

DRAINAGE FINANCIAL PLAN 2015-2018

2016 MAY 25



PROGRESS REPORT



TABLE OF CONTENTS

1.0 Introduction	4
1.1 Context for Review of Financial Plan, Policies and Targets	4
2.0 The Drainage Business Model.....	4
2.1 Drainage revenue.....	6
2.2 Off-Site Levies	6
2.3 Cost of Service Basis.....	6
2.3.1 Impervious area billing investigation and findings	7
2.4 Capital Intensive.....	8
2.4.1 Maintain Assets.....	9
2.4.2 Regulatory and Environmental Protection	9
2.4.3 Service	10
2.4.4 Growth	10
2.4.5 Annual Spending Plan	11
2.5 Flood	12
2.6 Financial Policies	13
2.6.1 Financing and Use of Debt	13
2.6.2 Amortization and Depreciation.....	13
2.6.3 Reserves	13
3.0 Progress Update.....	14
3.1 Operating Pressures.....	14
3.1.1 Water Services ZBR Implementation	14
3.1.2 Operating Cost of Capital Program	15
3.2 Progress on Financial Targets	15
3.2.1 Debt Limit.....	16
3.2.2 Debt Servicing	17
3.2.3 Cash Financing of Capital Maintenance	18
3.2.4 Sustainment Reserve	19
4.0 Financial Review.....	20



4.1 Consultant's Scope	20
4.2 Consultant's Assessment	20
4.3 Consultant's Recommendations	20
5.0 Next Steps	22
6.0 Conclusion	22
Appendix A - Timeline	23
Appendix B – Community Drainage Improvement List.....	24



1.0 INTRODUCTION

This report provides an update on the Drainage line of service (Drainage) Financial Plan, in particular, the progress towards achieving the financial targets and maintaining compliance with the financial policies set out in the Drainage Financial Plan. Additionally, this report also provides the results of a recent review of the continued relevance of Drainage's financial policies and targets in relation to the goal of financial sustainability and utility industry best practices.

The Drainage financial policies were first established in 2013 to provide improved financial capacity and sustainability to meet the challenges of maintaining service and responding to growth (UCS2013-0044, Drainage Financial Policies). In 2014, the Drainage Financial Plan 2015-2018 (UCS2014-0022) was presented to the Standing Policy Committee on Utilities and Corporate Services (SPC on UCS). Council directed Administration to target financial compliance by 2018, in accordance with timelines for the Water and Wastewater Utilities' (the Utilities) financial policy targets.

1.1 CONTEXT FOR REVIEW OF FINANCIAL PLAN, POLICIES AND TARGETS

It is timely to ensure the financial policies and targets set out in 2013 and 2014 respectively, together forming the Drainage Financial Plan, continue to ensure financial sustainability and manage the financial risk for the Drainage line of service.

Water Resources recently undertook a review of existing financial targets and policies for Drainage. The review included an assessment of each policy to ensure they meet industry best practices. Additionally, the review looked at the continued relevance of the financial policies and targets in relation to the goal of financial sustainability and utility industry best practices.

Further, Council directed Administration to scope the requirements and implications of implementing an impervious area billing system and provide a progress report at the same time. Water Resources has completed an investigation and this report provides an update on the feasibility of moving to an impervious billing system for Drainage.

In 2017, Water Resources will conduct a Cost of Service Study in advance of setting indicative rates for the 2019-2022 budget cycle. It is important to understand the current financial state of Drainage and potential financial policy changes in advance for the Cost of Service Study.

2.0 THE DRAINAGE BUSINESS MODEL

Together, the Water Services and Water Resources business units manage and operate the Drainage line of service. Drainage has operated as a self funded activity since 2004. In this model, the stormwater drainage fees and charges are set to recover the full costs of providing the drainage services. Key differences between the self funded activity and the full utility financial models include the payment of franchise fees and return on equity to The City within the utility model. These differences add to the revenue requirements of the Utilities.



Priority services in Drainage and the resources required to implement them are in part defined by watershed management planning activities and as such, this is a line of service which has evolving requirements. The integrated watershed management goals are to:

1. Protect our water supply by reducing upstream risks to our water source;
2. Use water wisely through responsible and efficient use;
3. Keep our rivers clean by reducing Calgary's impacts on the rivers; and
4. Build resiliency to flooding.

An update on activities supporting these goals was recently presented to UCS on 2016 April 27 through UCS2016-0167 Watershed Management Planning Update 2015, and UCS2016-0168 Flood Resiliency and Mitigation 2015 Update. Appendix A includes additional detail of the activities underway that support these goals.

The key components of the Drainage model include:

- Drainage revenue - Drainage revenue is generated from the flat stormwater drainage charge.
- Off-site levies - Drainage collects an off-site levy on greenfield development. The off-site levy is used to fund the full cost of infrastructure investments required to support new growth.
- Cost of service basis - A Cost of Service Study is carried out to ensure costs are being recovered appropriately by each customer class and that the right mix of charges are in place.
- Capital intensive - The nature of stormwater services requires ongoing capital investment in infrastructure. The demand for new drainage services continues to grow in response to population growth, environmental objectives, and the 2013 flood event, over and above the requirement to provide reliable service to Calgarians.
- Financial policies - In addition to complying with relevant Council and Administrative policies, Drainage maintains financial policies specific to its operations.



2.1 DRAINAGE REVENUE

There is currently a single customer class for drainage service where the same flat rate is charged to all residential, industrial, commercial and institutional customers. Revenue from the drainage service charge is used to fund operations, maintenance, riparian work, the Community Drainage Improvements program, flood mitigation, and water quality improvement projects.

2.2 OFF-SITE LEVIES

In 2015, Build Calgary undertook a review of the off-site levy bylaw. In 2016 January, Council approved a new off-site levy bylaw (C2016-0023, Bylaw 2M2016). The resulting bylaw provides for full cost recovery of growth related infrastructure through the collection of off-site levies from developers. The levy rates were updated with current cost and growth projections for six catchments and the new bylaw continues to recover 100 per cent of growth related capital costs for drainage infrastructure. Off-site levy revenue is used to pay principal and interest charges for major stormwater infrastructure to service new growth.

