Agenda – Executive Policy Committee – February 19, 2019

Report – Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – February 14, 2019

Moved by Councillor

That Rule 10(3) of The Procedure By-law No. 50/2007 be suspended in order that the following item, which was received less than four business days preceding the committee meeting, be considered by Committee.

Item No. 4 2019 Water and Sewer Rates

STANDING POLICY COMMITTEE RECOMMENDATION:

On February 14, 2019, due to a tie vote, the Standing Policy Committee on Water and Waste, Riverbank Management and the Environment submitted the matter to Executive Policy Committee and Council without recommendation.

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Report – Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – February 14, 2019

DECISION MAKING HISTORY:

STANDING COMMITTEE RECOMMENDATION:

On February 14, 2019, due to a tie vote, the Standing Policy Committee on Water and Waste, Riverbank Management and the Environment submitted the matter to the Executive Policy Committee and Council without recommendation.

ADMINISTRATIVE REPORT

Title: **2019 WATER AND SEWER RATES**

Critical Path: **Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – Executive Policy Committee – Council**

AUTHORIZATION

Author	Department Head	CFO	CAO
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EXECUTIVE SUMMARY

This report recommends a one-year rate approval for water and sewer rates.

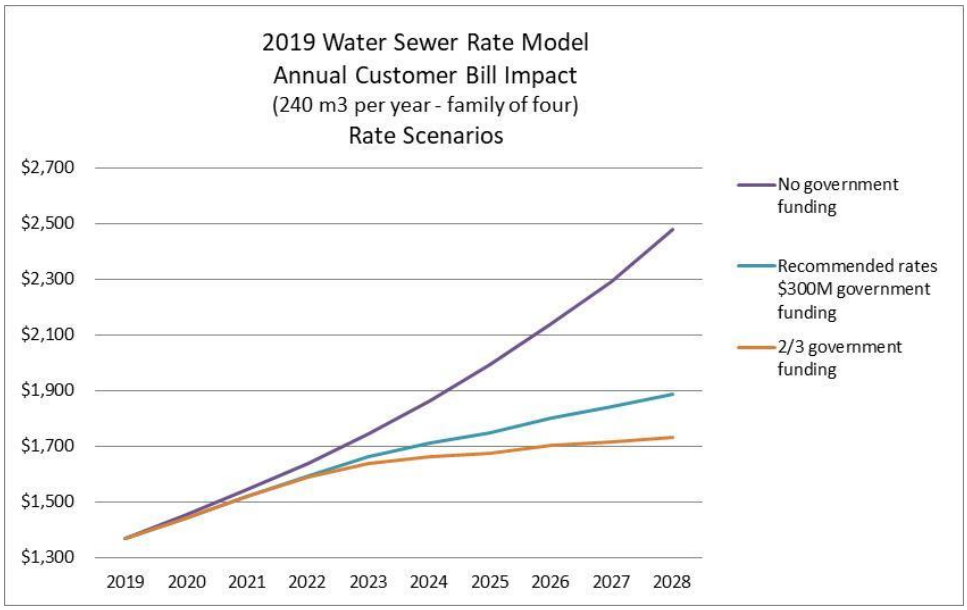
The main driver for the rate increases is the capital investment required by Environment Act Licences for the sewage treatment plants and combined sewer overflow (CSO) mitigation. In addition to the past and ongoing investment of $422 million in the upgrades to the West End Sewage and the South End Sewage Treatment Plants, the City is required to invest more than $2 billion in upgrades to the North End Sewage Treatment Plant (NEWPCC) and in CSO mitigation.

The rates in this report assume a Class 3 cost estimate of $1.6 billion, plus capitalized financing of $155 million, for the NEWPCC Upgrade project, and funding from other levels of government of $300 million in the 10-year forecast and $150 million thereafter. CSO mitigation spending is estimated at roughly $30 million per year.

A residential customer with an estimated consumption of 60 m^3 per quarter can expect an increase of approximately $15 or 4.7% to the quarterly bill.

The 2019 customer impact is less than forecast in the Council-approved *2016 to 2018 Water and Sewer Rates Report*. This is due to phasing of the NEWPCC Upgrade project, timing of capital spending and assumed new funding from other levels of government. The rate projections could change if funding from other levels of government does not materialize.

If the City were to receive the 2/3 funding from other levels of government for the NEWPCC Upgrade project, as recommended in the 2003 Manitoba Clean Environment Commission Report, future rate increases would be less. If the City were not to receive any funding from other levels of government, future rate increases would be higher.



In year ten of the estimated residential bill, the impact of not receiving any government funding for the NEWCC upgrade would mean a family of four would be paying 31.4% more annually. If the government funded two-thirds of the cost of the NEWPCC upgrade, the annual customer bill would rise more gradually and, in year 10, would be 8.3% less than the recommended plan.

In addition, the Public Service is recommending the introduction of a Water Meter Renewal Reserve (WMtrRR) to fund a program for the replacement and renewal of aging water meters and an advanced metering system (AMS). The WMtrRR will be funded from rates through the Daily Basic Charge.

The Public Service will come forward with a multi-year rate proposal effective 2020, which will include the opportunity to secure funding for the NEWPCC Upgrade project from other levels of government. This will coincide with implementation of the City of Winnipeg's multi-year budget, as directed by Council on June 21, 2018.

This report includes funding for NEWPCC Upgrade procurement as described in the North End Sewage Treatment Plant (NEWPCC) Biological Nutrient Removal Upgrade Project Report.

RECOMMENDATIONS

1. That Council approve an increase to the Water rate, based on the amount of water used in cubic metres (m^3), effective April 1, 2019, from $1.82 in 2018 to $1.89 in 2019.

2. That Council approve an increase to the Sewer rate, based on the amount of water used in cubic metres (m^3), effective April 1, 2019, from $2.80 in 2018 to $2.92 in 2019.

3. That Council approve an increase to the Daily Basic Charge rate for all meter sizes, effective April 1, 2019, as follows:

Meter Size (inches)	Approved rate/day 2018	**Recommended rate/day Apr 1, 2019**
5/8	$0.55	**$0.59**
3/4	$0.57	**$0.61**
1	$0.62	**$0.68**
1.5	$0.69	**$0.77**
2	$0.90	**$1.02**
3	$2.39	**$2.83**
4	$2.94	**$3.50**
6	$4.24	**$5.06**
8	$5.71	**$6.85**
10	$7.19	**$8.64**
private meter	$0.50	**$0.54**

4. That Council approve an increase per kilogram (kg) of overstrength compound Total Suspended Solids (TSS), effective April 1, 2019, from $1.25 in 2018 to $1.27 in 2019.

5. That Council approve an increase per kilogram (kg) of overstrength compound Biochemical Oxygen Demand (BOD), effective April 1, 2019, from $1.20 in 2018 to $1.25 in 2019.

6. That Council approve an increase per kilogram (kg) of overstrength compound Total Nitrogen (TN), effective April 1, 2019, from $4.60 in 2018 to $5.00 in 2019.

7. That Council approve an increase per kilogram (kg) of overstrength compound Total Phosphorus (TP), effective April 1, 2019, from $15.00 in 2018 to $18.00 in 2019.

8. That Council approve a new overstrength Leachate rate of $26.50 per cubic metre ($m^3$), effective April 1, 2019, to recover the costs of treating leachate at the NEWPCC sewage treatment plant.

9. That Council replace the two rates for hauled wastewater, based on whether it is household or non-household wastewater, with a single rate for hauled wastewater entitled the Hauled Wastewater Rate.

10. That Council approve an increase per cubic metre (m^3) for Hauled Wastewater, effective April 1, 2019, from $8.90 in 2018 to $9.35 in 2019.

