

DRAINAGE COST OF SERVICE STUDY

EXECUTIVE SUMMARY

As part of the development of the 2015-2018 Action Plan, and as directed by Council, the Utilities have undertaken its first Drainage Cost of Service Study. A cost of service study identifies the revenue required to provide drainage services and allocates the costs of those services among customer classes. There currently is a single customer class for drainage services, where the same flat rate is charged to all customers.

The Drainage Cost of Service Study consisted of two phases. Phase 1 focused on defining the level of service required to meet the growing demands and the corresponding revenue required to fund the planned operating, capital expenditures, and financial targets over the next four years. This work was approved by Council on 2014 May 05.

Phase 2 of the study reviewed the proportional allocation to drainage customers and analyzed options for new customer classes to share system costs equitably. Phase 2 also reviewed the options for implementing new customer classes. This report and Attachment outlines the guiding principles, the investigation, and the recommendations of the Drainage Cost of Service Study.

ADMINISTRATION RECOMMENDATION(S)

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

1. Direct Administration to maintain a uniform drainage charge for all customers for 2015 to 2018.
2. Direct Administration to scope the requirements and implications of implementing an impervious area billing system and provide a progress report with the update on the Drainage Financial Plan progress to the SPC on Utilities and Corporate Services no later than 2016 June.

RECOMMENDATION OF THE SPC ON UTILITIES AND CORPORATE SERVICES, DATED 2014 SEPTEMBER 17:

That the Administration Recommendations contained in Report UCS2014-0612 be approved.

PREVIOUS COUNCIL DIRECTION / POLICY

On 2011 June 28, as part of the Utilities Financial Plan (C2011-66), Council directed Administration to incorporate a cost of service study for the Utilities and Drainage in the 2012-2014 business plan.

On 2013 May 01, Utilities and Corporate Services Committee received the water, wastewater and drainage cost of service studies work plan for information (UCS2013-0045).

At the 2014 March 17 Strategic Session, Council adopted Report C2014-0229 (2015-2018 Drainage Fee Scenarios) and directed Administration to develop drainage indicative charges for the 2015-2018 Action Plan based on the recommended financial targets (accelerated delivery) and levels of service (meets requirements & standards).

DRAINAGE COST OF SERVICE STUDY

At the 2014 May 05 Strategic Session of Council, Council adopted Report C2014-0324 (2015-2018 Indicative Drainage Charge) and directed Administration to prepare the 2015-2018 Action Plan based on the recommended indicative drainage charge, the inclusion of the accelerated scenario and the incremental increase, and an implementation plan for the results of the cost of service study.

BACKGROUND

Best practice is to conduct cost of service studies every five to ten years. Cost of service is a methodical process by which the costs of providing a service are assigned to customer classes in proportion to the benefit derived by that customer class. In addition to ensuring the equitable allocation of costs, these studies are an analytical tool to support financial management, and provide validation and documentation for ratemaking decisions.

Stormwater management services provided by the drainage line of service have evolved significantly over the last twenty years. There is a better understanding of the impacts of both the quantity and quality of stormwater runoff on receiving streams and rivers and new technologies and techniques have been developed to mitigate these impacts. Regulations and standards have also changed to reflect both the improved knowledge and new technologies. Demand for new drainage services is growing in response to population growth, increased environmental objectives and the recent 2013 flood event.

To address the increased pressures facing the drainage line of service, Administration reviewed five program areas for drainage: regulatory and environmental protection, maintaining assets, community drainage improvements, flood recovery and resiliency and financial policy and target compliance. The results of the review and the estimated capital and operating impacts were summarized into a service level matrix (Attachment, Figure 1) which defined each program element under each of the following three service levels:

1. Current service level based on the capital and operating budgets from 2012-2014
2. Meets Requirements and Standards based on achieving current environmental objectives, long term targets and anticipated future regulation, and current best practices and design standards
3. Accelerated delivery based on accelerating specific programs

The drainage line of service is a self-funded activity, and operates with full cost recovery through two sources.

1. An ongoing drainage service charge is applied equally to all wastewater customer bills. Revenue from the drainage service charge is used to fund all of the operating and capital expenditures needed to provide high quality drainage services, other than the funding of growth related infrastructure.
2. Growth projects are funded through Stormwater Acreage Assessments. The acreage assessment is a one-time charge based on the cost of catchment-specific planned capital improvements.

The 2015-2018 indicative drainage charges (Table 1) are the result of the revenue requirements calculated to meet the service levels and drainage financial targets adopted by Council (C2014-0324) as Phase 1 of the Cost of Service Study.

DRAINAGE COST OF SERVICE STUDY

Table 1: 2015-2018 Indicative Drainage Charge

	2015	2016	2017	2018
Monthly Drainage Charge	\$10.96	\$13.05	\$15.54	\$18.51

INVESTIGATION: ALTERNATIVES AND ANALYSIS

The ultimate goal of the cost of service analysis is to transition towards an increasingly equitable rate structure where customers contribute for their share of the system costs in proportion to their use of the system. The City must be able to appropriately measure a customer's system use and bill accordingly for equity to be achieved.

Unlike water and wastewater systems, drainage systems manage runoff from developed property that is often not directly connected to the public drainage system. Service received is not typically measurable through direct methods such as water meters. Instead, drainage rates are often based on contribution of runoff, as estimated by the amount of runoff-producing area on a parcel.