Even though Drainage is recovering 100 per cent of costs through off-site levies, the current economic environment injects uncertainty and risk into actual revenue collections. Off-site levies are charged when developers enter into a development agreement for greenfield areas. If development does not materialize as projected, the result would be an unfavourable revenue variance, which would require mitigation.

In conjunction with the new bylaw, accounting changes have been implemented. Off-site levies were historically recognized in the Statement of Financial Position as developer deposits when billing occurred according to the payment schedule. As such, off-site levies for Drainage were not reflected in the original budget for 2015-2018 approved as part of Action Plan, or historically recorded as revenue. As well, it did not take into account unbilled off-site levy revenue from active development agreements or match corresponding expenditures such as debt servicing.

Starting in 2016, off-site levy revenue for both the Utilities and Drainage will be recognised on the lesser of corresponding expenditures or development agreements that occur in the same year. The actual collection of off-site levy amounts is based on the agreed upon payment schedule articulated in the off-site levy bylaw documents.

The approved net-zero budget adjustments recognize both the revised revenue recognition approach as well as changes from the 2016 off-site levy bylaw.

2.3 COST OF SERVICE BASIS

It is an industry best management practice to conduct cost of service studies every 5 to 10 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.

A Cost of Service Study is performed for Drainage in advance of setting indicative rates for each budget cycle. The next Cost of Service Study scheduled for 2017 will set the foundation for a stronger understanding of the contributions of different customers on the costs of providing the service.

The drainage rates approved by Council as part of the 2015-2018 Action Plan were set to meet the drainage service levels and financial targets adopted by Council (C2014-0324) as part of the 2014 Cost of Service Study. 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. Council directed Administration (C2014-0324) 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 UCS no later than June 2016.

2.3.1 Impervious area billing investigation and findings

Water Resources undertook an investigation in 2015 to understand the business feasibility and set strategic direction for a drainage rate structure that complies with guiding principles for utility rates. The guiding principles can be organized into three interdependent categories: financial sustainability; fairness and equity to customers; and water resource management. High level findings from the investigation found that the following effort is required to establish fair, equitable and defensible rates.

Financial Sustainability

Drainage rates must deliver **sufficient and predictable revenue** in order to meet current and future water quality requirements, and provide a reliable level of services to customers. There are numerous activities underway in the 2015-2018 business cycle that are providing greater clarity around the investments required to provide an appropriate level of service and ensure river health. This will support the business unit in understanding the full cost of providing drainage services now, and in the future.

Fairness and Equity

Drainage rates must be based on the philosophy that a customer's **rates should reflect the cost of providing the service to the customer**. The current investigation used impervious surface area as the measure for which to charge a customer for their contribution to the stormwater system. Initial findings on impacts to customers from an impervious surface area perspective suggest significant rate increases to industrial, commercial and institutional customers, while only providing minor savings to residential customers. Further research is required to determine whether impervious surface area is the right measure from a stormwater management perspective, and to understand the best method to measure a customer's system use in terms of runoff rate and volume, water quality, and local watershed impacts. In addition, consideration must be taken to understand the contribution that shared municipal infrastructure, such as roads and parks, have on the system. Municipal infrastructure contributions would be a fixed cost divided equally amongst all benefiting customers.



Water Resource Management

Rates as a financial tool *to incent adoption of appropriate stormwater best practices* must contribute to achieving the objectives of the Stormwater Management Plan. Through this business cycle, the Stormwater Management Plan is being reviewed to set new objectives and targets to align with the Wastewater Approval to Operate, to be renewed by Alberta Environment and Parks in 2018, which outlines sediment management and pollutant loading objectives for the Bow River. Effort is required to understand what programs will have the greatest impact on achieving the new stormwater objectives, and work will include establishing stormwater and release rate targets for new development to drive adoption of best management practices.

Findings

To support customers, rate structures need to be accompanied by tools and programs, such as credits and incentives, to support them in managing their impact on the system, and in turn help them to reduce their rate impact. Financial tools will be further explored once goals and targets are reaffirmed or defined in the stormwater strategy, providing direction for the level of investment required to achieve the stormwater outcomes. This will allow The City to continue to meet future regulatory requirements while encouraging customers to adopt behaviours that protect the watershed and river water quality.

The investigation also considered data and technology requirements, billing system considerations, implementation and sustainment costs, customer impacts, and benchmarking to identify best practices. Key findings suggest that technology investments are required to access and analyze customer data, and align with the ENMAX billing system. As well, stakeholder engagement with developers and impacted customers is a key factor of success. Significant engagement efforts are underway as part of flood mitigation, stormwater and release rate targets for new development, and the drainage levels of service activities. This engagement will be aligned with conversations on appropriate rates and financial tools to incent adoption of best practices.

To set a dynamic rate structure that reflects the full cost of providing drainage services, it is recommended that the 2017 Cost of Service Study focus on developing a complete picture of the revenue requirement for Drainage. It is expected that, with appropriate engagement and required technology enablement, a program will take six to eight years to form a fair and equitable stormwater rate that complies with cost of service guiding principles.

2.4 CAPITAL INTENSIVE

The capital requirements for Drainage continue to experience increased pressure due to factors such as:

- Aging infrastructure, which impacts the ability to operate efficiently and effectively without service interruptions;
- Changes to regulatory and environmental requirements, which necessitate infrastructure upgrades or the construction of additional infrastructure;
- Introduction of new services or service levels, which require new or upgraded infrastructure; and
- Continued population growth, which triggers capacity upgrades and expansions.



These factors are summarized in Figure 1.

Figure 1: Investment Drivers

Investment Driver	Objective	Percentage of WIIP
Maintain assets	Maintaining, protecting and extending the life of infrastructure investments.	15% - 20%
Regulatory & Environmental Protection	Continuing to meet increasingly stringent regulatory and environmental protection requirements.	15% - 20%
Service	Continuing to provide reliable and high quality services to meet the needs of citizens.	25% - 30%
Growth	Providing infrastructure to meet the needs of a growing city.	35% - 40%

Each investment driver provides a different perspective on when and where infrastructure investments are needed. The process to prioritize investments considers the need and timing of investments in light of the four drivers. The desired outcome is to meet customer and environmental priorities while staying within the financial capacity of Drainage.

