

2015-2018 Indicative Drainage Charge:

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1.0 Introduction

This report provides Administration's recommendations for the 2015-2018 indicative Drainage charge.

Most of the material presented in this attachment was already presented at the 2014 March 17 Special Meeting of Council. It is repeated here for completeness, to provide background and rationale for the recommendations in this report.

At the 2014 February 26, SPC on Utilities and Corporate Services meeting, Administration presented the Drainage Financial Plan (UCS2014-0022) which included a review of the capital and operating pressures facing the Drainage line of service categorized under five program elements: regulatory and environmental protection, maintaining assets, community drainage improvements, flood recovery and resiliency and financial policy and target compliance. The proposed indicative Drainage charge will enable the Utilities to deliver new levels of service for each of the drainage program elements.

2.0 Context:

Drainage services have been delivered as a self funded activity by The City of Calgary since 2004. All operating and capital expenditures are recovered through user fees, levies, and sources other than the municipal tax base. In 2006, a single flat rate drainage fee was introduced for all customer classes to fund both capital and operating budget needs. As part of the Cost of Service Study (UCS2013-0045) underway for Drainage, a review of customer classes and the fee structure will be evaluated.

The Drainage line of service will generate \$39.8 million of revenue from the 2014 flat rate fee. Of this, \$23.5 million is directed toward operating expenditures. The remaining drainage fee revenue of \$16.3 million supports a \$30 million capital program through a combination of cash and debt financing. The 2014 Drainage flat rate fee is \$9.20 per month for all customers.

On 2014 March 17, Administration presented the 2015-2024 Water Infrastructure Investment Plan (WIIP) to Council (C2014-0095). The WIIP is a strategic, long range capital planning document that underpins the delivery of water, wastewater and drainage services. Capital investments are needed to: maintain assets, meet increasingly stringent regulatory requirements, provide reliable and high quality services, and keep pace with growth. The WIIP identifies the infrastructure investments needed to address these four investment drivers and will guide the development of the 2015-2018 capital budget. The WIIP contains a total investment requirement of \$3.5 billion over ten years, averaging \$350 million per year for the water, wastewater and drainage lines of service. The water and wastewater component of the WIIP includes a total investment requirement of \$3.0 billion over ten years, averaging \$300 million per year. The remaining investments of \$500 million over ten years, averaging \$50 million per year are required for the drainage line of service.

2.1 Capital and Operating Pressure

Stormwater management services provided by the Drainage line of service have evolved significantly over the last two decades. There is better understanding of the impacts of both the volume 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. As a result, the capital and operating budgets needs for the Drainage line of service have been evaluated and incorporated into a service level matrix (Figure 1). The matrix includes five main program elements: regulatory and environmental protection, maintaining assets, community drainage improvements (CDI), flood recovery and resiliency and financial policy and target compliance.

The service level matrix defined each program element under each of the following three service levels:

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

The level of service identified to Meet Requirements and Standards includes additional investments required to meet long term targets, anticipated regulations and to bring the Drainage asset management practices in line with industry standards and to align with the Water and Wastewater Utilities. The Accelerated Delivery service level includes the options to deliver specific programs more quickly and to achieve the financial targets sooner.