11. That Council approve an increase per property for the buy-in charge for service sharing agreements, based on water meter size in inches or equivalent maximum water demand (MWD) in litres per second (l/s), effective April 1, 2019, as follows:

Sewer Services Buy-In Charge		Approved rate/property	**Recommended rate/property**
Water Meter Size (inches)	MWD (litres/sec)	2018	**Apr 1, 2019**
5/8"	0.0-0.9	$2,450	**$2,500**
3/4"	0.91-1.3	$3,600	**$3,700**
1"	1.31-2.4	$6,000	**$6,200**
1 1/2"	2.41-3.8	$12,100	**$12,500**
2"	3.81-7.6	$19,300	**$19,900**
3"	>7.6	$36,200	**$37,300**

12. That Council approve a new Water Meter Renewal Reserve to fund a program for the replacement and renewal of water meters, and to implement an advanced metering system, which Reserve would be funded from monies paid by consumers for the Daily Basic Charge, with the Director of Water and Waste as Fund Manager.

13. That the 2019 rates recommended in this report continue to be in effect until revised rates are approved by Council for future years.

14. That the proper officers of the City of Winnipeg be authorized to do all things necessary to implement the intent of the forgoing.

REASON FOR THE REPORT

Increases in water and sewer rates above inflation, introduction of a new leachate rate and establishment of a new reserve all require Council approval.

IMPLICATIONS OF THE RECOMMENDATIONS

The Department is requesting an increase to the water and sewer rates effective April 1, 2019. The rate model financial forecast assumes NEWPCC Upgrade project is estimated to cost $1.6 billion, plus capitalized financing of $155 million, and includes government funding of $450 million - $300 million in the first 10 years and an additional $150 million thereafter. Failure to access funding from other levels of government will result in higher rate increases than projected in this report or increased debt levels, which may breach the Council-approved Debt Strategy.

HISTORY/DISCUSSION

Water and sewer rates are designed to fund all costs of operations and capital projects related to water and sewer quality, city growth and regulatory requirements. Rate setting components and practices are explained below:

A. WHAT IS THE PROCESS?

The Department employs industry best practices to establish water and sewer rates. The rate-making process utilizes cost-of-service principles which support prevailing methods of funding services and provide a direct correlation between what customers pay for and the benefit they receive.

B. WHAT DRIVES RATES?

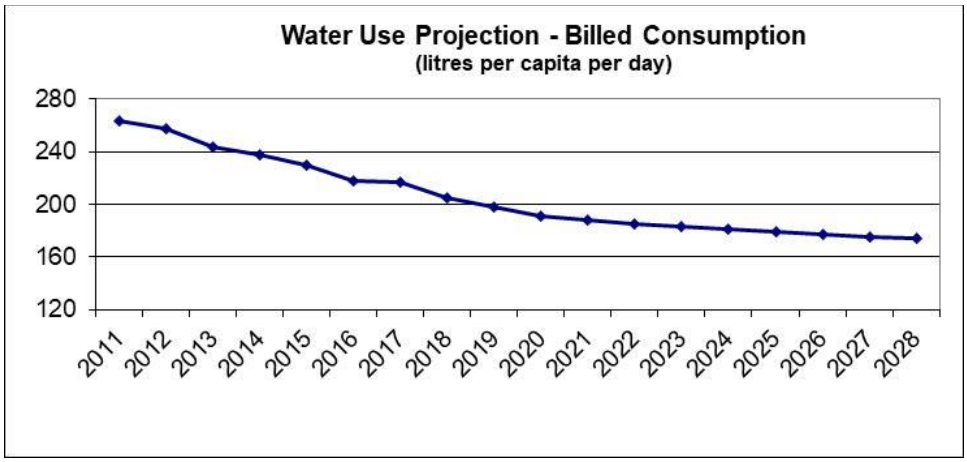
The Department is committed to protecting public health, property and the environment by delivering high quality drinking water, and collecting and treating sewage in accordance with provincial licences. The water and sewer utilities are self-supporting, and must plan to ensure uninterrupted customer service. A discussion of rate drivers, practices and assumptions includes the following:

1. Consumption
2. Revenue Requirements
3. Capital Spending and Federal/Provincial Funding Assumptions
4. Reserves
5. Debt Servicing
6. Dividends
7. Financial Stability

1. Consumption

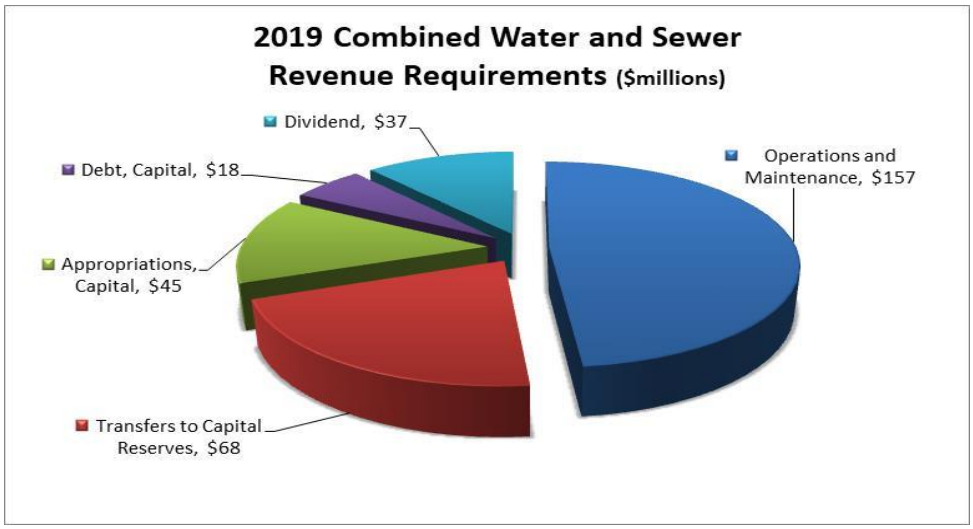
Residents continue to embrace water conservation practices. Conservation can eliminate the need for costly expansion of existing infrastructure due to increased water demand. Winnipeg's projected total residential trend usage reflects declining per capita consumption. This is consistent with cities surveyed across North America. Appendix A - *"Advances in Water Research, A Water Research Foundation Publication on Residential End Uses of Water, April – June 2016"* - indicates that the average daily indoor per capita water use has decreased by 15% since 1999. The majority of the decrease in consumption is attributable to improved water efficiency in toilets and clothes washers. (Appendix B) Despite projected growth in Winnipeg's population, consumption is expected to decline well into the future.

For rate purposes, water consumption is estimated to decline approximately 0.46% per year over the 10-year financial forecast. Forecasts take into consideration historical trends, water planning and research, technology, population growth and anticipated changes in industry.



2. Revenue Requirements

For 2019, total water and sewer revenue requirements are estimated at $325 million, and will fund capital spending, transfers to reserves, transfer to land drainage, operating costs, debt servicing and the dividend.



3. Capital Spending and Federal/Provincial Funding Assumptions

The water and sewer financial plan is based on cash flows associated with WWD's asset management strategy and capital budget. Spending reflects increases required for water, sewer and land drainage projects (Appendix C). Capital improvement programs are funded through a combination of debt, reserves, equity and other levels of government. The use of multiple funding sources supports intergenerational equity, by helping to reduce short-term increases to the sewer rate, and takes advantage of favourable interest rates for borrowing.

The 2019 10-year water and sewer financial plan incorporates the following government funding assumptions:

- NEWPCC Upgrade capital project's estimated cash flow incorporates a 3-project scheduling approach, estimated budget of $1.6 billion plus financing, and $450 million in government funding. There are currently no federal or provincial funding agreements in place.

- Combined Sewer Overflow (CSO) mitigation strategy and capital spending assumes no federal or provincial funding agreements in place.
- Biosolids composting program continues as per the provincially-approved Biosolids Master Plan. There are no federal or provincial funding agreements in place.

4. Reserves

a. Environmental Projects Reserve (EPR):

The EPR supports the sewage treatment improvement program, as directed by the Province and set forth in the Department's asset management strategy. Capital projects consist of biological nutrient removal and upgrades at the NEWPCC and South End Sewage Treatment (SEWPCC) Plants, biosolids management, and combined sewer overflow mitigation, including basement flood relief.

Timing of capital project implementation or changes to licencing requirements may impact reserve contributions.