2.4.1 Maintain Assets

A stormwater asset management plan is underway, including the establishment of a pond condition assessment program. This five year program began in 2015 and will yield a priority list for pond maintenance, repairs, and sediment removal. A similar program for storm pipes has also been initiated with the recent completion of a criticality model and the commencement of a full inspection program this year. The two programs will ensure that reinvestments are targeted and stormwater assets continue to function as intended.

2.4.2 Regulatory and Environmental Protection

As part of the 2015-2018 Action Plan, a number of initiatives are underway in Drainage. The 2015 Watershed Management Update (UCS2016-0167) outlined watershed management goals and the associated actions:

1. *Protect our water supply* by reducing upstream risks to our water source;
2. *Use water wisely* through responsible and efficient use;
3. *Keep our rivers clean* by reducing Calgary's impacts on the rivers;
4. *Build resiliency to flooding*; and,

Specific initiatives to support these goals include regulatory and environmental protection programs, asset maintenance, planning for growth, flood recovery and resiliency work, and community drainage improvements.



The annual progress towards the established goal to maintain total suspended solids levels (TSS) at or below 2005 levels is also reported on as a part of the 2015 Watershed Management Update (UCS2016-0167). In 2015, the estimate of TSS sediment loadings from stormwater to the Bow River was 39,620 kg/day which is below the 2005 level of 41,300 kg/day. New goal and target setting is underway to address both stormwater and wastewater given new assessments and risk evaluations. Goals and targets will be aligned to the Wastewater Approval to Operate to be renewed by Alberta Environment and Parks in 2018. Work continues to define key performance indicators, develop reporting mechanisms, and bring many concurrent activities together to develop a comprehensive program and implementation plan. Programs will be defined and coordinated to ensure action in priority areas which will set clear outcomes for program delivery.

2.4.3 Service

Community Drainage Improvements

The Community Drainage Improvement (CDI) program delivers stormwater infrastructure upgrades in older communities that were built prior to the use of modern drainage techniques and standards. These communities typically have a service level of 1 in 2 year event to 1 in 5 year event (flooding for storm events) as opposed to current service standards of 1 in 50 year event to 1 in 100 year event in retrofitted and new communities. The planning and delivery of the CDI program is proceeding according to plan, and opportunities to accelerate projects in the CDI stream of work are evaluated on an ongoing basis - prioritized list of projects in Appendix B.

Through delivery efficiency, savings of \$10 million were realized in 2015 from a favorable construction tender for the Rosemount upgrades, and a redesign of the Westgate upgrades. These cost savings were redirected to advance work earlier than anticipated in the communities of Woodlands, Woodbine, Cedarbrae and Braeside. Further efficiencies will be realized by integrating stormwater planning with community level flood management to achieve synergies with water quality improvements.

2.4.4 Growth

The City of Calgary has undergone significant growth over the last several years. The 2015 Civic Census showed that Calgary grew by 35,719 people. Forecasts for 2016 indicate a citywide population growth of 28,785 people (*Suburban Residential Growth 2016-2020 Report*). The average citywide gain over the next five years is forecasted to be an average of 27,117 people per year (2016-2020).

Stormwater infrastructure is a key enabler for growth. To align with the Corporate Growth Management Framework and to support growth, Water Resources monitor performance measures for serviced land supply. Currently, Water Resources' target is to have three to five years of land available for development that is serviced by water, wastewater and stormwater infrastructure. Of the current Drainage operating budget, about 10 per cent is attributed to debt payments and finance charges for growth related infrastructure.

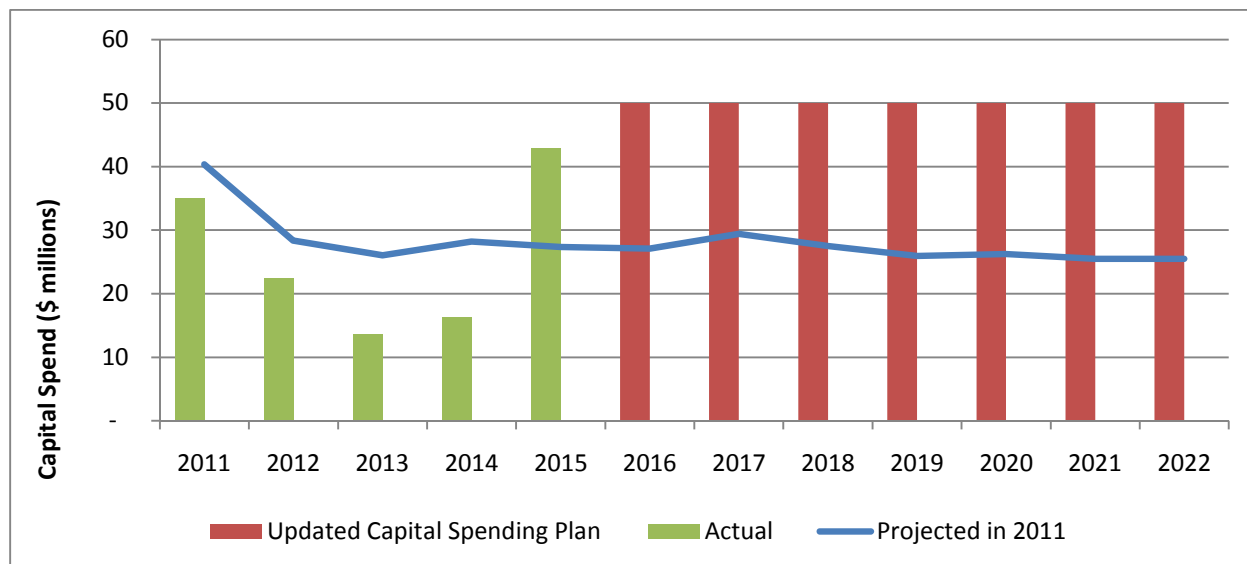


2.4.5 Annual Spending Plan

To accomplish investments per these capital program drivers for the 2015-2018 budget cycle, Drainage will deliver annual capital spending plans of \$50 million (Figure 2). The current Water Infrastructure Investment Plan (WIIP) allocates about 40 per cent of the investments to support growth. Within this planned annual capital spend, focus will be put on highest priority projects and any opportunity to accelerate service levels in the Community Drainage Initiatives program.