Figure 1: Drainage Level of Service Matrix - Budget Impact

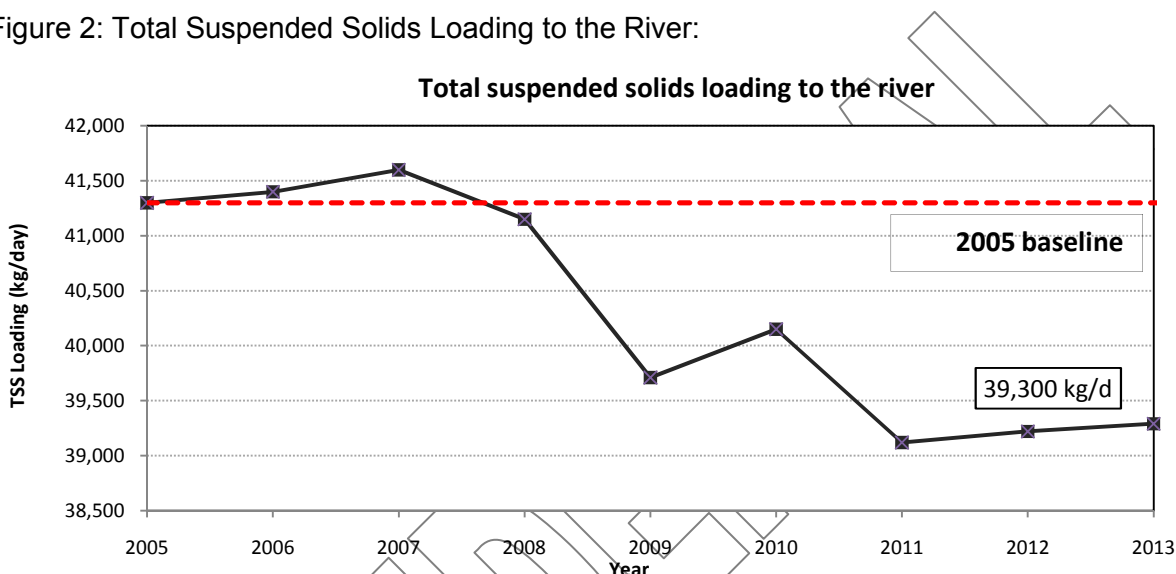
Program Service Level	Regulatory and Environmental Protection	Maintaining Assets	Community Drainage Improvements	Flood Recovery and Resiliency	Financial Policy and Target Compliance
Current Service Level (12-14)	<ul style="list-style-type: none"> Meets current Wastewater Approval to Operate water quality objectives for sediment loadings to the river. Achieved through the implementation of stormwater treatment facilities 	Typical O&M activities include: <ul style="list-style-type: none"> Pipe flushing Catch basin cleaning Lift station maintenance Vegetation control Select storm pond cleaning and maintenance activities 	<ul style="list-style-type: none"> With current investment, 24 years to deliver all projects on the list. Total program cost \$170 million. 	<ul style="list-style-type: none"> Coordination of flood preparedness Coordination of flood recovery and resiliency projects ** 2014 capital and operating related to flood were funded by FSR 	Targets are being established.
	Total Capital Budget \$30M Total Operating Budget \$23.5M				
Meets Requirements & Standards	<ul style="list-style-type: none"> Continues to meet regulatory requirements. Development of an implementation plan for the riparian strategy 	<ul style="list-style-type: none"> Pond cleanings to restore WO function Maintenance for new assets Establish asset condition assessment, main replacement and rehabilitation programs Research to inform and refine operational and maintenance practices. 	<ul style="list-style-type: none"> Accelerate program to deliver upgrades to all projects on the list within 16 years. Total program cost \$170 million. 	<ul style="list-style-type: none"> Flood recovery and resiliency projects including bringing infrastructure up to current design standards 	Compliance by 2022 of debt limit; debt servicing limit; cash financing of capital maintenance and reserves
	Additional Capital \$3.5M Additional Operating \$3.7M	Additional Capital \$8.0M Additional Operating \$4.6M	Additional Capital \$4.3M Additional Operating \$0.1M	Additional Capital \$1.5M Additional Operating \$0.5M	
Accelerated Delivery	<ul style="list-style-type: none"> Accelerate delivery of local stormwater infrastructure and features Accelerate the implementation of the riparian strategy to start in the 2015-2018 budget cycle 	<ul style="list-style-type: none"> Expand research scope to include emerging operational and maintenance issues. Accelerate storm pond cleanings Accelerate condition assessment, and trunk / main replacement program 	<ul style="list-style-type: none"> Accelerate program delivery to 12 years, and include additional projects from study areas still to be completed. Total program cost \$220M. 	<ul style="list-style-type: none"> Implementation of recommendations from the Rivey Flood Mitigation Panel Accelerate recovery and resiliency projects 	Compliance by 2018 of debt limit; debt servicing limit; cash financing of capital maintenance and reserves
	Additional Capital \$7.0M Additional Operating \$3.9M	Additional Capital \$11.0M Additional Operating \$5.6M	Additional Capital \$11.3M Additional Operating \$0.2M	Additional Capital \$11.5M Additional Operating \$1.0M	

** The 2014 capital and operating budget related to flood recovery and resiliency, including the operating costs for 3 FTEs are not included in the matrix and were funded using a one-time transfer from the Fiscal Stability Reserve.

2.1.1 Regulatory and Environmental Protection

The regulatory environment for stormwater continues to evolve. The City of Calgary has a stormwater management strategy in place that includes limits for sediment loadings to the Bow and Elbow rivers. Because most of the sediment loadings to the river and streams are from stormwater, efforts to reduce total suspended solids must be focused on stormwater management. Figure 2 shows the reduction in total suspended solids to the river as a result of improved stormwater management through the construction of stormwater management ponds, engineered wetlands and pilot source control practices such as rain gardens.

Figure 2: Total Suspended Solids Loading to the River:



Currently, the total suspended solids loading to the river are five percent below the target and will increase with growth of the city without further investment. Based on a review of the current stormwater quality objectives and anticipated future regulations, Water Resources has identified additional capital needs to install local stormwater quality improvement projects, which include low impact development (LID) approaches. These projects would be in addition to the major stormwater quality retrofit program currently in place. New operating requirements related to these new local stormwater quality projects have been identified.

Riparian areas are ribbons of the landscape along edges of rivers, creeks, lakes and wetlands where water and land interact. Riparian areas are an integral component of a healthy watershed and provide critical functions such as water quality protection, river bank stabilization, flood control and aesthetic, recreational and economic benefits. A significant percentage of riparian areas have been lost to development along major rivers and creeks in Calgary and remaining riparian areas continue to be at risk of degradation. In 2013, Water Resources developed a riparian strategy in consultation with key stakeholders. Capital budget needs have been identified for the implementation of the strategy which includes the installation of riparian protection. Additional operational budget needs have been identified to complete additional monitoring and site condition assessments. Moving forward, riparian protection will require a balance of conservation, flood protection and restoration. The implementation of the riparian strategy will also require policy and planning changes to guide development practices in riparian areas.