Environmental Projects and Financing Schedule $000s

Year	Annual Capital	Project Financing				
	Expenditure [1]	Volume Rate [2]	Fed/Prov	Debt	Earnings	Total
To 2017	247,558	248,467	52,064	24,000	92,192	416,723
2018	82,207	23,561	41,340 [3]	-	4,745	69,646
2019	**99,489**	**92,372**	**5,736**	**100,000**	**3,151**	**201,259**
2020	**130,057**	**24,270**	**11,247**	**76,335**	**17,643**	**129,495**
2021	**136,130**	**27,003**	**15,090**	**-**	**23,021**	**65,114**
2022	**147,777**	**32,110**	**31,546**	**-**	**15,458**	**79,114**
2023	**183,621**	**32,835**	**34,053**	**35,000**	**15,000**	**116,888**
2024	**155,651**	**32,832**	**29,278**	**94,000**	**-**	**156,110**
2025	**290,368**	**32,795**	**58,409**	**199,000**	**-**	**290,204**
2026	**238,717**	**35,126**	**46,148**	**157,000**	**-**	**238,274**
2027	**224,582**	**35,485**	**42,984**	**146,000**	**-**	**224,470**
2028	**193,881**	**35,482**	**37,644**	**120,846**	**-**	**193,972**
2029	165,941	43,000	75,000	50,000	-	168,000
2030	161,784	43,000	75,000	42,000	-	160,000
2031	48,781	43,000	-	-	-	43,000
2032	43,367	43,000	-	-	-	43,000
2033	44,666	43,000	-	-	-	43,000
2034	39,143	43,000	-	-	-	43,000
2035	40,317	43,000	-	-	-	43,000
2036	41,527	43,000	-	-	-	43,000
2037	42,773	43,000	-	-	-	43,000
2038	44,056	43,000	-	-	-	43,000
Total 10 Year 2019-2028	**1,800,273**	**380,310**	**312,136**	**928,181**	**74,273**	**1,694,900**
Total to 2038	**2,802,394**	**1,082,337**	**555,540**	**1,044,181**	**171,210**	**2,853,269**

[1] Includes management fees

[2] Includes interest

[3] Includes $33.54M provided by Manitoba for NEWPCC Biological Nutrient Removal Upgrade Project

The 10-year financing plan incorporates the following funding sources:

- Sewer rate includes consumption allocation of $0.40 per m^3 for 2019 ($0.40 per m^3 for 2018) that is dedicated to fund EPR projects. Volume rate funding for the 10-year financial plan is estimated at $380 million.

- Total federal and provincial funding for the 10-year financial plan is estimated at $312 million, of which $300 million assumes new government funding for the NEWPCC Upgrade project.
- Debt funding for the 10-year financial plan is estimated at $928 million. Total debt funding requirements, which assume completion of the NEWPCC and SEWPCC Upgrade projects, and current CSO mitigation strategy, are estimated at $1.04 billion, which complies with City Council's approved Debt Strategy (Appendix I)

Council-approved practices state that the maximum reserve balance will be no more than the total of the projected share of EPR projects over the upcoming five-year forecast period. For future years, once sewage treatment plant upgrades are complete, rate contributions will match planned capital spending to meet anticipated ongoing CSO mitigation program requirements.

The Department will monitor reserve balances and adjust future contributions according to Council-approved reserve practices, changes to licencing requirements or federal and provincial funding.

b. Sewer System Rehabilitation Reserve (SSRR):

The SSRR supports the sewer renewal program as set forth in the Department's asset management strategy. The 10-year financial plan incorporates funding from sewer rates. Timing of capital project implementation may impact reserve contributions. Annual contributions to the SSRR will be approximately equal to the subsequent year's program funding requirements.

Council-approved practices state that the maximum ending balance in the SSRR in any fiscal year can be approximately equal to the subsequent year's projected funding requirements. In order to reduce the impact of rate increases, the Department will strive to sustain a balance of between $5 million to $6 million, and acknowledges that there is risk in maintaining reserve balances that may not sustain emergency situations. The Department will monitor reserve balances and adjust contributions according to anticipated program requirements.

c. Water Main Renewal Reserve (WMRR)

The WMRR supports the renewal of water mains as set forth in the Department's asset management strategy. The 10-year financial plan incorporates funding from water rates. Timing of capital project implementation may impact reserve contributions. Annual contributions to the WMRR will be approximately equal to the subsequent year's water main renewal funding requirements.

Council-approved practices state that the maximum ending balance in the WMRR in any fiscal year can be approximately equal to the subsequent year's projected funding requirements. In order to reduce the impact of rate increases, the Department will strive to maintain a balance between $1 million and $4 million, and acknowledges that there is risk in maintaining reserve balances that may not sustain emergency situations. The Department will monitor reserve balances and adjust contributions according to anticipated program requirements.

d. Water Meter Renewal Reserve (WMtrRR)

The Department is recommending the introduction of a Water Meter Renewal Reserve in order to fund a program for the replacement and renewal of aging water meters and an advanced metering system (AMS). The Public Service proposes that the WMtrRR be funded from rates through the Daily Basic Charge and that it accumulate sufficient funds to implement AMS.

A 2011 Advanced Water Metering Business Case supported a positive business case for the implementation of an advanced metering system. The 2019 Capital Budget includes a project to review and update the 2011 Advanced Water Metering Business Case (2020), and further proposes a four-year AMS implementation (2025 to 2028), subject to a report back to Council.

The City of Winnipeg owns approximately 210,000 water meters, installed in homes and businesses for billing purposes, of which 62% are due for replacement. Winnipeg is not current with water meter technology. Over 30% of utility bills are estimated. Estimated bills can result in high bills if estimates do not reflect actual water use. The aging meter population presents an opportunity to implement AMS, as the majority of the assets are due for replacement.

Benefits of AMS include:

- eliminating estimated billing and reducing frequency of high bills
- eliminating inaccurate self-meter readings
- eliminating the need to access homes and businesses to obtain meter readings
- providing access to daily consumption data
- proactively alerting customers to potential leaks on property
- improving theft detection
- detecting reverse flows, which would alert utility of potential contamination of the distribution system
- improving customer service (customers only being billed for service used, customer access to detailed consumption data, leak notification)
- improving data for system design and evaluation (e.g. flow monitoring)
- improving leak detection in the water distribution system
- improving demand management

5. Debt Servicing

The Department utilizes some debt funding for legacy capital projects. Through the rate modeling and the capital budget process, a comprehensive funding plan is prepared which balances debt and equity funding. This manages the impact on short-term rate increases and supports intergenerational equity.

The Department adheres to the Council-approved Debt Strategy, which includes measures of affordability for the self-supporting utilities and the City of Winnipeg. Debt servicing as a percent of revenue for the City overall is not to exceed 11%. The utilities debt servicing as a percent of revenue is not to exceed 20%.

Total debt requirements for the 10-year financial plan are estimated at $928 million. Debt servicing as a percent of revenue remains within the water and sewer utility targets established by Council. (Appendix I)

6. Dividends

Based on the recommended rate increases, the Water and Waste Department project dividends as follows:

$000s	Budget 2018	**Recommended 2019**
Water	$15,487	$15,025
Sewer	$22,728	$22,239
Total	$38,215	**$37,264**

The annual dividend represents the City's return on investment in the utility. On March 3, 2015, Council approved that the utility dividend policy be 12% of budgeted gross water and sewer sales. The 10-year financial plan assumes no change to the 12% rate.

The City's dividend policy is in line with other cities as disclosed in Appendix A.

7. Financial Stability

Working capital is comprised of current assets (cash and accounts receivable) net of current liabilities (current accounts payable) – cash or near cash items that can respond quickly to unexpected fluctuations. The working capital target provides medium-term stability, adequate liquidity to sustain operations and the ability to absorb losses in any given year when consumption falls short of anticipated levels and/or unforeseen emergency funds are required.

Industry best practices recommend utilities maintain a minimum working capital target. The Water and Waste Department follows best practices, utilizing a combined water and sewer working capital target of 8%, or between 30 to 60 days cash and investments on hand.