Per the recommendation approved by Council on 2015 November 25, in the Proposed Adjustments to the 2016 Budget (C2015-0855), Water Resources is undertaking a recast of the capital budget for Drainage. The recast process will result in a Drainage capital budget more closely aligned with anticipated capital spend, and still ensure that the investment commitments made in Action Plan are fulfilled. Once the budget is recast, Water Resources will deliver Drainage capital projects through a process with additional controls that ensure that budget is allocated to highest priority projects, when they are ready to proceed and with the most accurate cost estimates available. Opportunities to deliver a higher level of service within the same planned capital spend will also be considered.

Figure 2: Drainage – Capital Spending Plan (excluding flood)



2.5 FLOOD

Capital investments to recover from flood events, or minimize the impact of future flood events are an integral part of the Utilities and Drainage services provided by The City of Calgary. Provincial and federal funding is essential for these investments, and The City continues to try to secure funding through all orders of government. Presently, flood recovery, mitigation and resilience investments are planned with the Utilities and Drainage investment plans. They are funded through a variety of mechanisms, including:

- Provincial disaster recovery programs.
- Asset specific insurance.
- Provincial Flood Recovery Erosion Control Program.
- Alberta Community Resilience Program.
- Fiscal Stability Reserve (set aside in 2014 for flood).
- Utility and Drainage rates for portions of projects ineligible for grant program funding.

Through processes to recast and reprioritize capital projects, the Utilities and Drainage will further integrate these planned flood investments into existing services, and report on them through Watershed Management Planning and Flood Resilience and Mitigation updates, and also as a part of drainage investment overall.



2.6 FINANCIAL POLICIES

2.6.1 Financing and Use of Debt

An appropriate mix of debt and cash financing derived from maximum debt limits and minimum cash requirements is necessary to deliver Drainage services. A good mix of financing strengthens the financial position of the line of service while providing greater flexibility when planning for future capital requirements.

Operating costs are always fully funded from revenues. Subject to funding availability, cash financing is used for capital projects that are part of an ongoing improvement program, or will reduce operating and maintenance costs. Cash financing is derived from retained earnings - the return to capital portion of the net income. The Drainage Financial Plan outlined a policy that Drainage will have a target of cash financing 100 per cent of the capital maintenance projects identified in the capital budget.

Debt financing is used for capital projects that are substantial in cost and size, and where the benefits will extend over a relatively long period; this spreads the costs of the infrastructure over an appreciable portion of the useful life of the assets.

Debt limits and debt servicing limits are normally established by lending institutions to ensure that debt and related interest costs are repaid in a timely manner. The City as a whole has both a debt limit and a debt servicing limit as required by the *Municipal Government Act* (MGA). The MGA outlines that for The City, debt may not exceed a limit of twice the revenue, and that debt servicing may not exceed a limit of 35 per cent of revenue. The City has set an administrative target of 80 per cent of the MGA total debt and debt servicing limits. The debt from Drainage contributes to The City debt levels and is subject to these targets.

Drainage has a maximum debt limit of \$300 million, and debt to equity target ratio of 60 per cent. A target of 40 per cent of revenues was set for Drainage debt servicing.

Drainage employs a 25 year debt term on major projects. Shorter terms may be employed on projects where the benefits will extend over shorter periods.

2.6.2 Amortization and Depreciation

Drainage employs amortization accounting practices, and maintains depreciation rates that are aligned with generally accepted accounting principles. Depreciation on donated assets is not charged as an operating expense for the purpose of rate setting.

2.6.3 Reserves

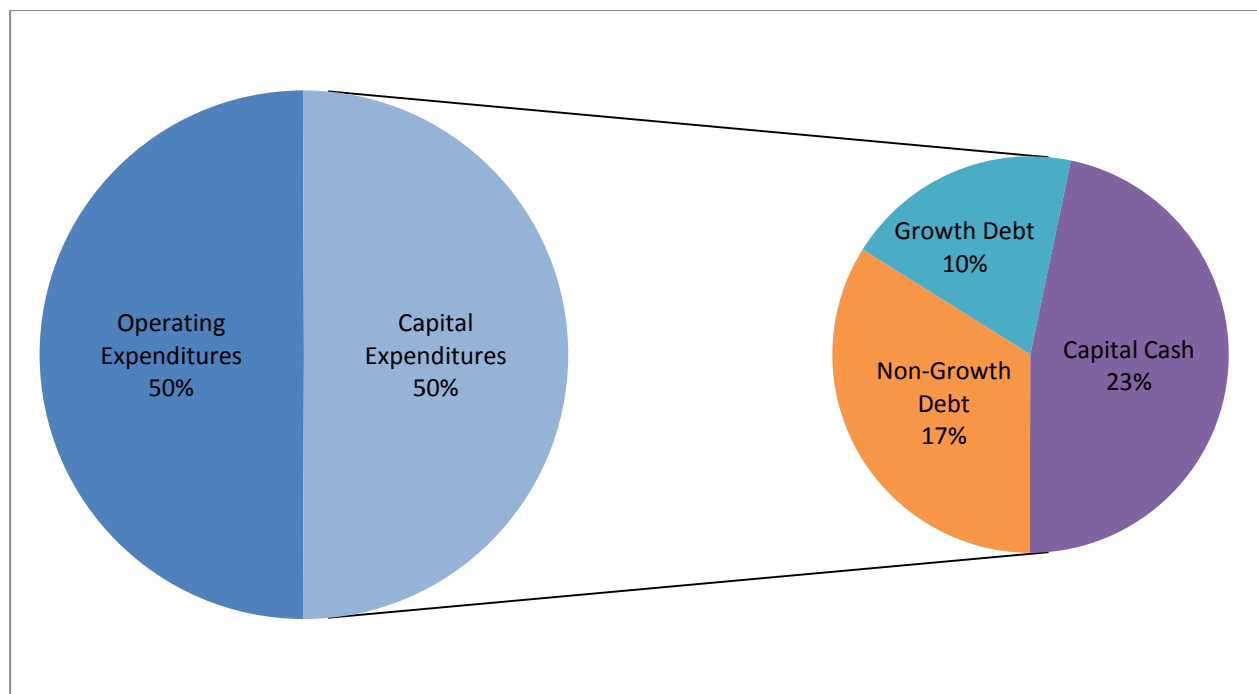
Drainage maintains sufficient reserves to mitigate risk. The size of the reserve is set at 10 per cent of total revenues. The purpose of this reserve is to provide cash flow to fund minor fluctuations in both operating and capital budget expenditures, and to mitigate the risk of period shortfalls in projected revenue.

