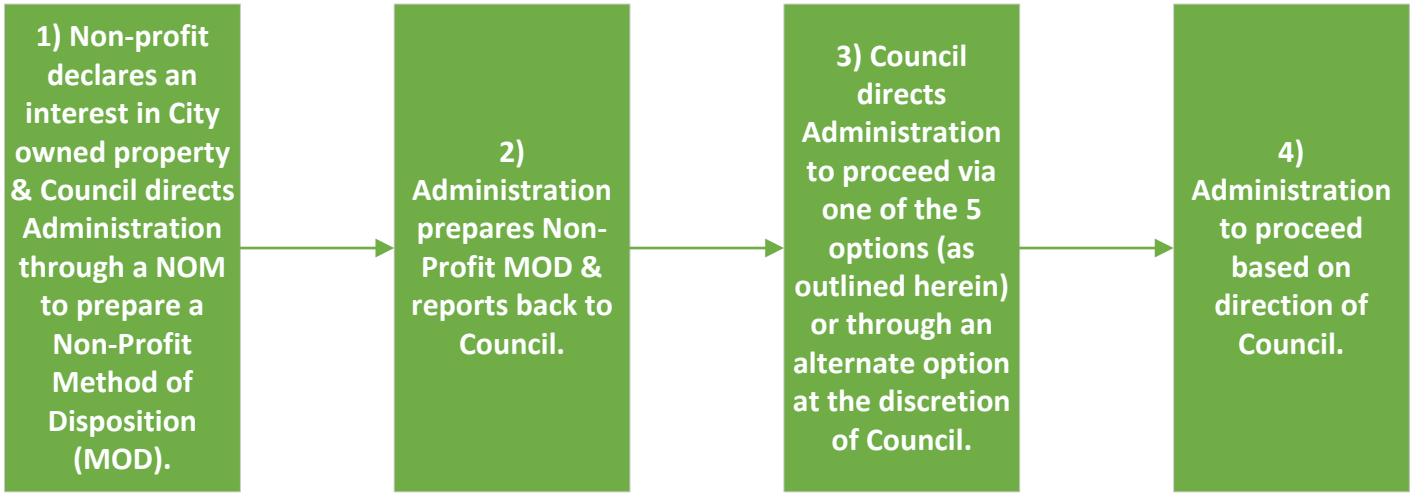
2) Direct negotiate with Non-Profit organization at market value.

3) Direct negotiate with non-profit organization at book value plus administration fees and all associated transaction costs.

4) Direct negotiate with Non-Profit organization at nominal value plus administration fees and all associated transaction costs.

5) Do no proceed with a transaction with the interested Non-Profit organization.

Proposed Non-Profit Framework Flow Chart



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