The water and sewer funds adhere to a set of operating principles that can be found in Appendix D.

C. WHAT ARE THE RECOMMENDED RATES?

1. Water Rate
2. Sewer Rate
3. Daily Basic Charge
4. Overstrength Sewage Rates
5. Hauled Wastewater Rate
6. Customer Impact
7. Service Sharing Buy-In Charge

1. Water Rate

The Public Service is recommending an increase to the water rate, based on the amount of water used in cubic metres (m^3), effective April 1, 2019, from $1.82 in 2018 to $1.89 in 2019.

The water rate funds operating and maintenance costs (such as salary, services, materials, parts and supplies), debt payments on borrowing for the water treatment plant, transfers for ongoing water main renewal programs, planned capital projects funded by retained earnings and the dividend.

10-year financial projections for Water can be found in Appendix E.

2. Sewer Rate

The Public Service is recommending an increase to the sewer rate, based on the amount of water used in cubic metres (m^3), effective April 1, 2019, from $2.80 in 2018 to 2.92 in 2019. Sewer rate includes consumption allocation of $0.40 per m^3 for 2019 ($0.40 per m^3 for 2018) to fund a transfer to the Environmental Projects Reserve.

The financial plan reflects an increasing sewer rate over the next 10 years, primarily due to sewage treatment plant upgrades and ongoing CSO mitigation as required by provincial licences.

The sewer rate funds operating and maintenance costs (such as salary, services, materials, parts and supplies), debt payments on new borrowing for provincially mandated capital projects, transfers for ongoing sewer main renewal programs, environmental projects reserve contributions, planned capital projects funded by retained earnings, transfer to support land drainage and flood control, and the dividend.

10-year financial projections for Sewer can be found in Appendix F.

3. Daily Basic Charge

The Public Service is recommending an increase in the daily basic charge (DBC) for all meter sizes, effective April 1, 2019. Billed on a daily basis, this charge is based on meter size and covers the fixed cost of water meters (including maintenance and reading), billing and production costs, and Utility Billing Centre operations.

The DBC is also increasing as part of a multi-year strategy to fund a program for the replacement and renewal of aging water meters and an advanced metering system (AMS).

Meter Size (inches)	Approved rate/day 2018	**Recommended rate/day Apr 1, 2019**
5/8	$0.55	**$0.59**
3/4	$0.57	**$0.61**
1	$0.62	**$0.68**
1.5	$0.69	**$0.77**
2	$0.90	**$1.02**
3	$2.39	**$2.83**
4	$2.94	**$3.50**
6	$4.24	**$5.06**
8	$5.71	**$6.85**
10	$7.19	**$8.64**
private meter	$0.50	**$0.54**

4. Overstrength Sewage Rates

The provincially issued Environment Act Licences for the sewage treatment plants stipulate effluent limits. The Department surcharges industries with overstrength sewage.

The Pubic Service is recommending an increase to Total Suspended Solids (TSS), Biochemical Oxygen Demand (BOD), Total Nitrogen (TN), Total Phosphorus (TP) and Leachate, effective April 1, 2019, as follows:

Overstrength Compound	Approved 2018	**Recommended Apr 1, 2019**
Total Suspended Solids (TSS per kg)	$1.25	**$1.27**
Biochemical Oxygen Demand (BOD per kg)	$1.20	**$1.25**
Total Nitrogen (TN per kg)	$4.60	**$5.00**
Total Phosphorus (TP per kg)	$15.00	**$18.00**
Leachate (per m3)	$0.00	**$26.50**

Costs associated with TSS, BOD, TN and TP are currently being subsidized by the volume sewer rate. The recommended increase is required to achieve full cost of recovery for these services, such that those customers who discharge overstrength effluent are paying for the additional costs to treat.

The Public Service is recommending the introduction of a new Leachate rate to recover the costs of depositing and treating leachate at the sewage treatment plant. Leachate is hauled from landfills and is the liquid that contains dissolved and suspended materials from buried solid waste.

5. Hauled Wastewater Rate

Hauled wastewater rate (HWR) recovers the cost of receiving and treating sewage effluent discharged by haulers at the wastewater treatment plant. Historically, customers were charged separate hauled wastewater rates for household and non-household effluent. Due to the effects of dilution, effluent testing and analysis supports a single hauled wastewater rate for both household and non-household hauled wastewater.

The Public Service recommends that Council replace the two rates for hauled wastewater, based on whether it is household or non-household wastewater, with a single rate for hauled wastewater entitled the Hauled Wastewater Rate.

The Public Service is recommending an increase to the Hauled Wastewater Rate, effective April 1, 2019, from $8.90 in 2018 to $9.35 in 2019, per cubic metre (m^3).

6. Customer Impact

A residential customer, family of four, with an estimated consumption of 60 m^3 per quarter, can expect an increase of approximately $15 or 4.7% to the quarterly bill.

A litre of water would continue to cost approximately one-half of a penny per litre. (Appendix G).

7. Service Sharing Buy-In Charge

On December 12, 2012, Council approved the basic terms of service sharing agreements for the provision of sewer services to neighbouring municipalities. Service Sharing Agreements contain provisions relating to sewer charges, including a one-time buy-in charge for new properties as they connect to the sewer.

The Public Service is recommending an increase to the buy-in charge for service sharing agreements, effective April 1, 2019. The buy-in charge is calculated based on water meter size in inches or on the equivalent maximum water demand (MWD) in litres per second (l/s).

Sewer Services Buy-In Charge		Approved rate/property	**Recommended rate/property**
Water Meter Size (inches)	MWD (litres/sec)	2018	**Apr 1, 2019**
5/8"	0.0-0.9	$2,450	**$2,500**
3/4"	0.91-1.3	$3,600	**$3,700**
1"	1.31-2.4	$6,000	**$6,200**
1 1/2"	2.41-3.8	$12,100	**$12,500**
2"	3.81-7.6	$19,300	**$19,900**
3"	>7.6	$36,200	**$37,300**

D. WHAT MAY INFLUENCE FUTURE RATES

1. Financial Projection Risks
2. Land Drainage Rate Planning

1. Financial Projection Risks

The detailed financial projections and rate plans are contained in Appendices E (water) and F (sewer). There are several variables that can affect the financial projection and resulting water and sewer rates.

Primary risks associated with the 10-year financial projections in the 2019 water and sewer rate report are licencing requirements and government funding:

- No Federal and Provincial Funding for NEWPCC upgrade: The amount of federal and/or provincial funding realized will impact rates, borrowing, and/or the planned sewage treatment upgrade projects.

- North End Sewage Treatment Plant (NEWPCC) Nutrient Removal/Upgrade: The NEWPCC class 3 estimate is $1.6 billion plus financing. Given the project status, the size of the project and the length of time to complete, the class 3 estimate could range from +30% to -20% or from $2.1 billion to $1.3 billion.

- Combined Sewer Overflow (CSO) Mitigation: The provincial regulator approved the CSO Preliminary Proposal on November 24, 2017 and directed the City to complete the CSO Master Plan engineering submission by 2019, based upon phase one, a control option of 85% capture in a representative year. In the approval, the Province advised that the first phase of the CSO Master Plan is to be fully implemented by 2045, which is half the time that the City has projected to complete these works. There will be incremental benefits as the City invests annually in this program, but if the City is held to the 2045 without any funding from other levels of government, the sewer rate increases will be much higher. The Combined Sewer Overflow Preliminary Proposal, as approved by the Province of Manitoba, carried a Class 5 planning level cost estimate of $1.3 billion for the program.

- Debt: Should anticipated government funding for the NEWPCC Upgrade capital project not materialize or be delayed, and the Department continue to adhere to provincial licencing requirements, resulting estimated debt levels may not meet Council-approved Debt Strategy limits and increased costs would be borne by customers.

- New Legislation: Environmental and public health concerns are driving more stringent standards in the water and sewage industry. The Environment Act Licences for the three sewage treatment plants have required large increases in capital and operating costs. Further introduction of new legislation or more stringent licences could cause an increase in rates.