2.1.2 Maintaining Assets

The implementation of both traditional stormwater management facilities and LID features in new and existing communities is an important part of our stormwater quality management program. These facilities and features also have operation and maintenance requirements to ensure that they continue to function as intended. While the storm ponds reduce the sediment loading to the rivers and streams, sediment is accumulating in the ponds. Eventually the accumulated sediment needs to be removed from the pond to restore the original design performance and to ensure continued compliance with our water quality objectives. Many of Calgary's storm ponds are at the point in their lifecycle where sediment removal is necessary. Many municipalities across Canada face similar challenges with their stormwater ponds. With current practices the costs to remove and dispose of sediment from one pond costs approximately \$5.5 million. Each storm pond is unique in size and may have different maintenance requirements specific to the site. Generally it is assumed that ponds will need to have sediment removed every 15 to 25 years depending on local conditions. Of the 120 ponds in place, many have been in service for more than 30 years. It is estimated that the number of stormponds will further increase by three ponds per year with growth.

Drainage does not currently have a proactive condition assessment or main replacement program, a best practice that is in place for the water and wastewater lines of service. The Water and Wastewater Utilities' asset management programs are substantially more advanced. Over time, the Utilities have built up an inventory of knowledge related to water and wastewater asset condition through on-going condition assessment and rehabilitation programs. The information obtained through condition assessment programs helps to identify pipe infrastructure in need of replacement before a major main break or service interruption. Capital and operating budget needs have been identified for the next budget cycle to start Drainage condition assessment and main replacement programs to advance the overall asset management for Drainage.

2.1.3 Community Drainage Improvements

Before 1988, stormwater management design practices did not incorporate deliberate overland grading in combination with drainage sewers to handle runoff. Drainage sewers accommodated the one in five year design storm (20 percent chance event), or less, not the one in one hundred year (or 1 percent chance) event now designed for in new communities. As a result, many older communities have had recurring flooding, high street flows and sanitary sewer back-ups during large rain storms. In addition, as more redevelopment occurs, more impervious surface is typically created resulting in additional runoff volumes. There is \$170 million worth of projects identified for this program. At the current funding levels, the list of upgrades will take over twenty years to complete. Additional capital and operating budget have been identified to accelerate the delivery of this program. Table 1 shows the CDI program delivery options considered, and the rate of investment required to deliver the program faster.

Table 1: CDI Program Delivery Options

Total CDI Program Investment (\$Million)	Rate of CDI Investment (\$Million/year)	CDI Program Delivery Span (years)
170	7	24
170	8.5	20
170	10.6	16
220	18.3	12

2.1.4 Flood Recovery and Resiliency

The recent 2013 flood event has put significant pressure on the Drainage capital budget. The flood significantly impacted riverbank areas and stormwater infrastructure throughout the city. Recovery efforts are underway and some projects are scheduled for completion in 2014. However, it will take several years to restore all of the impacted riverbanks and infrastructure, including outfalls and lift stations, back to pre-flood conditions. Table 2 shows the Drainage capital budget related to flood recovery and resiliency projects. As work continues and more assessments are completed, cost estimates for the recovery projects and the corresponding provincial funding will be refined. In addition, investments are needed in the infrastructure to reduce impacts from future flooding events. The operating budget in this program is used to cover the cost of river monitoring, flow forecasting, and emergency preparedness. Capital and operating budget needs have been identified to cover the costs of recovery projects not eligible for provincial funding and for resiliency projects in the next budget cycle. Additional capital and operating needs may be identified once recommendations have been developed by the River Flood Mitigation Panel this spring.

Table 2: Drainage Capital Budget Related to Flood:

	2012	2013	2014	2015-2018
Budget	\$2.6M	\$2.6M	\$2.6M	
2013 Budget Adjustment		\$12.8M		
2014 Budget Adjustment			\$61.9M	
2015-2018 Action Plan				\$33.4M
Total	\$2.6M	\$15.4M	\$64.5M	\$33.4M

2.2 Financial Policy and Targets

On 2014 February 26, Administration provided the SPC on Utilities and Corporate Services with a Drainage Financial Plan (UCS2014-0022). The goal of the plan is to set targets and increase the financial sustainability of the Drainage line of service and ensure its ability to remain a self funded operation. The targets (Table 3) set out in the Drainage Financial Plan are aligned with the Drainage Financial Policies that were approved by Council in 2013 April.

At the 2014 March 17 Strategic Session of Council, Administration was directed to develop the Drainage indicative charges for the 2015-2018 Action Plan based on the following financial targets:

Table 3: Drainage Financial Plan Targets

Policy Area	Target
Debt vs. Cash Financing	100% cash financing of capital maintenance
Debt Limit	\$300 million
Debt Servicing Limit	40% of revenues
Sustainment Reserve	10% of revenues

3.0 Proposed Indicative Drainage Charge 2015-2018

At the 2014 March 17 Strategic Session of Council, Administration was directed to develop the Drainage indicative charges for the 2015-2018 Action Plan based on the Accelerated Delivery for the financial policy and target compliance and the Meets Requirements and Standards level of service for the four remaining program elements: regulatory and environmental protection, maintaining assets, community drainage improvements and flood recovery and resiliency. The selected service levels and the associated fee impacts are shown with the yellow boxes in Figure 2.