3.0 PROGRESS UPDATE

3.1 OPERATING PRESSURES

Of the current Drainage budget, approximately half is capital related and half is for operations and maintenance (Figure 3). Monitoring and active management of Drainage operating expenditures is ongoing. A number of initiatives are in place to manage these costs.

Figure 3: Drainage - Expenditure Breakdown 2015 Actual



3.1.1 Water Services Zero-Based Review (ZBR) Implementation

The implementation plan and specific financial benefits expected to be realized from the recommendations of the Water Services Zero-Based Review were reported in UCS2016-0169 (Water Services Zero-Based Review Implementation Plan) on 2016 April 27. The outcomes from the ZBR expected to have future benefits realized in Drainage are as follows:

- Advancement of trenchless technologies;
- Risk based maintenance practices and asset life cycle planning; and
- Benchmarking and performance measurement.

Realized financial benefits will be used to advance Drainage's financial position and will offset increasing costs related to growing and aging infrastructure while continuing to meet all regulatory requirements.



3.1.2 Operating Cost of Capital Program

With an annual capital spending plan of \$50 million over the next 10 years, 40 per cent of which supports growth, the operating costs of these investments and an increased focus on risk based maintenance and asset life cycle planning, will continue to be a significant consideration for Drainage.

3.2 PROGRESS ON FINANCIAL TARGETS

The Drainage Financial Plan sets out specific financial targets to be met by 2018, in line with the Utilities Financial Plan. Figure 4 shows that overall, Drainage is on track to meet the timeline for financial policy and target compliance by 2018.

Figure 4: Drainage financial targets

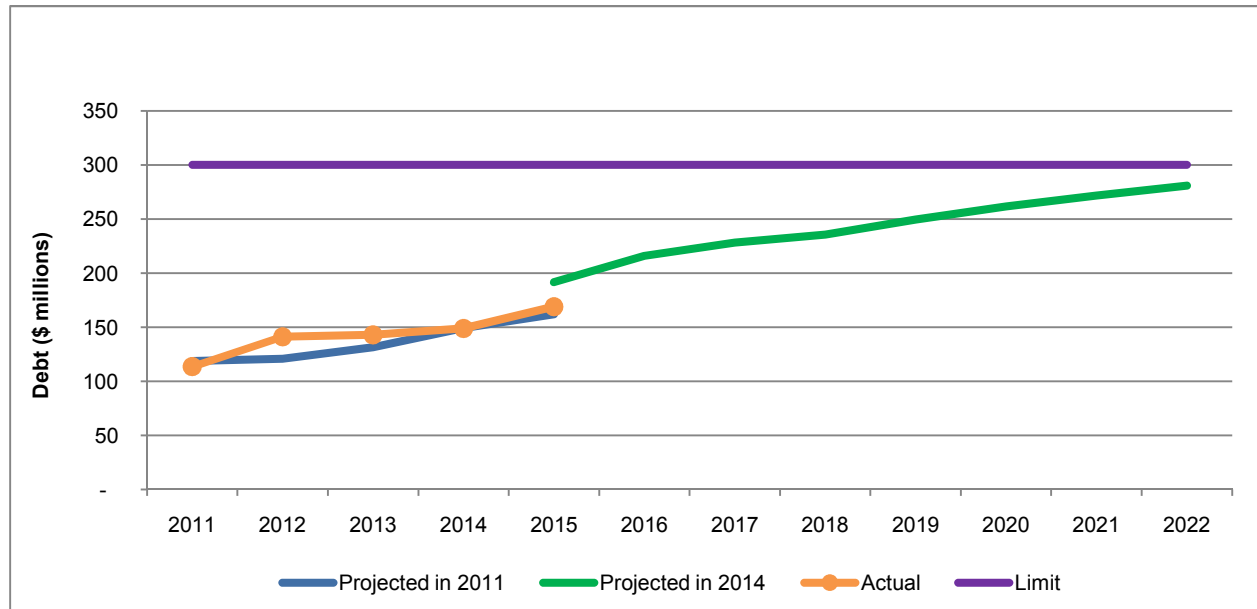
Policy Area	Financial Plan Target	2015 Actual
Debt limit	Maximum \$300 million	\$169 million
Debt service	Maximum 40% of total revenues	31.3% of total revenues
Cash financing of capital maintenance	100%	100%
Sustainment reserve	10% of total revenues	17.5% of total revenues

In 2014, Council approved annual drainage fee increases of 19.1 per cent for the 2015-2018 budget cycle. These fee increases continue to be relevant to ensure Drainage meets the financial policy targets in this budget cycle.

3.2.1 Debt Limit

Since the implementation of the debt policy, total debt for Drainage has been maintained below the target of \$300 million (Figure 5). The actual total debt outstanding for Drainage in 2015 was \$169 million.