Additional risk factors include:

- Consumption: Trends across North America, including Winnipeg, indicate a continued gradual decline of litres per capita per day (LCD) over the next 20 years, as consumers

continue to embrace water conservation. Rate model projections incorporate the continued trend of declining consumption, combined with forecasted increase in population and growth in the non-residential sectors. If actual consumption is less than planned, this could cause a rate increase. Conversely, actual consumption greater than planned could effect a rate decrease or mitigate future increases.

- Economic Development: The City's economic climate can impact the financial plan. The addition or deletion of a major customer could effect a change in rates due to the consumption and sales revenue associated with large volume users.

- Capital Investment: Capital investment is based on the Department's current estimate of improvements that are required. Many items can influence capital program expenditures including escalation in market price, introduction of new technology, availability of consultant and contractor resources, detailed design, and mandated improvements.

- Foreign Currency Exposure: Fluctuating currency exchange rates is a risk that must be managed and addressed within the financial plan, as many commodities for the capital programs may be purchased outside of Canada.

2. Land Drainage Rate Planning

For 2019, the sewer rate will fund a total of $11.8 million for land drainage and flood control operating and capital costs, $5.5 million for land drainage operating costs and $6.3 million for capital. A separate land drainage fee is a common practice in other cities surveyed across Canada. (Appendix A)

The potential for the introduction of a land drainage fee will be the subject of a future report to be tabled at Council.

E. COMPETITIVENESS

Winnipeg's combined water and sewer rate remains competitive with other cities of similar size. In 2018, Winnipeg ranks second out of five cities for affordability for a residential and commercial customer, as shown in Appendix H

F. COMMUNICATION

Following Council approval the Water and Waste Department will communicate the water and sewer rate, and overstrength rate increases to customers, as follows:

Strategy	Timeline
MyUtilityBill Website updated with new rates	March 2019
Message on utility bill	March 2019 to May 2019

The Water and Waste Department will communicate sewer and buy-in charge rates to impacted municipalities as follows:

Strategy	Timeline
Notice to municipalities impacted by rates	March 2019

FINANCIAL IMPACT

Financial Impact Statement

Date: January 14, 2019

Project Name:

2019 WATER AND SEWER RATES

COMMENTS:

The financial projections for water and sewer funds are contained in appendices to this report.

The proposed rate increases reflect cost of service recovery and assume that funding agreements with the federal and provincial governments will be achieved for the North End Sewage Treatment Upgrade (NEWPCC) capital project.

"Original signed by L. Szkwarek, CPA, CGA"
Lucy Szkwarek, CPA, CGA
Manager Finance and Administration

CONSULTATION

This Report has been prepared in consultation with:
Legal Services (as to legal issues)

OURWINNIPEG POLICY ALIGNMENT

This report is in accordance with the OurWinnipeg policies through sections 03-5 Maximize our Existing Water Supply/Ensure Availability of Future Water Supplies and 04-4 Maximize our Existing Wastewater Treatment and Collection System Capacity, as this falls in line with ensuring purity and reliability of the water supply through improving service reliability, protecting the health of our local rivers and Lake Winnipeg, and reducing costs by aligning service rates with the actual costs of delivering services.

OurWinnipeg Reference: 02-2 Environment

SUBMITTED BY

Department:	Water and Waste
Division:	Finance and Administration
Prepared by:	Lucy Szkwarek, CPA, CGA
Date:	January 28, 2019
File No:	010-07-20-01-00
	010-07-20-02-00

Appendices:

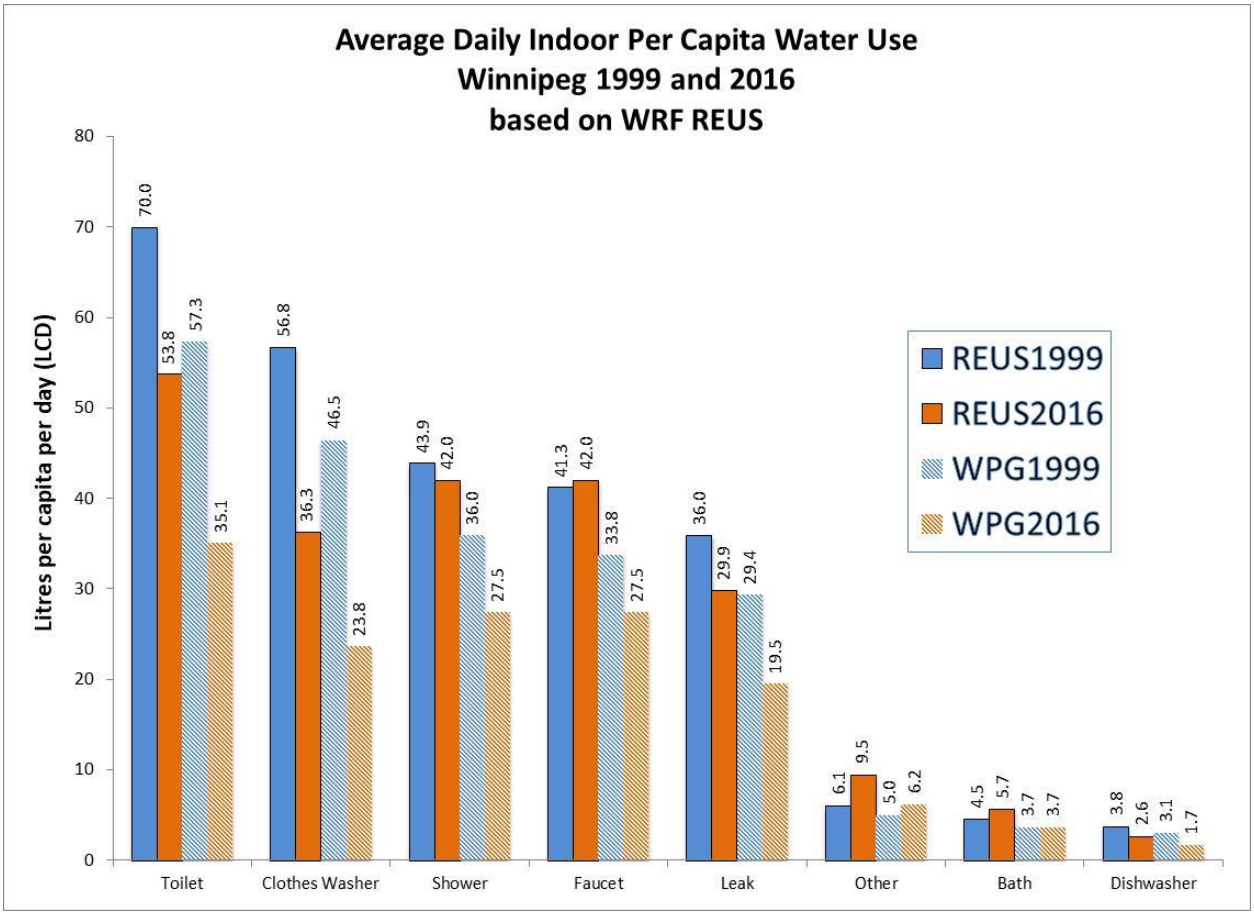
APPENDIX A	Benchmarking
APPENDIX B	Consumption
APPENDIX C	Capital Spending
APPENDIX D	Water and Sewer Utility Principles of Operation
APPENDIX E	Water Works System Fund Financial Projections
APPENDIX F	Sewage Disposal System Fund Financial Projections
APPENDIX G	Customer Bill Impact
APPENDIX H	Competitiveness to Other Canadian Cities
APPENDIX I	Debt Strategy and Projections