Administration was also directed to provide scenarios for acceleration for some urgent activities based on capacity at the 2014 March 17 Strategic Session of Council. A revised Accelerated level of service has been added to Figure 2 to represent this option.

3.1 Regulatory and Environmental Protection

For the regulatory and environmental protection program element, Administration was directed to include the Meets Requirements and Standards level of service into the indicative Drainage charge. The Utilities' stormwater management efforts are based on several goals and targets which include regulatory limits under The City's Approval to Operate and the watershed health target under The City's Municipal Development Plan. Since 2008, the Utilities have been implementing major stormwater quality retrofits which include wetlands and infiltration systems in older urbanized areas to reduce total loadings to the rivers. To continue to meet these goals and targets, the Utilities' have reviewed the number of required stormwater management facilities over the next 10 years. Traditional stormwater infrastructure is not sufficient to maintain stormwater quality and quantity. In recent years, there has been a move to integrate low impact development (LID) designs and source control practices, placing more emphasis on source stormwater management, and stormwater reuse strategies.

The Meets Requirements and Standards level of service will allow the Utilities to continue to maintain sediment loadings below 2005 levels by implementing a balance of major stormwater quality retrofits and local stormwater quality improvement projects. Local stormwater quality improvement projects are essential for meeting the sediment loading goals as traditional, end of pipe solutions such as ponds are often unfeasible in developed areas. The Utilities' Wastewater Approval to Operate is up for renewal in 2018 and it is anticipated that more stringent sediment loading targets could be incorporated which could result in the adjustment of the balance of major and local stormwater quality improvement projects over the next ten years. This level of service also allows the Utilities to increase its riparian monitoring and mapping and the development of an implementation plan for the Riparian Strategy (UCS2013-0048).

3.2 Maintaining Assets

For the maintaining assets program element, Administration was directed to include the Meets Requirement and Standards level of service into the indicative Drainage charge. This level of service will allow the Utilities to start cleaning out its inventory of over 120 storm ponds to restore the original water quality function while conducting research to inform and refine operational and maintenance practices. This level of service will also allow the Utilities to implement new asset management programs that are aligned with industry best practices and similar programs in the Water and Wastewater Utilities. These programs will include proactive condition assessments, and main replacement and rehabilitation programs.

3.3 Community Drainage Improvements

For the CDI program element, Administration was directed to include the Meets Requirements and Standards level of service. This level of service will allow the prioritized project list to be delivered in 16 years, which is 8 years faster than with the current investment level.

3.4 Flood Recovery and Resiliency

For the flood recovery and resiliency program element, Administration was directed to include the Meets Requirements and Standards level of service. This level of service allows the Utilities to continue with the flood recovery and resiliency projects that are planned and underway. This level of service assumes a portion of the projects will be funded through provincial programs such as the Disaster Relief Program and the Flood Recovery Erosion Control Program.

Operating funding for the three river engineering FTEs approved through the 2014 budget adjustment process have also been included in this level of service. Since recommendations from the River Flood Mitigation Panel are not expected until this June, this level of service does not include any additional funding for the implementation of mitigation recommendations from the Panel. It is anticipated that additional budget will be requested at the time of the recommendations and adjustments will be required to the indicative Drainage charge for any projects that are not eligible for Provincial funding.

