2018 Utility Operating Budget
2018-2022 Utility Capital Program

City of Regina | REGINA
Infinite Horizons

Table of Contents

Utility Fund Overview

The Water and Sewer Utility, provides water, wastewater and drainage services primarily to customers in Regina. It has operated on a full cost-recovery, user-pay basis for many years through utility rates. This model is based on users paying for the service rather than having the costs borne exclusively by property owners. Services are charged through a daily base rate and through a volume (usage) charge, which provides an incentive to conserve valuable resources.

The Utility is responsible for diverse infrastructure including water mains, storage reservoirs, pumping stations, building service connections, a wastewater treatment plant, wastewater and storm drainage sewers as well as drainage channels and creeks. The City of Regina is also a joint owner of the Buffalo Pound Water Treatment Plant with the City of Moose Jaw.

Services

The services provided by the Utility are grouped into four service areas:

- Water Supply and Distribution – The water system provides water for residential, institutional, commercial and industrial customers, as well as for fire protection. The system serves a population of over 220,000 including some customers outside city limits.
- Wastewater Collection and Treatment – The wastewater system collects wastewater from all residential, institutional, commercial and industrial customers in the City and treats wastewater in accordance with the provincial and federal governments' environmental regulations and industry standards.
- Storm Water Collection and Flood Protection – The drainage system controls water runoff from rainfall and melting snow in and around the City. The system serves approximately 69,000 residential, institutional, commercial and industrial properties.
- Customer Service – Customer service has two elements:
    - Utility Billing – producing and collecting on utility billings in an efficient, accurate and timely manner
    - Communications – being responsive to customer inquiries and needs

2017 Accomplishments

- Phase one of the Wastewaster Master Plan has been completed. The Plan will provide direction for capital investments in the wastewater collection system over the next 25 years.
- A new forcemain from the McCarthy Boulevard Pumping Station to the WWTP has been constructed to allow the City to pump more wastewater during major rainfall events and reduce the risk of wastewater overflows and sewer backups.
- A new ultra violet system at the Buffalo Pound Water Treatment Plant has been completed.
- The City experienced a very high number of water main breaks in the 3rd quarter. This resulted in staff being successfully re-deployed to assist with minimizing water service interruptions.

Strategic Issues and Opportunities

- The Utility uses a model to assess the benefits of proposed capital investments and prioritize projects across the Utility networks for the next 25 years. The capital investment plan forms the basis of longer term Utility rate and financial models.
- The Department has increased cross-training, which allows the deployment of resources where required.
- Through development of the Master Plans and integration with the utility model, the Utility is advancing a sustainable long-term plan.

Key Deliverables in 2018

- Completion of the Wastewaster Master Plan
- Improved drainage service with the completion of the Arcola Avenue detention pond project and the 5th Avenue North Relief Sewer project
- Continued inspection and rehabilitation of our underground water, wastewater and drainage pipes
- Advancing wastewater system improvements to meet the regulatory expectations of the Water Security Agency related to sewage bypasses
- Begin the next phase of the Trunk Relief Initiative
- Initiate the St. Anne's Park Drainage Project

2018 Utility Rate Review

The Utility is proposing an overall 2% increase for 2018, based on revenues of $132.8 million, expenditures of $76.1 million, $49.2 million transfer to the reserve and debt repayments of $7.5 million. A one-year schedule of rates is proposed for 2018 as part of the 2018 Utility Budget. If approved, the new rates for 2018 will be implemented January 1, 2018. Rates are billed monthly and are based on a daily fixed charge plus a charge based on usage.

Utility rates are set based on a long-range financial model which covers the cost of operating the Utility and the cost of ongoing asset management and renewal. The model accounts for revenues from Utility rates as well as service agreement fees for new development. The model also builds in some assumed debt. This serves to moderate the need for dramatic rate increases in any given year.

Rate Impact – Average Residential

The chart below illustrates the impact of the 2018 rates on a homeowner who uses 275 cubic metres of water per year. The cost increase from the 2017 rates is about $2.70 per month or $32.37 annually for the average homeowner.

2018 Rate Impact – Average Residential					
	2016 ($)	2017 ($)	2018 ($)	Dollar Change ($)	Change (%)
Water					
Annual Basic Charge	$277.40	$288.35	$295.65	$7.30	
Annual Volume Charge	$497.75	$517.00	$528.00	$11.00	
Total Annual Water	**$775.15**	**$805.35**	**$823.65**	**$18.30**	**2.0%**
Wastewater					
Annual Basic Charge	$215.35	$222.65	$226.30	$3.65	
Annual Volume Charge	$365.31	$378.84	$385.61	$6.76	
Total Annual Water	**$580.66**	**$601.49**	**$611.91**	**$10.42**	**2.0%**
Annual Drainage Infrastructure Levy	$182.50	$189.80	$193.45	$3.65	2.0%
Total Annual Utility Charges	**$1,538.31**	**$1,596.64**	**$1,629.01**	**$32.37**	**2.0%**

History of Regina's annual charges for water, wastewater and drainage based on average water use and property size.

Rate Comparison – Sample Residential Customer

The following chart compares Regina's 2017 rates with those of other cities for a residential customer who uses 275 cubic metres of water per year. The chart uses rates for 2017 as some other cities have yet to determine their 2018 rates.

Sample Residential Customer – 2017 Rates					
	Regina	Calgary	Edmonton	Saskatoon	Winnipeg
Water					
Annual Basic Charge	$288.35	$189.68	$85.53	$115.34	$178.85
Annual Volume Charge	$517.00	$480.43	$565.64	$333.62	$489.50
Total Annual Water	**$805.35**	**$670.10**	**$651.17**	**$448.96**	**$668.35**
Wastewater					
Annual Basic Charge	$222.65	$300.76	$53.05	$115.34	$0.00
Annual Volume Charge	$378.84	$383.79	$229.46	$196.89	$701.25
Total Annual Wastewater	**$601.49**	**$684.55**	**$282.51**	**$312.23**	**$701.25**
Annual Drainage Infrastructure Levy	$189.80	$170.58	$236.71	$395.66[1]	$0.00
Total Annual Utility Charges	**$1,596.64**	**$1,525.23**	**$1,170.38**	**$1,156.85**	**$1,369.60**

A comparison of Water and Wastewater Utility rates across Western Canada (2017 rates are the most recent rates published by all municipalities)
Note [1:] Saskatoon's levy is for all infrastructure and not drainage alone.

Rate Impact – Average Commercial Customer

The chart illustrates the impact of the 2018 rates on a commercial customer with a 40 millimetre meter that uses 3,000 cubic metres of water per year on a property between 3,000 to 5,000 square metres in size. This water consumption would be typical for a strip mall with a restaurant and hair salon as tenants, and a parking lot with minimal landscaping.

