Minutes – Executive Policy Committee – January 21, 2020

Report – Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – January 9, 2020

Item No. 3 2020 to 2023 Water and Sewer Rates

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

The Executive Policy Committee concurred in the recommendation of the Winnipeg Public Service and submitted the following to Council:

1. That a four-year increase to the Water rate be approved based on the amount of water used in cubic metres (m^3) effective March 1, 2020, January 1, 2021, January 1, 2022 and January 1, 2023 as follows:

Water	Approved 2019	**Recommended March 1, 2020**	**Recommended January 1, 2021**	**Recommended January 1, 2022**	**Recommended January 1, 2023**
Rate (per m3)	$1.82	**$1.86**	**$1.90**	**$1.95**	**$2.00**

2. That a four-year increase to the Sewer rate be approved, based on the amount of water used in cubic metres (m^3), which includes an amount allocated to the Environmental Projects Reserve (EPR) effective March 1, 2020, January 1, 2021, January 1, 2022 and January 1, 2023 as follows:

Sewer	Approved 2019	**Recommended March 1, 2020**	**Recommended January 1, 2021**	**Recommended January 1, 2022**	**Recommended January 1, 2023**
Rate (per m3)	$2.80	**$2.81**	**$2.86**	**$2.91**	**$2.96**
Allocated to EPR (per m3)	$0.40	**$0.35**	**$0.35**	**$0.35**	**$0.35**

Report – Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – January 9, 2020

EXECUTIVE POLICY COMMITTEE RECOMMENDATION (continued):

3. That a four-year increase to the Daily Basic Charge rate be approved for all meter sizes effective March 1, 2020, January 1, 2021, January 1, 2022 and January 1, 2023 as follows:

Meter Size (inches)	Approved rate/day 2019	**Recommended rate/day March 1, 2020**	**Recommended rate/day January 1, 2021**	**Recommended rate/day January 1, 2022**	**Recommended rate/day January 1, 2023**
5/8	$0.55	**$0.61**	**$0.66**	**$0.70**	**$0.73**
3/4	$0.57	**$0.64**	**$0.69**	**$0.73**	**$0.77**
1	$0.62	**$0.71**	**$0.77**	**$0.82**	**$0.88**
1.5	$0.69	**$0.81**	**$0.89**	**$0.95**	**$1.02**
2	$0.90	**$1.08**	**$1.20**	**$1.31**	**$1.41**
3	$2.39	**$3.08**	**$3.53**	**$3.91**	**$4.30**
4	$2.94	**$3.82**	**$4.39**	**$4.88**	**$5.37**
6	$4.24	**$5.55**	**$6.40**	**$7.13**	**$7.87**
8	$5.71	**$7.52**	**$8.69**	**$9.71**	**$10.72**
10	$7.19	**$9.49**	**$10.99**	**$12.28**	**$13.58**
Private meter	$0.50	**$0.56**	**$0.61**	**$0.65**	**$0.68**

4. That a four-year increase of overstrength sewage rates be approved based on per kilogram (kg) effective March 1, 2020, January 1, 2021, January 1, 2022 and January 1, 2023 as follows:

Compound	Approved 2019	**Recommended March 1, 2020**	**Recommended January 1, 2021**	**Recommended January 1, 2022**	**Recommended January 1, 2023**
Total Nitrogen (TN per kg)	$5.00	**$5.60**	**$5.75**	**$6.00**	**$6.20**
Total Phosphorus (TP per kg)	$15.00	**$24.00**	**$24.80**	**$26.00**	**$27.00**

5. That a four-year increase per cubic metre (m^3) be approved for Hauled Wastewater Disposal rate effective March 1, 2020, January 1, 2021, January 1, 2022 and January 1, 2023 as follows:

Hauled Wastewater Disposal	Approved 2019	**Recommended March 1, 2020**	**Recommended January 1, 2021**	**Recommended January 1, 2022**	**Recommended January 1, 2023**
Rate (per m3)	$9.35	**$12.30**	**$12.90**	**$13.20**	**$13.60**

Report – Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – January 9, 2020

EXECUTIVE POLICY COMMITTEE RECOMMENDATION (continued):

6. That a four-year increase per property be approved for the sewer service 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 March 1, 2020, January 1, 2021, January 1, 2022 and January 1, 2023 as follows:

Sewer Services Buy-In Charge		Approved rate/property	**Recommended rate/property**	**Recommended rate/property**	**Recommended rate/property**	**Recommended rate/property**
Water Meter Size (inches)	**MWD (litres/sec)**	2019	**March 1, 2020**	**January 1, 2021**	**January 1, 2022**	**January 1, 2023**
5/8"	0.0-0.9	$2,500	**$2,600**	**$2,680**	**$3,000**	**$3,100**
3/4"	0.91-1.3	$3,700	**$3,800**	**$3,940**	**$4,500**	**$4,600**
1"	1.31-2.4	$6,200	**$6,400**	**$6,550**	**$7,500**	**$7,700**
1 1/2"	2.41-3.8	$12,500	**$12,800**	**$13,200**	**$15,200**	**$15,600**
2"	3.81-7.6	$19,900	**$20,500**	**$21,100**	**$24,300**	**$25,000**
3"	>7.6	$37,300	**$38,400**	**$39,560**	**$45,600**	**$47,000**
4"	>7.6	N/A	**$66,300**	**$68,300**	**$70,350**	**$72,500**

7. That a new Water Meter Renewal Reserve be approved to fund a program for the replacement and renewal of water meters with advanced water meters, which Reserve would be funded by customers through the Daily Basic Charge, with the Director of Water and Waste as the Fund Manager.