APPENDIX A
BENCHMARKING

	Winnipeg	Calgary	Edmonton	Regina	Saskatoon
Dividends	Yes 12% budgeted water and sewer sales	Yes Approximately 10% of revenue	Yes 10.875% as a return on equity	Yes Franchise Fee 7.5% previous year's budgeted revenue	Yes Phasing in a new policy
Dividend trends	Remains unchanged from 2015	Capped and remains unchanged from 2004	Issued to extent that each utility's capital structure is maintained at 60%/40% debt/equity level	No increases proposed	n/a
Water rate structure	Uniform	Uniform	Inclining residential Declining non-residential	Uniform	Inclining residential Uniform non-residential
Trend billed water	Declining	Declining	Declining	Declining	Declining
Separate land drainage fee	No	Yes	Yes	Yes	Yes
Rates based on COS	Yes	Yes	Yes	Yes	Yes
Advanced meter system	No	Yes	Yes	Yes	Yes
Frequency of rate approval	Annual	4 year	Annual	2 year	3 year

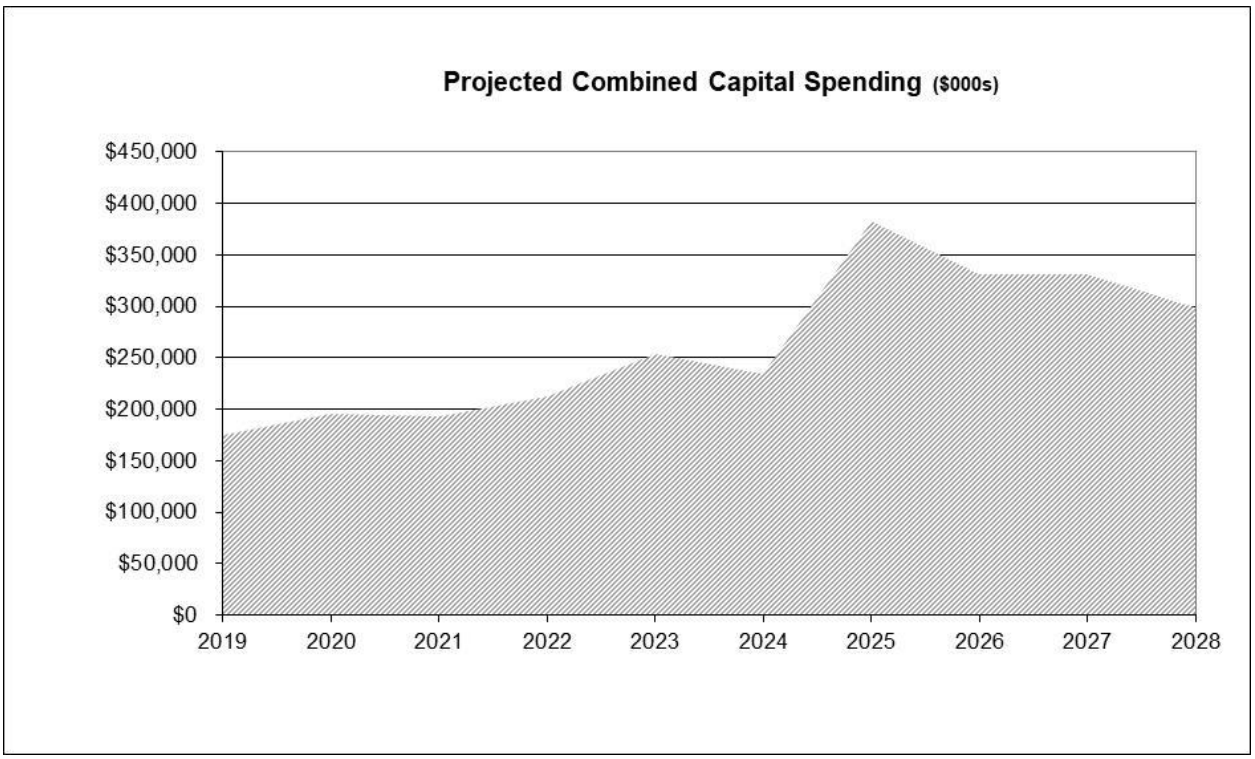
APPENDIX B
CONSUMPTION

Advances in Water Research, A Water Research Foundation Publication on Residential End Uses (REUS) of Water. Winnipeg's indoor water use percentage breakdown provided for comparison is based on the REUS data (WWD Engineering Services)



APPENDIX C
CAPITAL SPENDING

Projected capital spending over the 10-year financial plan incorporates: water main renewal, sewer system rehabilitation, environmental projects, water meter renewal, and retained earnings funded capital.



APPENDIX D
WATER AND SEWER UTILITY PRINCIPLES OF OPERATION

Self-Supporting Utilities: The Utilities do not receive subsidies from the mill rate.

Cost of Service Rates: Customers pay water and sewer rates, which represent the operating and capital costs of providing the utility services.

Debt Servicing: The Utilities' revenues are sufficient to service the Utilities' long-term debt.

Working Capital Reserves: The Water and Sewer Utilities maintain working capital reserves to protect the Utilities' financial position and prevent significant rate fluctuations that may otherwise result from a decline in consumption or major unforeseen expenditures. On an annual basis, the Utilities strive to maintain a minimum combined working capital position of 8% of sales or between 30 to 60 days cash and investments on hand.

10-Year Financial Plan: Rates in the Water and Sewer Utilities are planned over a 10-year time frame to mitigate the effects of year over year fluctuations and to coincide with the longer term infrastructure development and renewal planning.

Infrastructure Renewal: The Water Main Renewal and Sewer System Rehabilitation Reserves were established to provide a consistent approach to financing infrastructure renewal. Maintaining the reserves ensures this approach continues. Reserve contributions are based on an asset management strategy developed by the Utilities and approved through the capital and operating budget processes. The WMtrRR is based upon the same principle.

Capital Reserve Funds: The Utilities establish reserves to fund major capital projects. The pay-as-you-go capital program is more economical than traditional debt financing, which equates to lower rates for customers. In addition, for specific and cost intensive projects, the Department has developed a strategy whereby a portion of the project is funded through reserves and a portion through debt financing. This strategy facilitates an equitable, intergenerational approach for short and long term funding.

Dividends: The Utilities pay an annual dividend to the City of Winnipeg General Revenue Fund as a return on investment. City Council reviews this policy every four years.

APPENDIX E
WATER WORKS SYSTEM FUND

WATERWORKS SYSTEM FUND
Financial Projection 2019-2028 ($000s)

Waterworks System	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Revenue										
Sales Revenue	125,207	129,292	135,552	139,614	143,838	146,589	148,184	149,661	151,266	152,878
Other	4,724	4,978	5,237	5,388	5,656	5,934	6,223	6,525	6,839	7,162
Total Revenue	**129,931**	**134,270**	**140,788**	**145,002**	**149,493**	**152,523**	**154,408**	**156,186**	**158,105**	**160,040**
Expenditures and Appropriations to Capital										
Operating	104,669	108,188	111,786	113,228	117,966	120,428	121,929	123,819	126,458	129,132
Utility Dividend	15,025	15,515	16,266	16,754	17,261	17,591	17,782	17,959	18,152	18,345
Appropriations to Capital	11,000	11,000	13,000	13,000	13,000	13,000	13,000	13,000	15,000	15,000
Total Expenditures and Appropriations to Capital	**130,694**	**134,703**	**141,052**	**142,982**	**148,226**	**151,019**	**152,711**	**154,779**	**159,610**	**162,478**
Surplus(Deficit)	(763)	(433)	(264)	2,021	1,267	1,504	1,697	1,407	(1,505)	(2,437)
Opening Working Capital	2,943	2,180	1,747	1,483	3,503	4,770	6,274	7,971	9,379	7,873
Ending Working Capital	2,180	1,747	1,483	3,503	4,770	6,274	7,971	9,379	7,873	5,436
Water Rate ($dollars)	**1.89**	**1.97**	**2.05**	**2.11**	**2.13**	**2.15**	**2.17**	**2.19**	**2.21**	**2.23**
% Change	3.8%	4.2%	4.1%	2.9%	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%
Long-Term Debt Summary										
New debt	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Debt outstanding closing balance	**123,241**	**120,712**	**117,956**	**114,965**	**111,727**	**108,231**	**104,467**	**100,707**	**96,663**	**92,322**