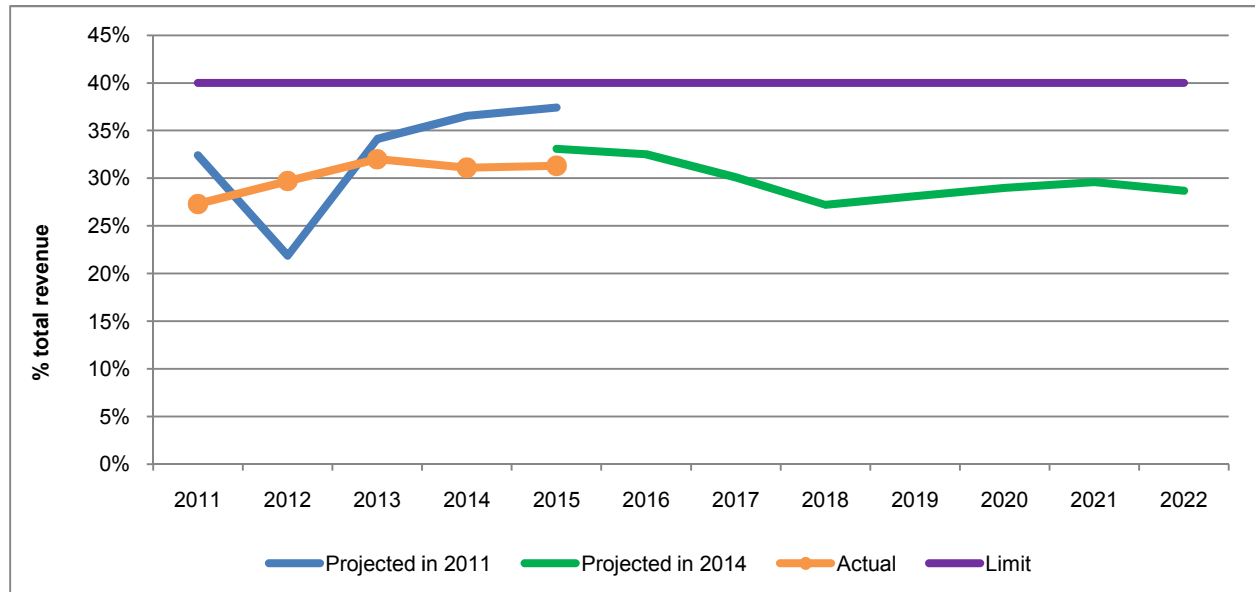
Figure 5: Drainage - Outstanding Debt



3.2.2 Debt Servicing

From 2012 to 2015, Drainage has maintained debt servicing below the limit of 40 per cent of total revenues. The actual debt servicing for 2015 was 31.3 per cent of revenues (Figure 6).

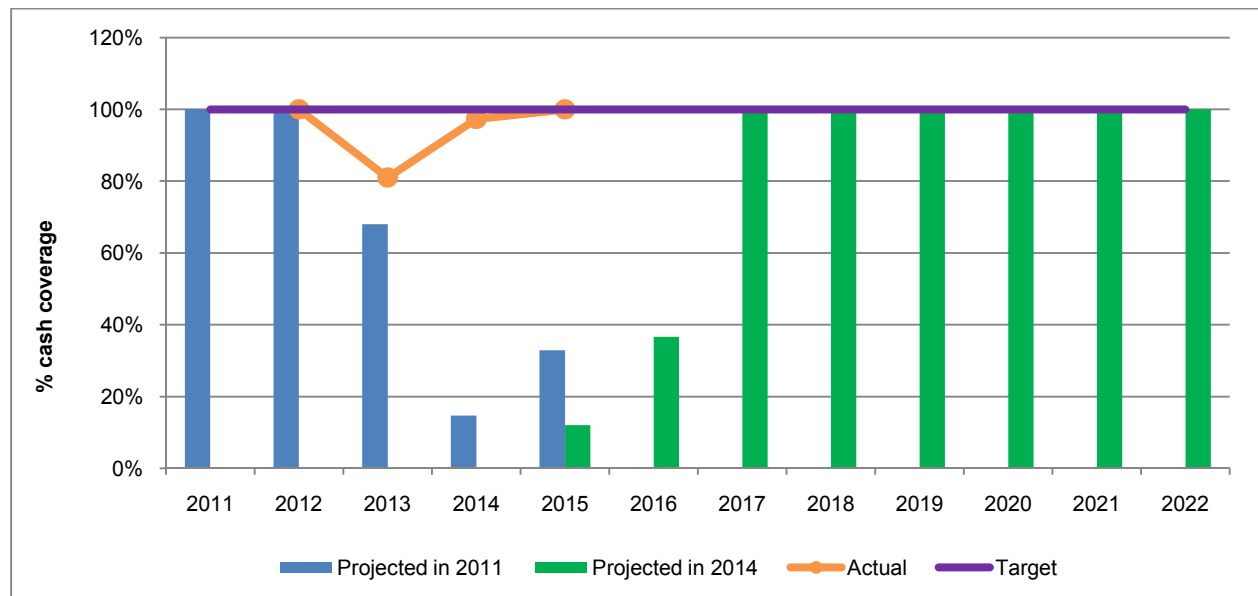
Figure 6: Drainage - Debt Servicing



3.2.3 Cash Financing of Capital Maintenance

Based on the 2018 compliance timeline, it was projected that Drainage would achieve the cash financing target in 2017 (Figure 7). In 2015, Drainage cash financed 100 per cent of the capital maintenance projects, higher than projected. Drainage's ability to outperform on this target in 2015 was due to higher than projected retained earnings from growth in revenues as well as lower than projected capital expenditures.

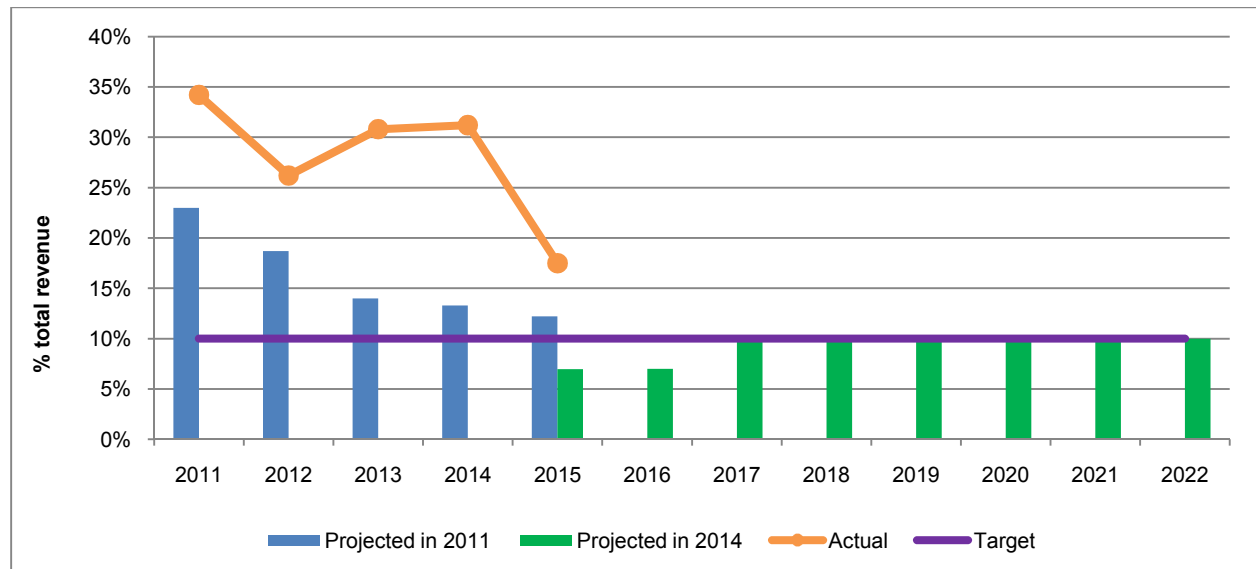
Figure 7: Drainage - Cash Financing of Capital Maintenance