Figure 2: Fee Impacts of Selected Levels of Service

Program Service Level	Regulatory and Environmental Protection	Maintaining Assets	Community Drainage Improvements	Flood Recovery and Resiliency	Financial Policy and Target Compliance
Current Service Level (12-14)	<ul style="list-style-type: none"> Meets current Wastewater Approval to Operate water quality objectives for sediment loadings to the river. 	Typical O&M activities include pipe flushing, catch basin cleaning, lift station maintenance, vegetation control, select storm pond cleaning and maintenance activities	<ul style="list-style-type: none"> With current investment, 24 years to deliver all projects on the list. Total program cost \$170 million. 	<ul style="list-style-type: none"> Coordination of flood preparedness Coordination of flood recovery and resiliency projects 	Targets are being established.
Total Capital: \$3.79, Total Operating: \$5.41 Total Monthly Drainage Charge \$9.20					
Meets Requirements & Standards	<ul style="list-style-type: none"> Continues to meet regulatory requirements. Development of an implementation plan for the riparian strategy 	<ul style="list-style-type: none"> Pond cleanings to restore WQ function Establish asset condition assessment, main replacement and rehabilitation programs Research to inform and refine operational and maintenance practices. 	<ul style="list-style-type: none"> Accelerate program to deliver upgrades to all projects on the list within 16 years. Total program cost \$170 million. 	<ul style="list-style-type: none"> Flood recovery and resiliency projects including bringing infrastructure up to current design standards 	Compliance by 2022 of debt limit, debt servicing limit, cash financing of capital maintenance and reserves
Revised Accelerated	Additional Capital \$0.22 Additional Operating \$0.16	Additional Capital \$0.50 Additional Operating \$0.20	Additional Capital \$0.27 Additional Operating \$0.01	Additional Capital \$0.09 Additional Operating \$0.01	Included in capital
	<ul style="list-style-type: none"> Additional research includes: pilot features, LID performance verifications, surface/subsurface interactions Increased riparian area maintenance and education/outreach 	<ul style="list-style-type: none"> Additional monitoring and evaluation of maintenance requirements for green infrastructure Increased installation of sediment capture devices 	Limited capacity to accelerate	Limited capacity to accelerate	N/A
Accelerated Delivery	Additional Capital \$0.22 Additional Operating \$0.21	Additional Capital \$0.54 Additional Operating \$0.21	N/A N/A	N/A N/A	N/A
	<ul style="list-style-type: none"> Accelerate delivery of local stormwater infrastructure and features Accelerate the implementation of the riparian strategy to start in the 2015-2018 budget cycle 	<ul style="list-style-type: none"> Expand research scope to include emerging operational and maintenance issues. Accelerate storm pond cleanings Accelerate condition assessment, and trunk / main replacement program 	<ul style="list-style-type: none"> Accelerate program delivery to 12 years, and include additional projects from study areas still be to completed. Total program cost \$220M. 	<ul style="list-style-type: none"> Implementation of recommendations from the River Flood Mitigation Panel Accelerate recovery and resiliency projects 	Compliance by 2018 of debt limit, debt servicing limit, cash financing of capital maintenance and reserves \$0.20
Accelerated Delivery	Additional Capital \$0.32 Additional Operating \$0.20	Additional Capital \$0.60 Additional Operating \$0.25	Additional Capital \$0.48 Additional Operating \$0.02	Additional Capital \$0.63 Additional Operating \$0.04	\$0.20

 Additional Drainage Charge Scenario 1
  Additional Drainage Charge Scenario 2

3.5 Financial Policy and Target Compliance

For the financial policy and target compliance program element, Administration was directed to incorporate the Accelerated Delivery level of service into the indicative Drainage charge for 2015-2018. This will allow the Utilities to achieve compliance with the financial policies and targets within one budget cycle (four years). This will ensure that the Drainage line of service evolves and grows while remaining financially sustainable.

The Drainage Financial Plan has outlined four financial targets:

- Cash financing target of 100 percent capital maintenance
- Debt limit of \$300 million
- Debt servicing limit of 40 percent of revenues
- Sustainment reserve target of 10 percent of revenues

The 10 year projected debt is shown in Figure 3 and the projected debt servicing is shown in Figure 4. The total debt and debt servicing is projected to increase over the next ten years as the capital spending increases. However, because the revenues are also projected to increase for Drainage, the debt servicing is maintained below the 40 percent target, and is trending towards 25 percent of revenues over the next ten years.