2018 Rate Impact – Average Commercial					
	2016 ($)	2017 ($)	2018 ($)	Dollar Change ($)	Change (%)
Water					
Annual Basic Charge	$500.05	$518.30	$532.90	$14.60	
Annual Volume Charge	$5,430.00	$5,640.00	$5,760.00	$120.00	
Total Annual Water	**$5,930.05**	**$6,158.30**	**$6,292.90**	**$134.60**	**2.0%**
Wastewater					
Annual Basic Charge	$386.90	$401.50	$408.80	$7.30	
Annual Volume Charge	$4,762.80	$4,939.20	$5,027.40	$88.20	
Total Annual Water	**$5,149.70**	**$5,340.70**	**$5,436.20**	**$95.50**	**2.0%**
Annual Drainage Infrastructure Levy	$730.00	$759.20	773.8	$14.60	2.0%
Total Annual Utility Charges	**$11,809.75**	**$12,258.20**	**$12,502.90**	**$244.70**	**2.0%**

Financial Summaries

Revenue ($000s)	2015 Actuals	2016 Actuals	2017 Budget	2017 Forecast (Sept)	**2018 Budget**	Budget Change: Dollar Change	Budget Change: Per Cent Change
Utility Fund							
Utility Billing	105,828.5	113,993.1	114,699.3	120,912.9	**116,339.4**	1,640.1	1.4
Drainage Fees	14,530.7	15,421.9	15,977.0	15,977.0	**16,480.6**	503.6	3.2
Other Revenues	404.0	238.8	-	-	**-**	-	-
Total Utility Operating Revenues	120,763.2	129,653.7	130,676.3	136,889.9	**132,820.0**	2,143.7	1.6

Expenditures ($000s)	2015 Actuals	2016 Actuals	2017 Budget	2017 Forecast (Sept)	**2018 Budget**	Budget Change: Dollar Change	Budget Change: Per Cent Change
Utility Fund							
Salaries & Benefits	15,077.0	16,422.9	18,054.4	17,266.2	**18,124.4**	69.9	0.4
Office & Administration	1,394.9	1,569.4	1,251.5	1,322.5	**1,273.7**	22.3	1.8
Professional Services	8,147.7	7,134.8	8,657.7	9,036.9	**9,491.1**	833.4	9.6
Goods & Materials	2,815.9	2,823.7	3,219.2	3,858.8	**3,091.6**	(127.5)	(4.0)
Other Expenses	3,686.0	3,806.9	4,713.5	3,789.7	**4,004.3**	(709.2)	(15.0)
Intramunicipal	20,555.7	22,642.4	25,983.9	25,504.8	**27,686.7**	1,702.8	6.6
Water Purchase	8,868.9	9,616.4	12,367.0	13,975.0	**12,447.5**	80.5	0.7
Civic Operational Total (Utility Fund)	60,546.0	64,016.5	74,247.2	74,753.9	**76,119.3**	1,872.2	2.5
Transfers to Reserves	58,781.0	64,235.0	50,303.4	50,303.3	**49,222.1**	(1,081.3)	(2.1)
Debt Repayment	1,436.2	1,402.3	6,125.8	6,125.8	**7,478.6**	1,352.8	22.1
Civic Other Expenditures (Utility Fund)	60,217.2	65,637.2	56,429.1	56,429.1	**56,700.7**	271.5	0.5
Total Utility Operating Expenditures	120,763.2	129,653.7	130,676.3	131,183.0	**132,820.0**	2,143.7	1.6

Budget Summary by Fund

	2017 Budget	2017 Forecast (Sept)	**2018 Budget**	Budget Change Dollar Change	Budget Change Per Cent Change
Utility Fund ($000s)					
Operating Revenue	130,676.3	136,889.9	**132,820.0**	2,143.7	1.6
Operating Expenditures and Planned Transfers	**130,676.3**	131,183.0	**132,820.0**	2,143.7	1.6

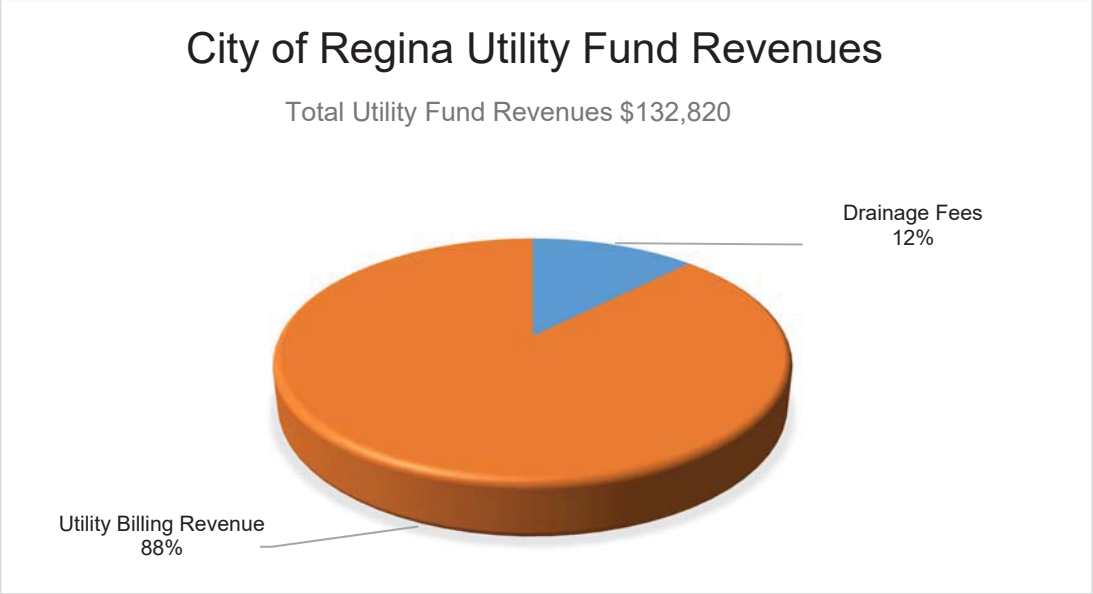
Full Time Equivalents (FTEs)	2016	2017	**2018**
Permanent	186.2	185.2	**186.6**
Casual	25.3	25.6	**26.6**
Total (Utility Operating Fund)	211.5	210.8	**213.2**
Permanent	27.9	29.4	**18.4**
Casual	1.1	0.7	**5.3**
Total (Utility Capital Fund)	29.0	30.1	**23.7**
Total All Funds	240.5	240.9	**236.9**

Revenue

Projected revenue for 2018 is $132.8 million; an increase of $2.1 million over 2017 Budget. Overall, revenue is increasing by 1.6%.