3.2.4 Sustainment Reserve

Based on the 2018 compliance timeline, it was projected that Drainage would be in compliance with the reserve target of 10 per cent of total revenues by 2017 (Figure 8). At the close of 2015, the Drainage sustainment reserve was 17.5 per cent of revenues, higher than the target policy reserve amount.

Figure 8: Drainage - Sustainment Reserve





4.0 FINANCIAL REVIEW

In 2015, The Utility engaged a utility sector financial consultant to conduct a review of the drainage financial policies and assess the progress made to date on achieving the associated financial targets.

4.1 CONSULTANT'S SCOPE

The consultant was asked to assess Drainage's current and projected level of financial risk as a standalone entity, and make recommendations regarding mitigations through changes to financial policy.

4.2 CONSULTANT'S ASSESSMENT

The approach compared Drainage's financial and managerial metrics to the criteria used by U.S. credit rating agencies to assess the risk of Drainage defaulting on debt service payments to external creditors.

Drainage's financial policies related to composition of its capital structure, debt service repayment, and the maintenance of adequate cash reserves were reviewed.

Overall, the opinion rendered by the consultant is that Drainage's level of financial risk is moderate or better. Drainage's debt combined with the Utilities' debt, when viewed on a standalone basis separate from The City, would be assigned the following credit ratings:

- Standard & Poor's: AA (capacity to meet the financial commitment on obligations is very strong)
- Moody's Investors Service: Aa3 (high intrinsic strength and very low credit risk)

4.3 CONSULTANT'S RECOMMENDATIONS

The consultant supports the majority of Drainage's existing financial policies, with the exception of the current self-imposed maximum debt limit of \$300 million.

Further recommendations include:

- Establishing a dedicated capital reserve to mitigate the risk of large unplanned increases in capital improvement program expenditures; and
- Incorporating the use of debt service coverage ratios, in addition to other currently used financial metrics, as part of the financial management process.

Figure 9 summarizes the financial policy recommendations.

Figure 9: Financial Policy Recommendations

Drainage Policy Area	Financial Plan Target (by 2018)	Consultant Recommendation	Utilities' Preliminary Response
Debt limit	Maximum \$300 million	Remove this as a policy and replace with Debt Service Coverage Ratio. Target a minimum of 1.75 times for Drainage	Agree - further analysis and policy engagement is required
Debt service	Maximum 40% of total revenues		
Cash financing of capital maintenance	100%	Agree	Agree - align size of capital maintenance program to investment drivers of the WIIP
Sustainment reserve	10% of total revenues	Change policy to equal 120 days of annual operating and maintenance expenditures	Agree
Capital reserve	n/a - new	Establish a capital reserve equal to 25% of the average annual capital expenditure for the four year budget cycle	Further analysis and policy engagement is required



5.0 NEXT STEPS

Along with ongoing focus on achieving the financial policies by 2018, Drainage will continue to manage increasing cost pressures, market uncertainty and financial sustainability while providing a high level of service to Calgarians. With respect to the financial plan, Drainage will concentrate on:

- Further analysis of the recommendations from the financial review with the aim of presenting recommended revisions to the financial policies in Q1 2017 ahead of the next Cost of Service study;
- Per the recommendation approved by Council on 2015 November 25, in the Proposed Adjustments to the 2016 Budget (C2015-0855), a re-cast of the 2016-2018 capital budget for Drainage that ensures the investment commitments made in Action Plan are fulfilled and opportunities to deliver a higher level of service within the same planned capital spend are considered;
- Developing a complete picture of drainage revenue requirements based on defined service levels and priorities as part of the 2017 Cost of Service study; and
- Aligning policy areas with recommendations to be implemented from Water Resources ZBR and leveraging any financial benefits from both the Water Services and Water Resources ZBR to advance financial position of the Utilities.