Figure 3: 10 Year Projected Debt

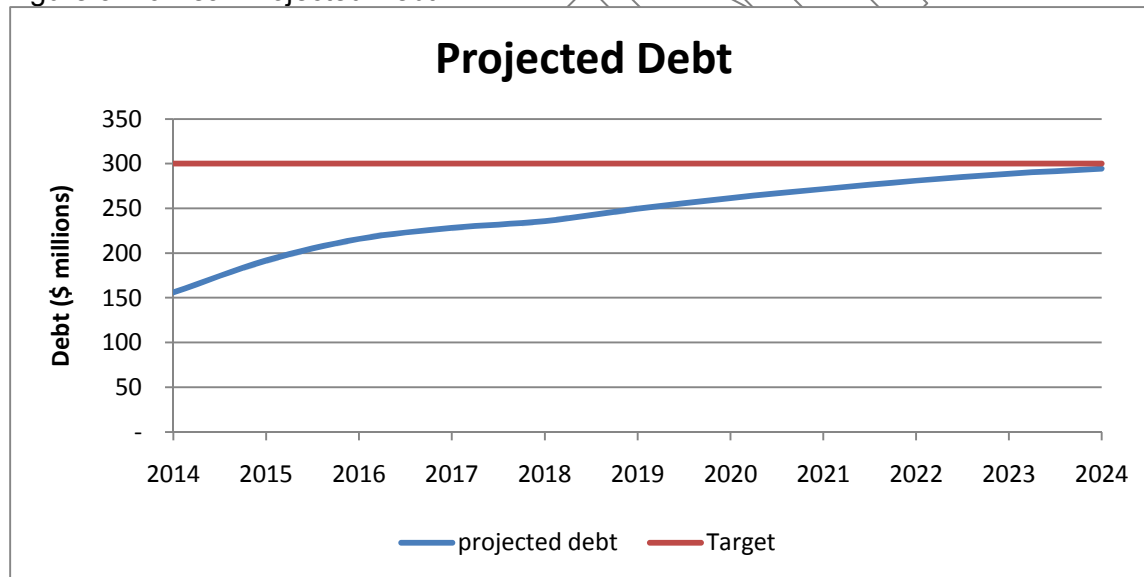
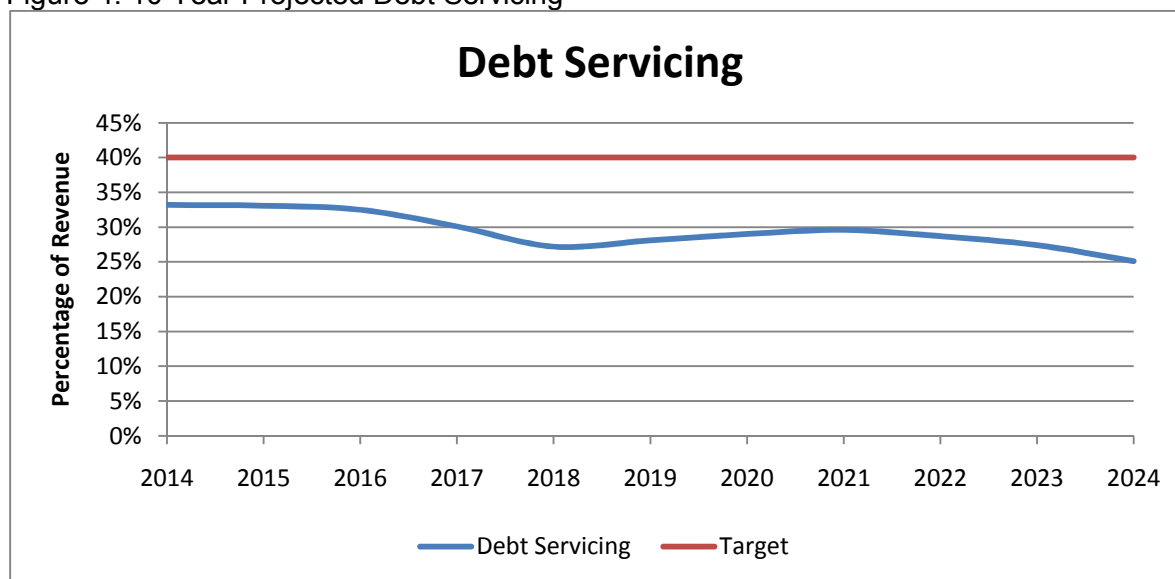
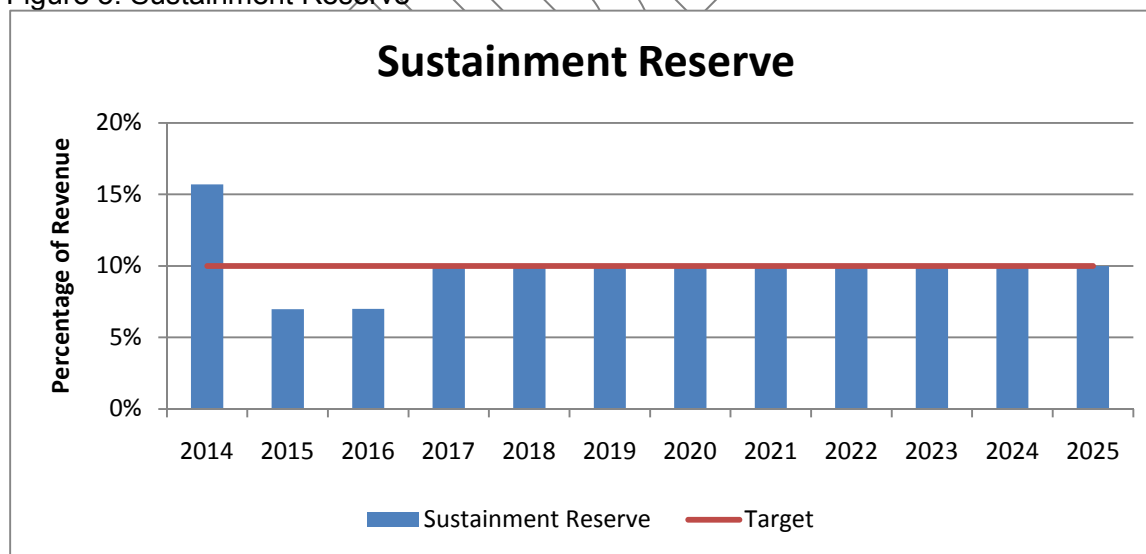


Figure 4: 10 Year Projected Debt Servicing



The sustainment reserve for Drainage will be depleted over the next three years and then built up again to the target of 10 percent of revenue. In 2014, the costs of the River Flood Mitigation Panel, estimated to be \$2.3 million, will be funded from the Drainage reserve. In 2015 to 2016, the sustainment reserve is reduced as Drainage works to achieve the cash for capital maintenance target while maintaining debt levels. The sustainment reserve target of 10 percent of revenues is projected to be achieved by 2017 as shown in Figure 5.