APPENDIX F
SEWAGE DISPOSAL SYSTEM FUND

SEWAGE DISPOSAL SYSTEM FUND
Financial Projection 2019-2028 ($000s)

Sewage Disposal System	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
Revenue										
Sales Revenue	185,326	193,695	205,448	218,788	230,522	239,942	247,564	257,807	266,835	276,048
Other	8,267	9,171	9,331	8,873	9,066	9,286	9,613	10,085	10,670	11,361
Total Revenue	**193,593**	**202,866**	**214,779**	**227,661**	**239,589**	**249,228**	**257,178**	**267,892**	**277,504**	**287,409**
Expenditures and Appropriations to Capital										
Operating	138,493	153,232	163,876	171,906	181,426	193,012	205,408	221,279	233,506	243,963
Utility Dividend	22,239	23,243	24,654	26,255	27,663	28,793	29,708	30,937	32,020	33,126
Appropriations to Capital	33,517	33,989	31,138	28,354	32,797	25,181	22,576	14,984	10,403	9,835
Total Expenditures and Appropriations to Capital	**194,249**	**210,464**	**219,667**	**226,514**	**241,885**	**246,986**	**257,691**	**267,200**	**275,929**	**286,924**
Surplus(Deficit)	(656)	(7,598)	(4,888)	1,147	(2,297)	2,241	(514)	692	1,575	485
Opening Working Capital	37,904	37,248	29,650	24,762	25,909	23,612	25,853	25,340	26,031	27,607
Ending Working Capital	37,248	29,650	24,762	25,909	23,612	25,853	25,340	26,031	27,607	28,092
Sewer Rate $dollars	**$2.92**	**$3.10**	**$3.28**	**$3.52**	**$3.67**	**$3.81**	**$3.94**	**$4.13**	**$4.28**	**$4.44**
$ Change	4.3%	6.2%	5.8%	7.3%	4.3%	3.8%	3.4%	4.8%	3.6%	3.7%
Long-Term Debt Summary										
New debt Environmental Projects	100,000	76,335	-	-	35,000	94,000	199,000	157,000	146,000	120,846
Estimated Debt outstanding closing balance	**122,537**	**196,562**	**192,872**	**189,160**	**220,425**	**310,043**	**502,963**	**650,315**	**783,846**	**889,596**