						Budget Change	
Revenue ($000s)	2015 Actuals	2016 Actuals	2017 Budget	2017 Forecast (Sept)	**2018 Budget**	Dollar Change	Per Cent Change
Utility Fund							
Utility Billing	105,828.5	113,993.1	114,699.3	120,912.9	**116,339.4**	1,640.1	1.4
Drainage Fees	14,530.7	15,421.9	15,977.0	15,977.0	**16,480.6**	503.6	3.2
Other Revenues	404.0	238.8	-	-	**-**	-	-
Total Utility Operating Revenues	120,763.2	129,653.7	130,676.3	136,889.9	**132,820.0**	2,143.7	1.6

The following chart indicates 2018 Utility Fund revenue by source.



Expenses

The Utility Fund operating budget totals $132.8 million; an increase of $2.1 million or 1.6% over the base operating budget of 2017. This is a result of inflationary increases, population growth (e.g. purchasing a higher volume of water from Buffalo Pound Water Treatment Plant) and increases related to new practices inherent to overseeing the new Wastewater Treatment Plant such as:

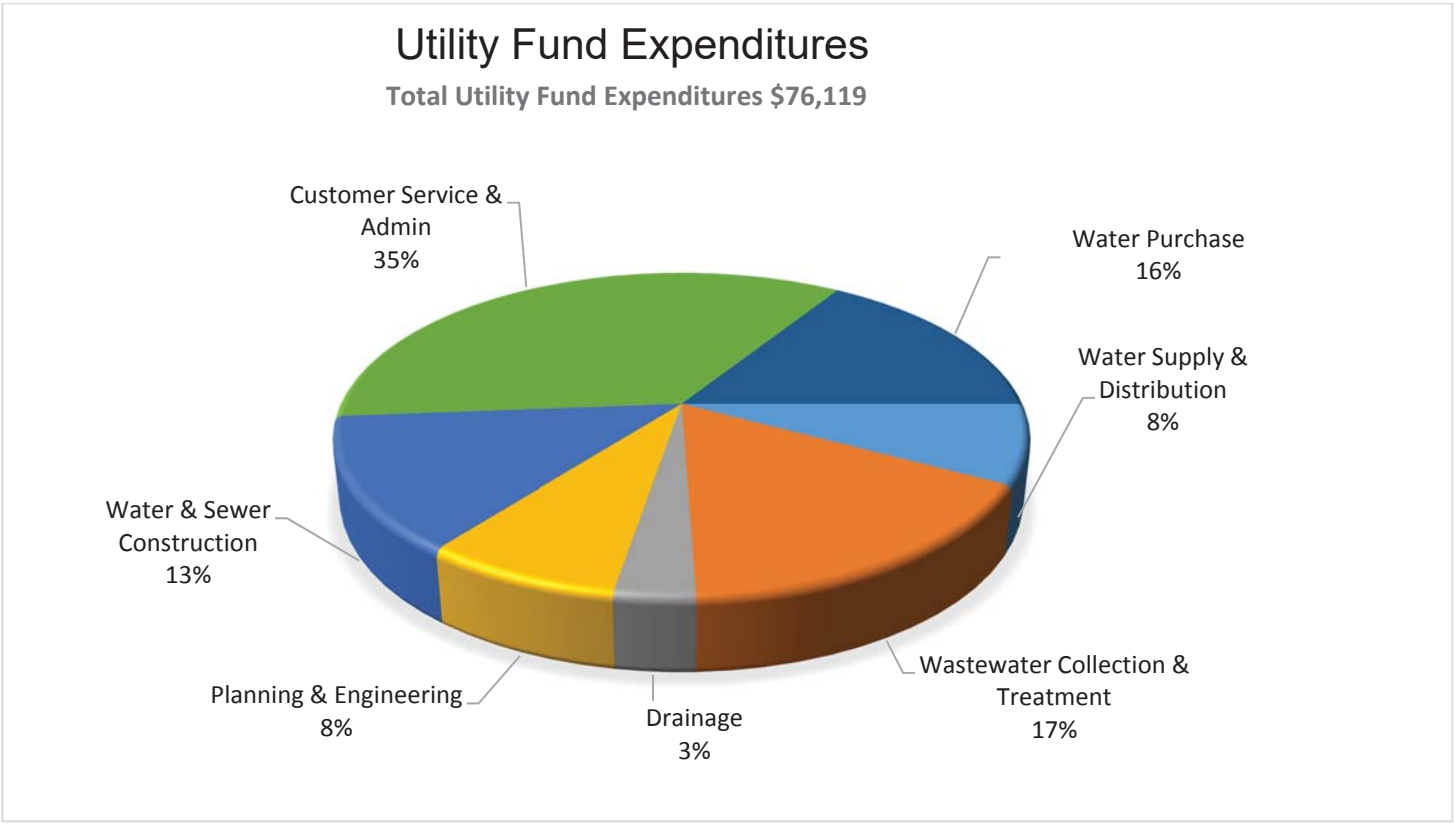
- Programs and strategies to ensure proper source control on materials entering the plant, including a septage receiving station, improved communication and regulation to ensure low levels of fat, oils, and grease in the system
- Improved laboratory testing to ensure materials released into the environment meet required standards

A number of factors have also allowed the City to moderate its estimates of cost growth in 2018. These factors include:

- Lower costs to complete capital projects as a result of changing economic conditions
- The new governance model for Buffalo Pound Water Treatment Plant which results in overall savings for the Utility

The following tables shows expenses by source.

						Budget Change	
Expenditures ($000s)	2015 Actuals	2016 Actuals	2017 Budget	2017 Forecast (Sept)	**2018 Budget**	Dollar Change	Per Cent Change
Utility Fund							
Salaries & Benefits	15,077.0	16,422.9	18,054.4	17,266.2	**18,124.4**	69.9	0.4
Office & Administration	1,394.9	1,569.4	1,251.5	1,322.5	**1,273.7**	22.3	1.8
Professional Services	8,147.7	7,134.8	8,657.7	9,036.9	**9,491.1**	833.4	9.6
Goods & Materials	2,815.9	2,823.7	3,219.2	3,858.8	**3,091.6**	(127.5)	(4.0)
Other Expenses	3,686.0	3,806.9	4,713.5	3,789.7	**4,004.3**	(709.2)	(15.0)
Intramunicipal	20,555.7	22,642.4	25,983.9	25,504.8	**27,686.7**	1,702.8	6.6
Water Purchase	8,868.9	9,616.4	12,367.0	13,975.0	**12,447.5**	80.5	0.7
Civic Operational Total (Utility Fund)	60,546.0	64,016.5	74,247.2	74,753.9	**76,119.3**	1,872.2	2.5
Transfers to Reserves	58,781.0	64,235.0	50,303.4	50,303.3	**49,222.1**	(1,081.3)	(2.1)
Debt Repayment	1,436.2	1,402.3	6,125.8	6,125.8	**7,478.6**	1,352.8	22.1
Civic Other Expenditures (Utility Fund)	60,217.2	65,637.2	56,429.1	56,429.1	**56,700.7**	271.5	0.5
Total Utility Operating Expenditures	120,763.2	129,653.7	130,676.3	131,183.0	**132,820.0**	2,143.7	1.6