Figure 5: Sustainment Reserve



3.6 Proposed Indicative Drainage Charge Scenario 1

Based on Council direction, Administration has created Scenario 1 for the proposed indicative drainage charge based on the Accelerated Delivery for the financial policy and target compliance and the Meets Requirements and Standards level of service for the four remaining program elements. Scenario 1 results in a significant increase to the drainage programs. The total capital program for 2014 is \$30 million per year. The new levels of service will increase the

total capital program to \$50 million per year for 2015-2018. To deliver the new levels of service, the total operating program is increased from \$23.5 million in 2014 to \$32.4 million per year for 2015-2018. The fee impacts for the selected service levels have been evaluated for Scenario 1 and are shown in Figure 2, outlined in yellow. Based on the identified levels of service for each of the program levels in Figure 2, the indicative Drainage charge increase required for Scenario 1 would be the sum of the selected fee impacts as shown in Table 4 for 2015 and will result in an overall average fee increase of approximately 18.0 percent per year (Table 5). Table 5 is repeated in Attachment 2 for Council approval.

Table 4: 2015 Incremental Increase to the Monthly Drainage Charge Based on Recommended Levels of Service (Scenario 1):

	Regulatory & Environmental Protection	Maintaining Assets	Community Drainage Improvements	Flood Recovery and Resiliency	Financial Policy and Target Compliance	Total
Capital	\$0.22	\$0.50	\$0.27	\$0.09	\$0.20	\$1.28
Operating	\$0.16	\$0.20	\$0.01	\$0.01	Included in capital	\$0.38
Total Fee Increase	\$0.38	\$0.70	\$0.28	\$0.10	\$0.20	\$1.66

Table 4: Proposed Indicative Drainage Charge based on Scenario 1

	2014 (current)	2015	2016	2017	2018
Proposed Monthly Drainage Charge Increase		\$1.66	\$1.95	\$2.31	\$2.72
Proposed Monthly Drainage Charge	\$9.20	\$10.86	\$12.81	\$15.12	\$17.84

3.7 Proposed Indicative Drainage Charge Scenario 2

At the 2014 March 17 Strategic Meeting of Council, Administration was also directed to provide scenarios for acceleration for some activities based on capacity. Overall, the Utilities have increased their capital spending plan for water, wastewater and drainage significantly for 2015-2018. The Utilities have reviewed each of the program elements to determine if there are any activities that could be accelerated and realistically delivered in addition to the increased capital spending already planned. For Scenario 2, Administration has identified some programs that could be accelerated under the regulatory and environmental protection and the maintaining assets program areas.

Under the regulatory and environmental protection program element, the Utilities have identified additional research that could be accelerated. The additional research would be focused on low impact development (LID) and source control features and would include the construction of pilots and additional monitoring to verify the performance of LID and source control features already installed to improve future designs and to inform maintenance activities. Some operating increases have also been identified to accelerate policy development to support erosion and sediment control efforts. For riparian areas, the Utilities have also identified accelerated maintenance of riparian areas which includes invasive weed control, maintenance of riverbank protection structures and replanting of riparian areas. Additional education and

outreach related to riparian protection and restoration was also identified to be accelerated over the 2015-2018 budget cycle.

Under the maintaining assets program element, the Utilities have identified additional research to improve lifecycle costing practices. As new stormwater management facilities are installed, it is important for the Utilities to take a full lifecycle approach to managing these facilities. Understanding the full costs to maintain and operate all of the stormwater management facilities and features throughout their entire lifecycle will allow the Utilities to compare the effectiveness of these facilities and features and adjust the combination of these identified in long range plans to meet long term stormwater quality objectives and regulations. The Utilities have also identified the acceleration of the installation of sediment capture devices. These devices are installed throughout the drainage system to control the amount of sediment entering storm ponds and other stormwater management features and would result in reduced pond maintenance requirements. A prioritized list of areas that would benefit from these devices has already been developed and the acceleration of the implementation is not expected to significantly impact the Utilities' capacity to deliver on its capital plans.

No additional programs under the CDI and flood recovery and resiliency programs are recommended for acceleration at this time. The CDI program is capital intensive, and accelerating the CDI implementation would have an impact on the Utilities' ability to deliver on the capital plan outlined in the WIIP. The Utilities will be increasing its capacity to deliver the \$350 million per year WIIP over the 2015-2018 budget cycle and adding more capital projects is not recommended at this time. The Utilities will need to re-evaluate the flood recovery and resiliency projects with the recommendations and findings from the River Flood Mitigation Panel expected in June. The recommendations and findings from the Panel could result in additional projects that may need to be incorporated into the 2015-2018 Action Plan.

The fee impacts for the selected service levels for Scenario 2 are shown in Figure 2, outlined with the dashed green boxes. Overall the programs that have been identified for Scenario 2 would further increase the Drainage capital program by approximately \$900 thousand per year, and the Drainage operating budget by \$1.2 million per year. Scenario 2 would result in an indicative Drainage charge increase of approximately 19.1 percent per year for 2015-2018 (Table 6). This accelerated scenario includes achieving compliance to the financial policies and targets by 2018.