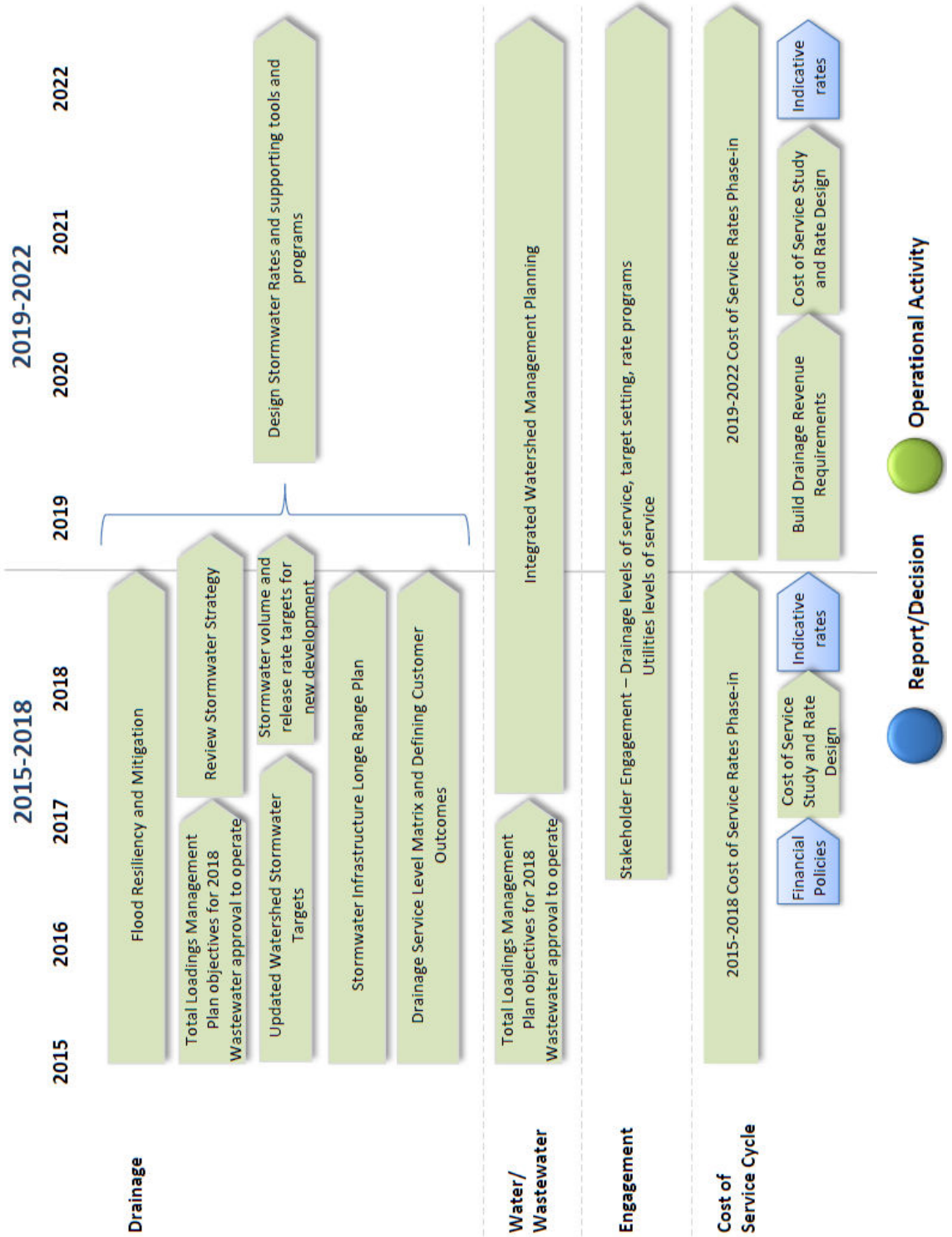
6.0 CONCLUSION

The demand for drainage services is on-going and presents continued capital and operating pressures related to regulatory requirements, growth, and environmental protection. As well, the 2013 flood event has identified additional investment requirements.

Drainage is in compliance with the financial targets set out in the financial plan. Maintaining compliance is dependent on the stormwater drainage charge increases approved in Action Plan 2015-2018. Drainage continues to benefit from the implementation of a financial plan that aligns with the Utilities Financial Plan. The recommended financial targets implemented with the previously approved financial policies will ensure the financial sustainability of Drainage.

APPENDIX A - TIMELINE

Activities Informing Future Utilities/Drainage Rates



APPENDIX B – COMMUNITY DRAINAGE IMPROVEMENT LIST

<u>Project Name</u>	<u>Cost Estimate (2015 \$'000's)</u>	<u>Benefit/Cost Ratio*</u>	<u>Project Status</u>	<u>Construction Start Date Business Cycle**</u>
Christie Park Upgrades & Sarcee Trail (formerly Westgate)	\$3,900	20	in construction	2015-2018
Woodlands/Woodbine - Pond D	\$16,540	9	design	2015-2018
Woodlands/Woodbine - Pond A (Cedarbrae/Braeside)	\$18,910	9	design	2015-2018
Woodlands/Woodbine - Local Improvements	\$4,245	6	design	2019-2022
North West Inner-City - 14.5 Street	\$900	15	design	2015-2018
North West Inner-City - Pump Station #2 - Sunnyside	\$12,600	4	design	2015-2018
North West Inner-City - Kensington Close	\$2,200	13	to be funded	2019-2022
North West Inner-City - Crescent Road	\$1,100	11	to be funded	Beyond 2022
North West Inner-City - 7th Avenue	\$2,000	8	to be funded	2019-2022
North West Inner-City - 19th Street & 9th Avenue	\$2,100	8	to be funded	2019-2022
North West Inner-City - Pump Station #4 - Hillhurst	\$11,700	8	to be funded	2019-2022
North West Inner-City - 19th Street & 6th Avenue	\$600	8	to be funded	2019-2022
North West Inner-City - Upper Plateau Separation	\$36,900	7	to be funded	2019-2022 - Beyond 2022
North West Inner-City - Pump Station #3 - Hillhurst	\$8,400	7	to be funded	Beyond 2022
North West Inner-City - South of Riley Park	\$11,200	6	to be funded	Beyond 2022
Pineridge / Rundle Dry Pond B	\$4,175	6	to be funded	Beyond 2022
Palliser/Oakridge - Phase 2 and Phase 1	\$18,326	6	to be funded	Beyond 2022
Tuxedo/Mnt Pleasant - Phase 2, Phase 1 and Local Improv	\$14,196	5	to be funded	Beyond 2022
Pineridge / Rundle Storage Duct #2	\$2,824	5	to be funded	Beyond 2022
North West Inner-City - Pump Station #1 - Sunnyside	\$7,400	4	to be funded	Now (ACRP)*** or beyond 2022
Shawnessy Stormwater Upgrades	\$20,197	3	to be funded	Beyond 2022
North West Inner-City - 10th Street	\$10,900	2	to be funded	Beyond 2022
North West Inner-City - 14th Street	\$14,900	2	to be funded	Beyond 2022
Palliser/Oakridge - Phase 3	\$11,247	2	to be funded	Beyond 2022
North West Inner-City - 17th Street & 23rd Avenue	\$3,800	2	to be funded	Beyond 2022
Westgate - Ditch Upgrade	\$4,355	1	to be funded	Beyond 2022
Oakmount Dry Pond (Oakmont Way Rev Report)	\$492	1	to be funded	Beyond 2022
Total	\$246,107			



Notes:

- * Benefit/Cost ratio is based on original project scope and costing
- ** Project construction schedules vary from top down based on dependencies to other projects. Construction schedules are subject to change with the addition of new projects added to the list.
- *** ACRP - Alberta Community Resilience Program