Utility Fund Expenditures
Total Utility Fund Expenditures $76,119
Customer Service & Admin 35%
Water Purchase 16%
Water Supply & Distribution 8%
Water & Sewer Construction 13%
Planning & Engineering 8%
Drainage 3%
Wastewater Collection & Treatment 17%

Reserves

The City maintains two funding sources related to utility operations. Reserves provide a capital planning mechanism to ensure the sustainability of services and assets. Reserves are intended to smooth the impact of fluctuations in expenditures or revenues. They also serve as a resource for unexpected/emergency spending requirements and minimize the use of debt to finance capital projects.

The Utility Reserve is based on a long range financial model for water, wastewater and drainage service and allows for full cost recovery, including the long-term cost of maintaining assets. At the recommended rate increase, the General Utility Reserve is projected to remain within the recommended range of $33 million to $80 million over the forecast period of the long range financial model.

Allocating fee-based revenues to reserves allows for the cost of renewal to be spread across all users over the full life of the asset. This is consistent with a financial principle in our Official Community Plan, which identifies the "benefits model" as the basis for costing services. In the Utility model, the users of the service pay for the service through user fees. Financing tools like reserves can reduce the risk of transferring the cost of an asset to a future generation that didn't benefit from the asset.

Year Summary of Reserves, Deferred Revenue and Service Agreement Fees (SAFs) Continuity Schedule ($000s)

Minimum Allowable	Maximum Allowable	Reserve Name	2017 Projected Ending Balance	2018 Additions	2018 Reductions	2018 Projected Ending Balance	2019 Projected Ending Balance	2020 Projected Ending Balance	2021 Projected Ending Balance	2022 Projected Ending Balance
33,000	80,000	General Utility Reserve	87,717	45,318	(53,753)	79,282	58,971	52,859	47,036	37,747
N/A	N/A	Service Agreement Fees - Utilities	(29,311)	11,903	(8,897)	(26,304)	(21,867)	(15,489)	(7,996)	(28,468)
Total Utility Reserves & SAFs			**58,406**	**57,221**	**(62,650)**	**52,977**	**37,104**	**37,370**	**39,040**	**9,279**

Debt

The City is using more of its own sources of financing to cover infrastructure costs. A significant portion of the capital funding comes from the utility reserve.

The operating budget also covers the repayment of debt issued to fund capital projects. In accordance with Section 129(1) of *The Cities Act*, the budget is to include "the amount to be transferred to the capital budget" and in accordance with Section 129(1)(b), it is also to include "the amount needed to pay all debt obligations with respect to borrowings of the City."

5 Year Debt Forecast		
	2018	2019-2022
Opening Balance	85,834,147	83,804,320
New Issue	0	0
Payments	7,478,589	32,676,051
Closing Balance	83,804,320	70,675,329
Principal	2,029,826	13,128,991
Interest	5,448,762	19,547,060
Payments	7,478,589	32,676,051

Capital

The Utility uses an asset management approach to investment planning that begins with the development of business cases to describe service needs and propose solutions. The submissions are reviewed and evaluated consistently to identify the benefits of investment and to prioritize projects and programs that support water, wastewater and drainage service goals, aligned with corporate objectives. Preliminary funding constraints are applied to the proposed plan and the residual risk of unfunded or deferred projects and programs are assessed. Scenarios are also developed to finance the plan with varying rates, debt issuance and reserve balances using the 25-year Utility Model. Together, the prioritized plan and financing scenarios form the recommended investment plan and budget to Senior Administration and Council.

The Utility Fund capital plan for 2018 will invest approximately $56.3 million. The long-range capital plan includes funding for:

- Meeting the regulatory expectations of the Water Security Agency regarding sewage bypasses
- Paying an increased water rate to Buffalo Pound Water Treatment Plant to fund future infrastructure renewal in the Plan, which reduces short-term demand
- Addressing the renewal of linear infrastructure (underground water, sanitary and drainage pipes)

The 2018 capital spending plan includes committed projects, which are multi-year projects. They require additional funding in future years. If approved by Council this allows the City to commit the total cost of the project from tendering through to the completion of the work while allowing flexibility in cash management.

In 2018, the Utility will continue its renewal plan with significant capital investments including $11.9 million in water infrastructure renewal, $7.5 million in wastewater infrastructure renewal and $2.8 million in large diameter pipe assessment and rehabilitation. In addition, the Utility will begin planning the next phase of the Trunk Relief Initiative ($10 million in 2018) and will begin design and construction of the St. Anne's Park drainage project ($3 million in 2018).

Project detail is outlined in Appendix A – Detailed Utility Fund Capital Plan

Appendix A – Detailed Utility Fund Capital Plan

Utility Capital by Program ($000s)