8. That the introduction of a Turn Off/Turn On Fee be approved for By-law Enforcement as authorized by section 5 of the Water By-law No. 107/2015 of $113.00 per transaction effective March 1, 2020.

9. That subject to the approval of Recommendation 8, the deletion of the Turn Off/Turn On Fee for Non-Payment effective March 1, 2020, be approved.

10. That an increase to the Property Account Balance Confirmation for Law Firms Fee, from $17.00 to $25.00 per transaction effective March 1, 2020, be approved.

11. That spending of $15.334 million be authorized from the 2019 Capital Budget for the NEWPCC Upgrade Project 2: Biosolids Facilities to proceed with engineering services for the project.

Report – Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – January 9, 2020

EXECUTIVE POLICY COMMITTEE RECOMMENDATION (continued):

12. That the Proper Officers of the City be authorized to do all things necessary to implement the intent of the foregoing.

Report – Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – January 9, 2020

DECISION MAKING HISTORY:

Moved by Councillor Gilroy,

That the recommendation of the Winnipeg Public Service be concurred in and forwarded to Council.

Carried

STANDING COMMITTEE RECOMMENDATION:

On January 9, 2020, 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: 2020 TO 2023 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
L. Szkwarek, CPA, CGA Manager, Finance and Administration	M. L. Geer, CPA, CA, Director, Water and Waste Department	P. Olafson, Interim CFO	M. Ruta, Interim CAO

EXECUTIVE SUMMARY

This report recommends a four-year rate approval of water and sewer rates for 2020 to 2023 as detailed in Appendix A.

The typical residential customer bill would go up by 3.0% or $33 in 2020, 3.0% or $35 in 2021, 2.8% or $34 in 2022 and 2.8% or $34 in 2023.

The typical residential consumption is estimated at 50 cubic metres per quarter, down from 60 metres that has been used in the past, as supported by historical actual consumption and industry studies.

The City of Winnipeg's water and sewer utility bill is the second-lowest in cities surveyed. (Appendix I)

The main driver for the rate increases is the capital investment required for the NEWPCC Upgrade Projects 1 and 2, required by Environment Act Licences and to address capacity issues in the existing facility, as well as combined sewer overflow (CSO) mitigation.

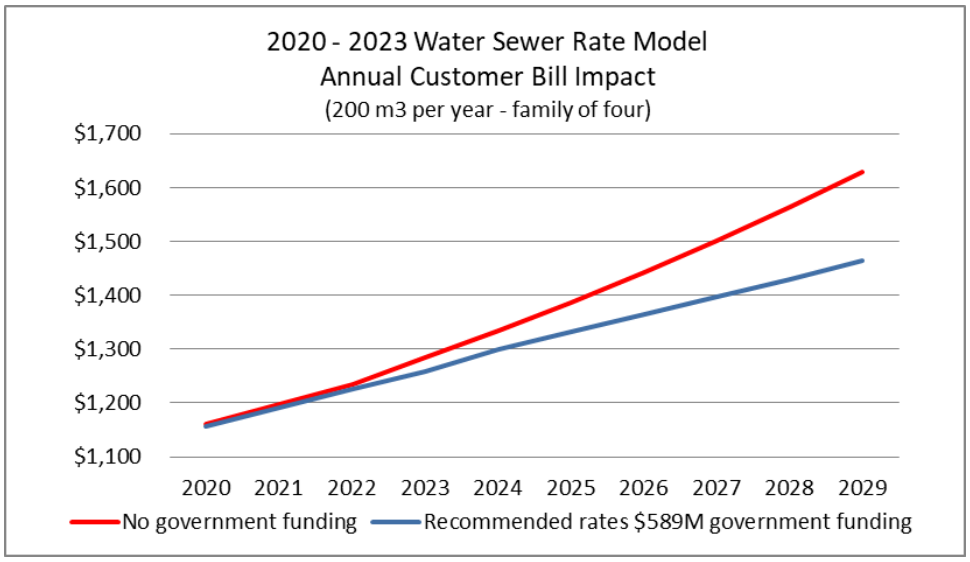
The Public Service is requesting funding to start engineering work on the NEWPCC Upgrade Project 2: Biosolids Facilities in order to meet regulatory requirements but also to address capacity issues in the existing facility.