Table 6: Proposed Indicative Drainage Charge based on Scenario 2

	2014 (current)	2015	2016	2017	2018
SCENARIO 1 (from Table 5)– Proposed Monthly Drainage Charge	\$9.20	\$10.86	\$12.81	\$15.12	\$17.84
Incremental Increase for Scenario 2		\$0.10	\$0.24	\$0.42	\$0.67
SCENARIO 2 - Proposed Monthly Drainage Charge	\$9.20	\$10.96	\$13.05	\$15.54	\$18.51

The research that the Utilities will undertake over the 2015-2018 budget cycle will inform and adjust long range investment and maintenance plans. Administration will incorporate a review

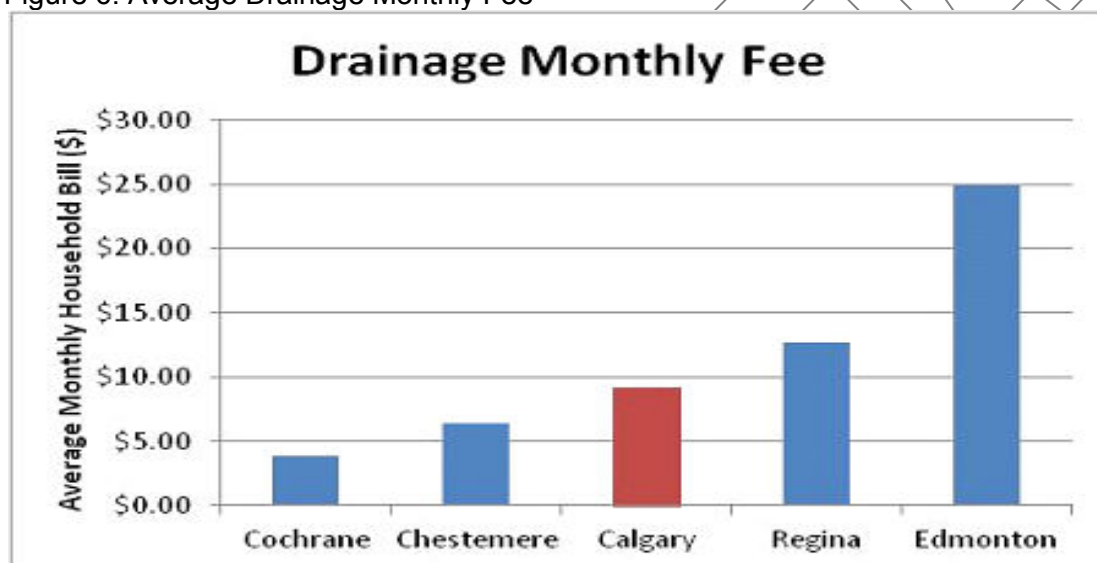
of the progress made in each of the five program elements identified in the service level matrix into the 2015-2018 Action Plan. This review will include the identification of any specific programs that could be further accelerated through the 2019-2022 budget cycle.

5.0 Continual Improvement

As the Utilities work to achieve compliance to the financial targets set out in the Drainage Financial Plan over the next budget cycle, work will continue to improve and monitor the overall performance and health of the Drainage line of service.

The Utilities have compared the 2014 monthly Drainage Charge against other municipalities. The Drainage charge for Calgary remains in the middle of the comparison (Figure 6). Not all municipalities have released their 2015 rates, so the Utilities were unable to compare the proposed indicative charge at this time.

Figure 6: Average Drainage Monthly Fee



5.1 Cost of Service Study

The Utilities are undertaking a cost of service study for Drainage in parallel with the cost of service study for the Water and Wastewater Utilities. One of the outcomes of the study is an update to the customer classes and the equitable allocation of costs. For Drainage, there is only one customer class because the same flat rate fee applies to all customers. The study will look at the potential of moving towards rate structures based on lot/parcel size or impervious surface area.

Administration recommends that a new cost of service study is incorporated into the 2015-2018 Action Plan. The current study may result in recommendations to change the single customer class and rate structure. A new study in 2015-2018 may include the development of a phased-in approach to implement any recommended changes to the customer classes and the rate structure through 2019-2022.

5.2 Zero-Based Review

Water Services will be undertaking a zero-based review over the next year. The review will focus on the services that Water Services provides in all three lines of service: water, wastewater and drainage. Results from the review will be presented to Council 2015 March. The Utilities will implement the findings and recommendations over the 2015-2018 budget cycle. It is also expected that a zero based review will be conducted in Water Resources.

6.0 Recommendations

Administration recommends that the 2015-2018 Action Plan as a minimum, be based on Scenario 1 for the indicative Drainage charge as identified in Attachment 2, Table 1. Should Council wish to include the accelerated work identified in Scenario 2, the indicative drainage charge would be as identified in Attachment 2, Table 2.

The proposed indicative Drainage charge for 2015-2018 will allow the Utilities to bring the Drainage line of service up to the minimum requirements and provide a phased in approach of industry standards and best practices. The accelerated timeline to achieve financial compliance will ensure that the Drainage line of service can remain a self-funded activity as it continues to evolve.

Administration also recommends that a new cost of service study and a review of progress made in each of the five program elements, including the identification of any program areas that should be further accelerated in 2019-2022, be incorporated into the 2015-2018 Action Plan. Administration will also report back no later than 2016 June with an update on the Drainage Financial Plan progress.