Program Name	Project Name	2018	2019	2020	2021	2022	Grand Total
Water Supply & Distribution	Eastern Pressure Solution	-	-	-	-	28,500.0	**28,500.0**
	Future Equipment Purchase	-	-	-	250.0	250.0	**500.0**
	Hydrant Nozzle Replacement	**120.0**	120.0	120.0	120.0	120.0	**600.0**
	Second Pressure Zone Upgrades	-	945.0	-	-	-	**945.0**
	Serviceability Study for 300K+ Lands	-	500.0	-	-	-	**500.0**
	Trench Settlement Remediation	**300.0**	300.0	300.0	300.0	300.0	**1,500.0**
	Utility Billing Equipment Replacement Program	**20.0**	40.0	20.0	20.0	40.0	**140.0**
	Water Control System Upgrades	**80.0**	64.0	-	-	-	**144.0**
	Water Infrastructure Renewal	**11,935.0**	15,535.0	13,535.0	15,935.0	13,935.0	**70,875.0**
	Water Meter Installations	**500.0**	500.0	500.0	500.0	500.0	**2,500.0**
	Water Meter Test Bench	**500.0**	-	-	-	-	**500.0**
	Water Meters and AMR Replacement	-	1,300.0	9,145.0	15,370.0	7,685.0	**33,500.0**
	West Well Radio Upgrades	**20.0**	15.0	-	-	-	**35.0**
	Utility Billing System Upgrade and Maintenance	**350.0**	-	-	150.0	240.0	**740.0**
	Buffalo Pound WTP Substation	**3,000.0**	-	-	-	-	**3,000.0**
	Chlorine Booster Stations	**500.0**	2,000.0	2,000.0	-	-	**4,500.0**
	Corporate ITS Infrastructure – Utility Portion	**325.0**	325.0	325.0	325.0	325.0	**1,625.0**
	Decommission GTH Booster Station	**100.0**	-	-	-	-	**100.0**
	Fire and Security Vulnerability Upgrade - Monitoring	**400.0**	400.0	400.0	400.0	-	**1,600.0**
	Flow Meter Chambers for Transmission Pumping	**250.0**	1,500.0	1,500.0	-	-	**3,250.0**
	Large Diameter Assessment and Rehabilitation	**2,800.0**	2,800.0	2,800.0	2,800.0	2,800.0	**14,000.0**
	Leak Detection Program	**250.0**	100.0	100.0	100.0	100.0	**650.0**
	Pressure Management	**200.0**	-	-	-	-	**200.0**
	Repurpose Ross Pumping Station	-	-	250.0	-	-	**250.0**
	Reservoir Aeration	-	1,800.0	3,600.0	-	-	**5,400.0**
	Reservoir Assessment and Rehabilitation	**2,500.0**	250.0	2,500.0	250.0	2,500.0	**8,000.0**
	Supply Line Assessment and Rehabilitation	**250.0**	500.0	500.0	500.0	950.0	**2,700.0**
	Water Pumping Stations Upgrades and Equipment Replacement	**500.0**	1,000.0	200.0	250.0	1,625.0	**3,575.0**

Program Name	Project Name	2018	2019	2020	2021	2022	Grand Total
Water Supply & Distribution Total		**24,900.0**	**29,994.0**	**37,795.0**	**37,270.0**	**59,870.0**	**189,829.0**
Wastewater Collection and Treatment	Lift Station Radio Upgrades	**12.0**	9.0	-	-	-	**21.0**
	Trunk Relief Initiative	**10,000.0**	2,000.0	2,000.0	-	-	**14,000.0**
	Wastewater Control System Upgrades	**24.0**	16.0	-	-	-	**40.0**
	Wastewater Infrastructure Renewal	**7,580.0**	9,180.0	1,080.0	7,580.0	9,580.0	**35,000.0**
	Unidirectional Gateway	**60.0**	-	-	-	-	**60.0**
	Wastewater Capacity Upgrades	**-**	5,000.0	5,000.0	5,000.0	5,000.0	**20,000.0**
	Wastewater Flow Monitoring	**100.0**	100.0	100.0	100.0	100.0	**500.0**
	Wastewater Lift Station Renewal	**300.0**	300.0	300.0	300.0	300.0	**1,500.0**
	Sanitary Trunk - Mapleridge Diversion	**5,000.0**	-	-	-	-	**5,000.0**
Wastewater Collection and Treatment Total		**23,076.0**	**16,605.0**	**8,480.0**	**12,980.0**	**14,980.0**	**76,121.0**
Drainage & Stormwater Collection	Area 13- Avonhurst Relief Trunk	**500.0**	3,000.0	-	-	-	**3,500.0**
	Drainage Control System Upgrades	**32.0**	48.0	32.0	-	-	**112.0**
	Drainage Infrastructure Renewal	**3,130.0**	2,930.0	1,280.0	2,930.0	780.0	**11,050.0**
	Dykes, Drainage Channels and Lake Improvements	**400.0**	400.0	400.0	400.0	400.0	**2,000.0**
	Area 1 & 17 - Phase 1	**1,000.0**	4,000.0	-	-	-	**5,000.0**
	Area 1 & 17 - Phase 2	**-**	1,000.0	8,500.0	-	-	**9,500.0**
	Area 1 & 17 - Phase 4	**-**	-	-	500.0	3,500.0	**4,000.0**
	Area 13 - St. Anne Park	**3,000.0**	-	-	-	-	**3,000.0**
	Area 13- Imperial Park	**-**	-	-	1,000.0	5,000.0	**6,000.0**
	Area 8 - Broadway Ave	**-**	-	-	-	500.0	**500.0**
	Citywide Drainage Master Plan Update	**-**	800.0	-	-	-	**800.0**
	Drainage Lift Station Renewal	**200.0**	200.0	200.0	200.0	200.0	**1,000.0**
	Drainage Lift Station Replacement	**-**	230.0	-	690.0	-	**920.0**
Drainage & Stormwater Collection Total		**8,262.0**	**12,608.0**	**10,412.0**	**5,720.0**	**10,380.0**	**47,382.0**
Solid Waste	Environmental Compliance Storm Retention Ponds	**50.0**	50.0	50.0	-	-	**150.0**
Solid Waste Total		**50.0**	**50.0**	**50.0**	**-**	**-**	**150.0**
Grand Total		**56,288.0**	**59,257.0**	**56,737.0**	**55,970.0**	**85,230.0**	**313,482.0**

Utility Capital - Funding Sources ($000s)

Funding Name	2018	2019	2020	2021	2022	Grand Total
Moose Jaw	**820.5**	-	-	-	-	**820.5**
Service Agreement Fees (Utility)	**3,000.0**	2,045.0	600.0	-	28,500.0	**34,145.0**
Utility Reserve	**52,467.5**	57,212.0	56,137.0	55,970.0	56,730.0	**278,516.5**
Grand Total	**56,288.0**	**59,257.0**	**56,737.0**	**55,970.0**	**85,230.0**	**313,482.0**

Detailed Project/Program Descriptions (Utility Fund Capital)

Project/Program Name	Project/Program Description
Area 1 & 17 - Phase 1	This project will upgrade the drainage system in Area 1 and 17 to reduce surface flooding and improve level of service in this area. The project is part of a multi-year improvement plan in the area.
Area 1 & 17 - Phase 2	This project will upgrade the drainage system in Area 1 and 17 to reduce surface flooding and improve level of service in this area. The project is part of a multi-year improvement plan in the area.
Area 1 & 17 - Phase 4	This project will upgrade the drainage system in Area 1 and 17 to reduce surface flooding and improve level of service in this area. The project is part of a multi-year improvement plan in the area.
Area 13 - St. Anne Park	This project will upgrade the drainage system in Area 13 to reduce surface flooding and improve level of service in this area. The project is part of a multi-year improvement plan in the area.
Area 13- Avonhurst Relief Trunk	This project will upgrade the drainage system in Area 13 to reduce surface flooding and improve level of service in this area. The project is part of a multi-year improvement plan in the area.
Area 13- Imperial Park	This project will upgrade the drainage system in Area 13 to reduce surface flooding and improve level of service in this area. The project is part of a multi-year improvement plan in the area.
Area 8 - Broadway Ave	This project will upgrade the drainage system in Area 8 to reduce surface flooding and improve level of service in this area. The project is part of a multi-year improvement plan in the area.
Buffalo Pound WTP Substation	Improvements are required at the Buffalo Pound Water Treatment Plant to continue meeting quantity and quality of treated water delivered to Regina and Moose Jaw. Work includes design studies, detailed design engineering, and several installation construction contracts over a multiple year upgrade schedule. Funding is provided by the City of Regina's Utility Reserve (73%) and the City of Moose Jaw (27%).