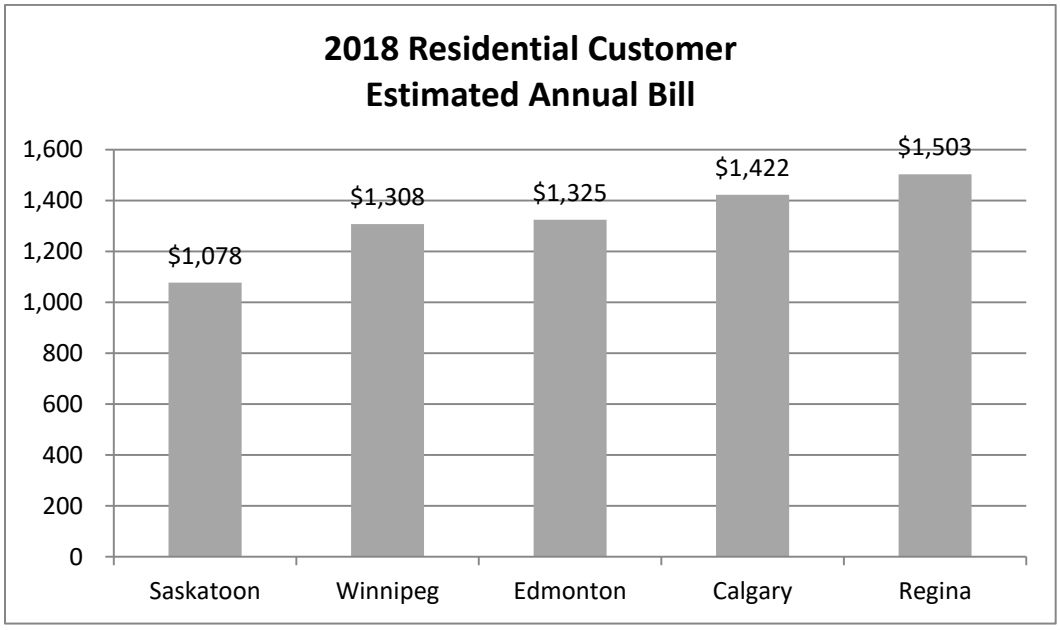
APPENDIX G
CUSTOMER BILL IMPACT

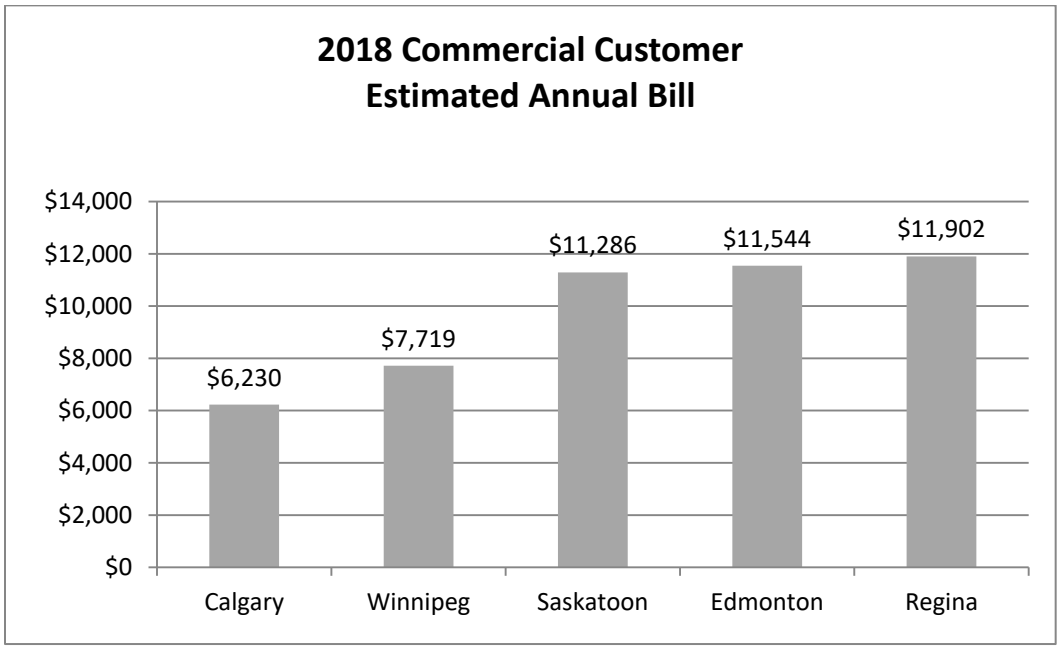
		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Residential 5/8" meter												
240 m3/yr	Water	$437	$454	$473	$492	$506	$511	$516	$521	$526	$530	$535
	Sewer	$672	$701	$744	$787	$845	$881	$914	$946	$991	$1,027	$1,066
Total volume charge		$1,109	$1,154	$1,217	$1,279	$1,351	$1,392	$1,430	$1,466	$1,517	$1,558	$1,601
Daily Basic Service Charge		$199	$215	$225	$241	$243	$269	$279	$281	$283	$285	$288
Land Drainage		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Annual Bill		**$1,308**	**$1,369**	**$1,442**	**$1,520**	**$1,594**	**$1,661**	**$1,709**	**$1,748**	**$1,800**	**$1,843**	**$1,888**
Overall $ Change			$61	$72	$78	$74	$67	$49	$38	$53	$43	$45
Overall % Change			4.7%	5.3%	5.4%	4.9%	4.2%	2.9%	2.2%	3.0%	2.4%	2.5%
Commercial 2" meter												
1,600 m3/yr	Water	$2,912	$3,024	$3,152	$3,280	$3,376	$3,408	$3,440	$3,472	$3,504	$3,536	$3,568
	Sewer	$4,480	$4,672	$4,960	$5,248	$5,632	$5,872	$6,096	$6,304	$6,608	$6,848	$7,104
Total volume charge		$7,392	$7,696	$8,112	$8,528	$9,008	$9,280	$9,536	$9,776	$10,112	$10,384	$10,672
Daily Basic Service Charge		$327	$370	$396	$440	$443	$516	$543	$546	$550	$553	$557
Land Drainage	25,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Annual Bill		**$7,719**	**$8,066**	**$8,508**	**$8,968**	**$9,451**	**$9,796**	**$10,079**	**$10,322**	**$10,662**	**$10,937**	**$11,229**
Overall $ Change			$347	$442	$460	$483	$345	$283	$243	$340	$276	$292
Overall % Change			4.5%	5.5%	5.4%	5.4%	3.7%	2.9%	2.4%	3.3%	2.6%	2.7%
Large Restaurant 3" meter												
17,700 m3/yr	Water	$32,214	$33,453	$34,869	$36,285	$37,347	$37,701	$38,055	$38,409	$38,763	$39,117	$39,471
	Sewer	$49,560	$51,684	$54,870	$58,056	$62,304	$64,959	$67,437	$69,738	$73,101	$75,756	$78,588
Total volume charge		$81,774	$85,137	$89,739	$94,341	$99,651	$102,660	$105,492	$108,147	$111,864	$114,873	$118,059
Daily Basic Service Charge		$870	$1,029	$1,126	$1,289	$1,298	$1,571	$1,668	$1,677	$1,687	$1,696	$1,705
Land Drainage	38,600	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Annual Bill		**$82,644**	**$86,166**	**$90,865**	**$95,630**	**$100,949**	**$104,231**	**$107,160**	**$109,824**	**$113,551**	**$116,569**	**$119,764**
Overall $ Change			$3,522	$4,699	$4,765	$5,319	$3,282	$2,929	$2,664	$3,726	$3,018	$3,195
Overall % Change			4.3%	5.5%	5.2%	5.6%	3.3%	2.8%	2.5%	3.4%	2.7%	2.7%
Food Processing 8" meter												
254,500 m3/yr	Water	$463,190	$481,005	$501,365	$521,725	$536,995	$542,085	$547,175	$552,265	$557,355	$562,445	$567,535
	Sewer	$712,600	$743,140	$788,950	$834,760	$895,840	$934,015	$969,645	$1,002,730	$1,051,085	$1,089,260	$1,129,980
	LVSD *	-$168,780	-$177,942	-$191,685	-$205,428	-$223,752	-$235,205	-$245,894	-$255,819	-$270,326	-$281,778	-$293,994
	* Adj. Sewer	$543,820	$565,198	$597,265	$629,332	$672,088	$698,811	$723,752	$746,911	$780,760	$807,482	$835,986
Total volume charge		$1,007,010	$1,046,203	$1,098,630	$1,151,057	$1,209,083	$1,240,896	$1,270,927	$1,299,176	$1,338,115	$1,369,927	$1,403,521
Daily Basic Service Charge		$2,079	$2,495	$2,748	$3,175	$3,196	$3,913	$4,168	$4,190	$4,212	$4,235	$4,257
Land Drainage	150,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Annual Bill		**$1,009,089**	**$1,048,698**	**$1,101,378**	**$1,154,232**	**$1,212,279**	**$1,244,809**	**$1,275,094**	**$1,303,366**	**$1,342,327**	**$1,374,162**	**$1,407,778**
			$39,610	$52,680	$52,854	$58,047	$32,530	$30,285	$28,272	$38,961	$31,835	$33,616
			3.9%	5.0%	4.8%	5.0%	2.7%	2.4%	2.2%	3.0%	2.4%	2.4%
Industrial 10" meter - Overstrength Customer												
500,000	Water	$910,000	$945,000	$985,000	$1,025,000	$1,055,000	$1,065,000	$1,075,000	$1,085,000	$1,095,000	$1,105,000	$1,115,000
400,000	Sewer	$1,120,000	$1,168,000	$1,240,000	$1,312,000	$1,408,000	$1,468,000	$1,524,000	$1,576,000	$1,652,000	$1,712,000	$1,776,000
	LVSD *	-$315,013	-$333,472	-$357,570	-$380,644	-$410,918	-$428,996	-$447,192	-$464,261	-$488,593	-$508,189	-$529,170
	Adj. Sewer	$804,987	$834,528	$882,430	$931,356	$997,082	$1,039,004	$1,076,808	$1,111,739	$1,163,407	$1,203,811	$1,246,830
Subtotal before overstrength		$1,714,987	$1,779,528	$1,867,430	$1,956,356	$2,052,082	$2,104,004	$2,151,808	$2,196,739	$2,258,407	$2,308,811	$2,361,830
2,589	TSS (kg)	$3,236	$3,236	$3,236	$3,366	$3,495	$3,495	$3,625	$3,777	$3,935	$4,101	$4,285
2,031	BOD (kg)	$2,437	$2,437	$2,437	$2,539	$2,640	$2,640	$2,742	$2,857	$2,977	$3,102	$3,242
2,589	TKN (kg)	$11,911	$12,947	$12,947	$13,465	$13,983	$14,242	$14,501	$15,110	$15,745	$16,406	$17,144
4,164	TP (kg)	$62,460	$74,952	$83,280	$87,444	$91,608	$91,608	$95,772	$99,794	$103,986	$108,353	$113,229
Daily Basic Service Charge		$2,616	$3,147	$3,469	$4,014	$4,040	$4,955	$5,279	$5,307	$5,335	$5,363	$5,391
Land Drainage	150,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Annual Bill		**$1,797,647**	**$1,876,247**	**$1,972,800**	**$2,067,183**	**$2,167,849**	**$2,220,944**	**$2,273,726**	**$2,323,583**	**$2,390,385**	**$2,446,136**	**$2,505,121**
Overall $ Change			$78,601	$96,552	$94,384	$100,666	$53,096	$52,782	$49,857	$66,801	$55,751	$58,985
Overall % Change			4.4%	5.1%	4.8%	4.9%	2.4%	2.4%	2.2%	2.9%	2.3%	2.4%

* Large Volume Sewer Discount (LVSD) applies according to conditions in section 89 of Sewer By-Law 92/2010

APPENDIX H
COMPETITIVENESS TO OTHER CANADIAN CITIES

Presented below are known fees and charges applied in other cities that are included in Winnipeg's water and sewer rates. The following tables reflect estimated customer impacts in cities of similar size using 2018 rates and select consumption -- residential (240 m^3), and commercial (1,600 m^3).





APPENDIX I
DEBT STRATEGY AND PROJECTIONS

On October 28, 2015, Council adopted a Debt Strategy for Tax Supported, Utilities and total City borrowing. This report has total borrowing for the utility over a 10 year period of $928,181,000 in long-term debt financing.

$195 million of borrowing capacity will remain if Council approves this borrowing authority.

The impact of this debt financing falls within the debt limits established in the Council Policy as outlined in the table below:

Tax Supported net debt as a percentage of revenue not to exceed	80%
Forecasted peak rate including proposed debt from this report	65.6%
Utilities net debt as a percentage of revenue not to exceed	220%
Forecasted peak rate including proposed debt from this report	155.7%
Total City net debt as a percentage of revenue not to exceed	90%
Forecasted peak rate including proposed debt from this report	78.5%
Tax Supported debt servicing as a percent of revenue not to exceed	10%
Forecasted peak rate including proposed debt from this report	5.3%
Utilities debt servicing as a percent of revenue not to exceed	20%
Forecasted peak rate including proposed debt from this report	16.2%
Total City debt servicing as a percent of revenue not to exceed	11%
Forecasted peak rate including proposed debt from this report	8.7%
Tax Supported Debt per Capita not to exceed	1,500
Forecasted peak rate including proposed debt from this report	1,110
Utilities Debt per Capita not to exceed	1,500
Forecasted peak rate including proposed debt from this report	1,366
Total City Debt per Capita not to exceed	2,800
Forecasted peak rate including proposed debt from this report	2,310