There is currently a single customer class for drainage services, where the same flat rate is charged to all customers. The Drainage Cost of Service Study included scoping an equitable customer allocation methodology.

The following main alternatives for rate structures were analyzed:

1. Impervious Surface Area – Rates are established based on the amount of hard surface area (ex. asphalt, driveways) that prevents or slows water permeation into the ground.
2. Geographic Location – Rates are established based on the geographic location.
3. Multiple Customer Classes – Rates are established for different customer classes or types, such as residential and non-residential.

The three alternatives were evaluated based on fairness, legality, ability to administer, and the overall feasibility. The evaluation included a review of rate structures being used in other municipalities. Details of the analysis can be found in the Attachment. Based on the analysis, Administration recommends that The City pursue a drainage fee structure based on the impervious surface area, with single family residential customers defined as one equivalent service unit (ESU).

Implementation Considerations

To administer a rate structure based on impervious surface area, data quantifying the impervious area by parcel is required to be linked to the customer billing data. Although The City does have Geographic Information System (GIS) data to identify the amount of impervious surface area by parcel, there are challenges with linking this database to the customer billing system.

Administration considered two options to implement a rate structure based on impervious surface area.

- The first option considered continuing with the existing uniform rate structure on a temporary basis while scoping the requirements to integrate the customer billing system to the GIS data.

DRAINAGE COST OF SERVICE STUDY

- The second option was to establish an interim rate structure while the GIS data and the customer billing system are integrated.

Administration recommends continuing with the existing rate structure and to scope the level of effort required to align the billing system to GIS data to bill non-residential customers based on impervious surface area. This alternative allows time to review different integration options and the potential impacts as well; it allows time for additional stakeholder engagement of any potential drainage rate increase for impacted customers.

Stakeholder Engagement, Research and Communication

As the recommended course of action is to remain with the existing rate structure while scoping the requirements to move towards an impervious billing system for customers little engagement independent of the Action Plan 2015-2018 is required. The Action Plan 2015-2018 includes the application of the drainage rate increase to all customers, effective 2015 January. Further stakeholder engagement plans will be developed as part of the project to scope and implement an impervious billing area system as the impacts to non-residential customers are quantified.

Strategic Alignment

Sustainability for the Utilities is tied to achieving long-term goals as outlined in The City's 2020 Sustainability Direction, the Long Range Financial Plan, the Municipal Development Plan and imagineCALGARY. For example, the Municipal Development Plan encourages the reduction of the amount of effective impervious areas by incorporating site level and neighbourhood level stormwater source control practices. The Drainage Cost of Service Study contributes to the strategic alignment of the Utilities to The City's long-term vision and planning documents by ensuring sufficient and flexible funding is available for the continued operation, maintenance, and expansion of the Utility systems.

Social, Environmental, Economic (External)

The Drainage Cost of Service Study requires a balanced approach to rate setting that considers the social, environmental, and economic implications of rates and rate structures. In alignment with the guiding principles for utility rates, the recommended approach to move towards an impervious surface billing system will improve fairness and equity to customers, and addresses the capability of recovering the Utilities costs of providing drainage services, while continuing to meet regulations, achieve financial policies and plans, and support reaching The City's environmental goals.

Financial Capacity

Current and Future Operating Budget:

The rate increase for all customers has been incorporated into the Utilities financial models and plans and is deemed appropriate to deliver on the drainage service levels and Action Plan 2015-2018 as approved by Council. There are no additional operating budget requirements to complete the scope and implementation review.

DRAINAGE COST OF SERVICE STUDY

Current and Future Capital Budget:

The rate increase for all customers has been incorporated into the Utilities financial models and plans and is deemed appropriate to deliver on the drainage service levels and Action Plan 2015-2018 as approved by Council. The scope and implementation review will include the identification of any capital budget implications of transitioning to an impervious area billing approach.

Risk Assessment

The report outlines the next steps Water Resources will undertake to increase the fairness and equity among drainage customers. Four main risks have been considered as part of this analysis:

1. While an impervious area billing approach is scoped and implemented, the existing inequity between single family residential and non-single family residential will not be resolved. Given that levels of service are currently changing, this risk is minimized at this time.
2. A conversion from a small flat charge to an impervious surface area charge could cause rate increases to some non-single family residential customers. Should such increases occur, appropriate engagement, outreach and education programs and potentially a credit system will be implemented.
3. To implement an impervious surface billing system, the integration of the existing billing system with GIS data is required. The full impacts of this integration are not fully understood. The scoping project will consider the steps that need to be taken to complete the integration, while minimizing interruptions to the billing system and the costs associated with the implementation.

Overall, the opportunity to begin sharing system costs based on the proportion of impervious area presents challenges and should be properly analyzed and scoped before a solution is implemented with customers.

REASON(S) FOR RECOMMENDATION(S):

Continuing with the existing uniform drainage charge for all customers while scoping the requirements to integrate the billing system with impervious surface area data will allow the Utilities to review different options for integration and the potential impacts to the system and customers. In addition, this option has lower implementation costs, since it does not require any interim system changes.

ATTACHMENT(S)

2014 Drainage Cost of Service Study Findings and Recommendations