Project/Program Name	Project/Program Description
Chlorine Booster Stations	This project provides the required disinfection to ensure the safety of water for consumption during emergency well water usage from the groundwater wells.
Citywide Drainage Master Plan Update	This project will update the 2009 drainage master plan study to guide future renewal and upgrade plans to the drainage system to improve level of service.
Corporate ITS Infrastructure – Utility Portion	This capital program was established in 2011 based on a calculation of the impact on capital projects by the Water Utility. These costs have been included as part of the utility model. The Water Utility benefits from corporate projects (Facilities and Information Technology) and this program ensures the costs are captured within the utility model and the MCP tool.
Decommission GTH Booster Station	This project will review the function and operation of GTH booster stations and potentially decommission one station.
Drainage Control System Upgrades	This project provides for the renewal and upgrade of drainage control systems to maintain operational reliability of drainage lift stations within the system.
Drainage Infrastructure Renewal	The drainage system requires ongoing rehabilitation and upgrading to maintain and improve the level of service and to ensure the system's reliability. This program includes inspections, assessments, cleaning, relining, replacement, and rehabilitation for the pipes, manholes and catch basins. The condition assessments may be done in conjunction with scheduled roadway renewal projects or proactively at locations as warranted.
Drainage Lift Station Renewal	The drainage pumping stations are aging and require upgrading to restore or improve the level of service and to reduce emergency repair costs. This program will include assessment, pre-design, design, rehabilitation, and/or upgrades of existing pumping stations. The Utility Reserve funds this program.
Drainage Lift Station Replacement	The City's drainage pumping stations are aging and require replacement to restore or improve the level of service and function within the system.
Dykes, Drainage Channels and Lake Improvements	This program rehabilitates and improves the level of service of facilities such as dikes, channels, streams, lakes and ponds. Periodic assessments, repairs, modifications and improvements are required to ensure the integrity and capacity of these systems. The Utility Reserve funds this program.
Eastern Pressure Solution	Development Services to provide however below is an option. In order to maintain current service levels as the City grow an Eastern Water Pressure solution is required. The project will include design and construction of pipelines, reservoirs and pump station.

Project/Program Name	Project/Program Description
Environmental Compliance Storm Retention Ponds	Due to nutrient loading the five retention ponds experience algal blooms on a regular basis, with several of the blooms releasing dangerous toxins into the water. The funding is for year three of a five year program to test the effectiveness of new low cost practices and technologies available to reduce future maintenance and algal blooms at the retention ponds.
Fire and Security Vulnerability Upgrade - Monitoring	This work is intended to upgrade safety and security measures at key water assets to improve the integrity of the system.
Flow Meter Chambers for Transmission Pumping	This project will improve monitoring of the water supply and help operations better understand the flow within the supply system.
Future Equipment Purchase	As equipment requirements change within the utility, additional or new specialized pieces of equipment are required to manage ongoing operations. This program is intended as a placeholder for planning purposes based on average expected new or specialized equipment purchases over a five year history. Funding is provided from the Utility Reserve.
Hydrant Nozzle Replacement	The objective of this project is to upgrade the pumper nozzle for fire hydrants to a new standard nozzle. The new nozzle will allow the Fire Department to more efficiently and effectively connect to a hydrant.
Large Diameter Assessment and Rehabilitation	This program rehabilitates the large diameter water mains that are critical infrastructure within the system. Through age related deterioration these pipes are at risk to failure, which will lead to loss of service and capacity. A relining and replacement program, in conjunction with roadways renewal work, will rehabilitate/replace sections of cast iron pipe over the next several years.
Leak Detection Program	This funding provides for the development and implementation of a pilot program to detect leaks in the water system and help inform the water infrastructure renewal programs.
Lift Station Radio Upgrades	This project provides for the upgrade of communications systems within the pumping stations to improve operational management and response to issues in the stations and improve system resiliency.
Pressure Management	This project will review the energy efficiency improvement of implementing pressure management for nighttime water pumping.
Repurpose Ross Pumping Station	This project will review the function and operation of the Ross Pumping Station within the water system and potentially convert the station pending the review.
Reservoir Aeration	This project provides for aeration in two reservoirs to improve drinking water quality prior to distribution to customers.

Project/Program Name	Project/Program Description
Reservoir Assessment and Rehabilitation	This program inspects, repairs and rehabilitates the water reservoirs in the city. As the reservoirs age, these program actitivites are necessary to ensure the reliability of the water quality and supply to the City and reduce emergency repairs.
Sanitary Trunk - Mapleridge Diversion	This project is for the design and construction of approximately 2km of sanitary trunk main to accelerate the diversion of flows from the Mapleridge area from the existing station to the northern extent of one of two initial development phases in the Coopertown Neighbourhood Plan area. The project will be done in conjuction with the design and construction of a new Coopertown Sanitary Lift Station by the developer of the southern initial phases.
Second Pressure Zone Upgrades	The Second Pressure Zone was installed in 2011-2014 and is expected to be fully operational in late 2014. This budget request is a placeholder intended to allow for substantial upgrades to the system that are anticipated for approximately 2019.
Serviceability Study for 300K+ Lands	This study is to support the future phasing of lands beyond the 300K growth horizon of the City of Regina. It will consider serviceability and impacts on the existing system on all the aspects of the City utility services.
Supply Line Assessment and Rehabilitation	This program inspects, repairs and replaces main valves, valve structures and other miscellaneous work on the Buffalo Pound supply pipeline and other major supply mains within the city. As the pipelines age, inspection, rehabilitation, and improvements are necessary to ensure the reliability of the water quality and supply to the city and reduce the number of emergency repairs. The Utility Reserve funds this work.
Trench Settlement Remediation	Cracking and settling of sidewalks, curbs, gutter and pavement occur as a result of backfill settlement at water main work locations. This program corrects settlement at these locations. The Utility Reserve funds this program.
Trunk Relief Initiative	Wastewater capacity improvements are required on the wastewater system to meet regulatory commitments to reduce bypasses to Wascana Creek during heavy precipitation events and improve the levels of service. Work includes design and construction of several staged upgrades and infrastructure renewals at the McCarthy Boulevard Pumping Station and the Wastewater Collection System over multiple years.
Unidirectional Gateway	This funding is to install a unidirectional gateway to improve the availability of operational data without compromising the security of the SCADA network.
Utility Billing Equipment Replacement Program	This program replaces the hand-held and vehicle-mounted radio-read devices used for utility billing operations and is funded from the Utility Reserve.

Project/Program Name	Project/Program Description
Utility Billing System Upgrade and Maintenance	In order to maintain the technical currency of the City's Utility Billing system, funding is planned in the Utility model on a period basis. The periodic funding accounts for the cost of patches, upgrades, regular maintenance and vendor support.
Wastewater Capacity Upgrades	This project will develop wastewater system solutions to meet regulatory commitments to improve wastewater capacity and minimize bypasses to Wascana Creek during heavy precipatation events. The solutions will be further defined by the Wastewater Master Plan.
Wastewater Control System Upgrades	This project provides for the renewal and upgrade of wastewater control systems to maintain operational reliability of wastewater pump stations within the system.
Wastewater Flow Monitoring	This funding provides for the continued collection of flow data from permanent monitoring locations to better understand the wastewater system and help inform wastewater capital projects and infrastructure renewal programs.
Wastewater Infrastructure Renewal	The wastewater collection system requires ongoing rehabilitation and upgrading to maintain and improve the level of service and to ensure the system's reliability. This program includes inspections, assessments, relining, replacement, and rehabilitation of the pipes, service connections, and manholes. The condition assessment and rehabilitation is done both in conjunction with scheduled roadway renewal projects and proactive locations identified in the system. The Utility Reserve funds this program.
Wastewater Lift Station Renewal	The City's wastewater pumping stations are aging and require upgrading to restore or improve the level of service and to reduce emergency repair costs. This program will include assessment, pre-design, rehabilitation, and/or upgrades of existing pumping stations. The Utility Reserve funds this program.
Water Control System Upgrades	This project provides for the renewal and upgrade of water control systems to maintain operational reliability of water pump stations within the system.
Water Infrastructure Renewal	The underground water distribution system requires ongoing rehabilitation and upgrading to maintain expected level of service and ensure the reliability and safety of the water distribution system. This program typically includes studies, inspection, assessment, relining, replacement, rehabilitation, and upgrading of water mains, fire hydrants, service connections, water valves, and other appurtenances and associated structures. The condition assessment and rehabilitation is done both in conjunction with scheduled roadway renewal projects and proactive locations identified in the system. The Utility Reserve funds this program.

Project/Program Name	Project/Program Description
Water Meter Installations	The City's expanding community requires the installation of water meters in new homes. This program includes the purchase and installation of new water meters for new construction. Funding is provided from the Utility Reserve.
Water Meter Test Bench	This funding is to upgrade the water meter test bench to enable increased meter testing capacity in-house. This will allow the City to maintain levels of service to customers in line with industry practice. Meter testing supports the accuracy of meter reads and associated water bills to reflect actual consumption.
Water Meters and AMR Replacement	The City's water meters and Automated Meter Reading (AMR) system are aging and require upgrading to restore and improve the system reliability and reduce downtime and repair costs. This work includes project development, assessment, pre-design, design, installation and construction over multiple years.
Water Pumping Stations Upgrades and Equipment Replacement	This work is intended to ensure that the pump stations throughout the City are maintained in good operating condition. Work required includes lifecycle upgrades to replace obsolete equipment as well as upgrades to improve energy efficiency and to ensure reliable service. The Utility Reserve funds this work.
West Well Radio Upgrades	This project provides for the renewal and upgrade of radios to prevent unplanned down time due to equipment failure and maintain operational reliability of the groundwater wells.

Appendix B - Utility Rate Policies

In 2005, the Provincial government adopted new regulations in Part V.1 of *The Cities Regulation*s regarding Public Reporting on Municipal Waterworks. The regulations apply only to waterworks, however, since the Utility includes water, wastewater and drainage services, the information required by the regulations is provided for the entire utility. The information requirements include:

- Information on the rate policy and capital investment strategy as adopted pursuant to sections 22.3 and 22.4 of the regulations.
- The regulations also require a financial overview. The data outlined in the regulations is included in the Utility Fund Revenues below. The regulations also require a comparison of the Utility revenues to expenditures and debt payments, expressed as a ratio in accordance with the following formula:

$$\frac{\textbf{Revenues}}{\textbf{(Expenditures + Debt Payments)}}$$

For 2018, based on the definitions in the regulations, the ratio for the Water and Sewer Utility is 1.78, based on revenues of $132.8 million, expenditures of $76.1 million and debt repayments of $7.5 million. In accordance with the definition in the regulations, expenditures include the interest cost on the debt, while debt payments are the principal repayments on the debt.

Section 22.3 of *The Cities Regulations* requires Council to adopt a rate policy which sets out the rates or fees that consumers will be charged for the use of water. The policy must include the method used to determine those rates or fees. The following policies have been previously adopted by City Council:

1. Utility rates are to be established so they are sufficient to fully fund operating costs, interest costs, debt repayments, capital requirements and transfer policies, taking into account the operating and infrastructure requirements of the Utility to meet its service goals. The objectives for the Utility's rate structure are:
   - Financial Self Sufficiency – Utility rates must generate enough revenue to meet all short-term and long-term operating and capital costs.
   - Conservation – Utility rates should encourage customers to use water responsibly.
   - Reduction of Peak Demand – Utility rates should encourage water conservation during summer months, reducing the need for infrastructure investment and higher rates.
   - Equity – Utility rates should result in a charge to customers according to the cost of services used.

2. The rate structure for water and wastewater will include a base fee that varies according to the size of the water meter. The variation in the base rate will be based on the schedule recommended by the American Water Works Association (AWWA). The ratios for the base rate based on meter size are shown in the following table.

Water and Wastewater Base Fee Ratios	
Meter Size	**AWWA Standard Ratio**
15 mm	1.0
18 mm	1.0
25 mm	1.4
40 mm	1.8
50 mm	2.9
75 mm	11
100 mm	14
150 mm	21
200 mm	29

3. The rate structure for water and wastewater will include a uniform rate for each cubic metre of water consumed and each cubic metre of deemed wastewater flow. For water, the uniform rate is applied to all consumption. For wastewater, the deemed volume is a percentage of water consumption.
    - For residential customers, the wastewater volume is 82% of water consumption
    - For multiple unit residential properties, the percentage is 95% of water consumption
    - For institutional, commercial and industrial properties, the percentage is 98% of water consumption

4. The rate structure for the storm drainage infrastructure levy will be based on the size of the property, with larger properties paying a higher levy. The ratios approved by City Council in 2001 (CR01-189) are shown in the following table. The drainage levy applies regardless of whether the property is connected to the water or wastewater systems.

Drainage Infrastructure Rate Ratios			
Area of Property	**Rate Ratio**	**Area of Property**	**Rate Ratio**
0 to 1,000 m^2	1.0	17,001 to 19,000 m^2	18.0
1,001 to 3,000 m^2	2.0	19,001 to 21,000 m^2	20.0
3,001 to 5,000 m^2	4.0	21,001 to 23,000 m^2	22.0
5,001 to 7,000 m^2	6.0	23,001 to 25,000 m^2	24.0
7,001-9,000 m^2	8.0	25,001-27,000 m^2	26.0
9,001 to 11,000 m^2	10.0	27,001 to 29,000 m^2	28.0
11,001 to 13,000 m^2	12.0	29,001 to 31,000 m^2	30.0
13,001 to 15,000 m^2	14.0	Over 31,000 m^2	32.0
15,001 to 17,000 m^2	16.0		

Regardless of actual property size, the rate for properties up to 1,000 m^2 is applied to all locations designated as “standard residential properties”.

5. In the setting of rates, the Utility must present a balanced budget, with any surplus directed to the following:
    - Transfer to the General Utility Reserves: The purpose of the reserve is to provide a source of financing for capital projects and funding emergency expenditures.

The balance of the Utility's surplus, after other transfers, is transferred to the General Utility Reserve. The transfer is budgeted at $49.2 million for 2018. An overall requirement for capital funding is set through the Utility Model. Utility rates are set to provide sufficient surpluses to cover the capital costs over the next 25 years.

In the event that the Utility incurs an operating deficit in a given year, the deficit would also be funded from the reserve.

6. The Utility Operating Expenses include an access fee, which is a transfer to the City's General Operating Fund. Any organization or utility operating in a municipality would be required to pay either property taxes or an access fee for the rights to use or access civic assets. Policies on these types of fees vary between cities. Calgary's Utility pays 10% of revenue plus a 10% return on equity. Saskatoon's Utility pays a franchise fee based on 10% of revenue. Winnipeg's is also 10%, with dividends paid. Moose Jaw's rate is 5% of revenue. Regina's transfer is the total of:
   - 7.5% of the previous year's budgeted revenues for billed water consumption, wastewater charges and drainage infrastructure levy.
   - The amount of $675,000, estimated to be three-sevenths of the Goods and Services Tax (GST) rebate received by the Utility. This amount is the additional rebate provided by the federal government starting in 2004.
   - For 2017, these amounts total $9.2 million.

7. The Utility Operating Expenses also include a Utility Administration Charge, which is an approximate measure of corporate administration costs attributable to the Utility. It is calculated as 5% of the budgeted utility revenues for the previous year. Most corporate functions, including City Council, Committees, Office of the City Manager, Human Resources, City Solicitor's Office, Office of the City Clerk and Finance, are involved in activities related to the Water and Sewer Utility. The percentage transfer is used in lieu of a more detailed cost allocation process. A more detailed process would still involve arbitrary decisions and would significantly increase the effort and cost required compared to the current policy. The total charge for 2017 is $5.6 million.

2018 Detailed Water, Wastewater and Drainage Rates

Water Revenue Summary

The rate structure for water includes a base fee that varies according to the size of the water meter. The variation in the base rate is based on a schedule recommended by the American Water Works Association. The ratios for the base rate, based on meter size, are provided in the Utility Rate Policy.

The rate structure for water also includes a uniform rate for each cubic metre of water consumed. For water, the uniform rate is applied to all consumption. The impact of the proposed rate increase on the base fee and consumption water rates is shown in the following table.

Water Rates		
	Approved Rate Schedule ($)	
Daily Base Fee:	**2017**	**2018**
15 mm/18 mm water meter	0.79	0.81
25 mm water meter	1.11	1.13
40 mm water meter	1.42	1.46
50 mm water meter	2.29	2.35
75 mm water meter	8.69	8.91
100 mm water meter	11.06	11.34
150 mm water meter	16.59	17.01
200 mm water meter	22.91	23.49
Volume Charge:		
Charge per m3	1.88	1.92

Wastewater Revenue Summary

The rate structure for wastewater includes a base fee that varies according to the size of the water meter. The variation in the base rate is based on the schedule recommended by the AWWA. The ratios for the base rate based on meter size are provided in the Utility Rate Policy.

The rate structure for wastewater also includes a uniform rate for each cubic metre of deemed wastewater flow. The deemed volume is a percentage of water consumption.

- For residential customers, the wastewater volume is 82% of water consumption.
- For multiple unit residential properties, the percentage is 95% of water consumption.
- For institutional, commercial and industrial properties, the percentage is 98% of water consumption.

The impact of the proposed rate increase on the base fee and consumption wastewater rates is shown in the following table.

Wastewater Rates		
	Approved Rate Schedule ($)	
Daily Base Fee:	**2017**	**2018**
15 mm/18 mm water meter	0.61	0.62
25 mm water meter	0.85	0.87
40 mm water meter	1.10	1.12
50 mm water meter	1.77	1.80
75 mm water meter	6.71	6.82
100 mm water meter	8.54	8.68
150 mm water meter	12.81	13.02
200 mm water meter	17.69	17.98
Volume Charge:		
Charge per m3	1.68	1.71

Drainage Infrastructure Levy Revenue Summary

The rate structure for the storm drainage infrastructure levy is based on the size of the property, with larger properties paying a higher levy. The ratios, approved by City Council in 2001 (CR01-189), are provided in the Utility Rate Policy. The drainage levy applies regardless of whether the property is connected to the water or wastewater systems.

Regardless of actual property size, the rate for properties up to 1,000 m^2 is applied to all locations designated as standard residential properties.

The impact of the proposed rate increase on storm drainage rates is shown in the following table.

Storm Drainage Rates		
	Approved Rate Schedule ($)	
Daily Base Fee:	**2017**	**2018**
0 to 1,000 m2	0.52	0.53
1,001 to 3,000 m2	1.04	1.06
3,001 to 5,000 m2	2.08	2.12
5,001 to 7,000 m2	3.12	3.18
7,001 to 9,000 m2	4.16	4.24
9,001 to 11,000 m2	5.20	5.30
11,001 to 13,000 m2	6.24	6.36
13,001 to 15,000 m2	7.28	7.42
15,001 to 17,000 m2	8.32	8.48
17,001 to 19,000 m2	9.36	9.54
19,001 to 21,000 m2	10.40	10.60
21,001 to 23,000 m2	11.44	11.66
23,001 to 25,000 m2	12.48	12.72
25,001 to 27,000 m2	13.52	13.78
27,001 to 29,000 m2	14.56	14.84
29,001 to 31,000 m2	15.60	15.90
Over 31,000 m2	16.64	16.96