It is imperative that the City start Project 2 as all biosolids are treated at the NEWPCC and the existing facility has finite capacity. Recent, unprecedented growth is using up capacity that could restrict future industrial and residential growth in the City and service sharing agreements with neighbouring municipalities.

The 2020-2023 water and sewer rate financial plan assumes a Class 3 cost estimate for Project 1 NEWPCC Upgrade: Power Supply and Facilities ($408 million), and Project 2 NEWPCC Upgrade: Biosolids Facilities ($553 million) for a total estimate of $961 million, which includes funding of $589 million from other levels of government for these two projects, as applied for under the existing Investing in Canada Infrastructure Program.

Project 3 NEWPCC Upgrade: Biological Nutrient Removal Facilities, estimated at $828 million, has not been included in the rate plan pending further discussions with other levels of government regarding future funding programs

The following table demonstrates the impact on the typical residential bill if the other levels of government do not provide the $589 million in funding, as estimated in this report.



If the City were to receive no government funding, rate increases would be 3.4% or $38 in 2020, 3.0% or $35 in 2021, 3.2% or $38 in 2022 and $4.0% or $49 in 2023. In year ten of the rate projection the typical residential customer would pay 11.3% or $165 more.

Also included in the rate financial plan is Combined Sewer Overflow (CSO) mitigation spending of $30 million per year, as per the Combined Sewer Overflow Master Plan (CSOMP) submitted to the Province of Manitoba on August 28, 2019. The Province of Manitoba approved the plan on November 13, 2019 with a date of December 31, 2045 for completion, unless otherwise approved by the Director, Manitoba Conservation and Climate. The accelerated timeline of 2045 could require annual spending to increase up to four times as much as currently planned when factoring in construction and program inflation, and inefficiencies in coordination with other works such as road renewals. Capital costs of this magnitude, without cost sharing with other governments, would increase customer bills by roughly 26% or $300 per year in 2020 with higher increases for the duration of the program. To date, the City has not applied for or secured any funding from other levels of government for CSO mitigation. The Public Service will continue discussions with the provincial regulator.

The rate financial plan incorporates utilities' budget target reduction options of $55.42 million as set forth in the City of Winnipeg's multi-year budget strategy.

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

The Public Service will review the rate financial model on an annual basis and will report back to Council if there are any significant changes, for example, if provincial or federal funding does not materialize or if processes defined by the Province in the denial of the City's Notice of Alteration for the NEWPCC impact timing or cost of the existing plans.

The rate projections do not include any capital or operating costs that will result from implementation of interim chemical phosphorus reduction as these have not yet been determined.

RECOMMENDATIONS

1. That Council approve a four-year increase to the Water rate, based on the amount of water used in cubic metres (m^3) effective March 1, 2020, January 1, 2021, January 1, 2022 and January 1, 2023 as follows:

Water	Approved 2019	**Recommended March 1, 2020**	**Recommended January 1, 2021**	**Recommended January 1, 2022**	**Recommended January 1, 2023**
Rate (per m3)	$1.82	**$1.86**	**$1.90**	**$1.95**	**$2.00**

2. That Council approve a four-year increase to the Sewer rate, based on the amount of water used in cubic metres (m^3), which includes an amount allocated to the Environmental Projects Reserve (EPR) effective March 1, 2020, January 1, 2021, January 1, 2022 and January 1, 2023 as follows:

Sewer	Approved 2019	**Recommended March 1, 2020**	**Recommended January 1, 2021**	**Recommended January 1, 2022**	**Recommended January 1, 2023**
Rate (per m3)	$2.80	**$2.81**	**$2.86**	**$2.91**	**$2.96**
Allocated to EPR (per m3)	$0.40	**$0.35**	**$0.35**	**$0.35**	**$0.35**

3. That Council approve a four-year increase to the Daily Basic Charge rate for all meter sizes effective March 1, 2020, January 1, 2021, January 1, 2022 and January 1, 2023 as follows:

Meter Size (inches)	Approved rate/day 2019	**Recommended rate/day March 1, 2020**	**Recommended rate/day January 1, 2021**	**Recommended rate/day January 1, 2022**	**Recommended rate/day January 1, 2023**
5/8	$0.55	**$0.61**	**$0.66**	**$0.70**	**$0.73**
3/4	$0.57	**$0.64**	**$0.69**	**$0.73**	**$0.77**
1	$0.62	**$0.71**	**$0.77**	**$0.82**	**$0.88**
1.5	$0.69	**$0.81**	**$0.89**	**$0.95**	**$1.02**
2	$0.90	**$1.08**	**$1.20**	**$1.31**	**$1.41**
3	$2.39	**$3.08**	**$3.53**	**$3.91**	**$4.30**
4	$2.94	**$3.82**	**$4.39**	**$4.88**	**$5.37**
6	$4.24	**$5.55**	**$6.40**	**$7.13**	**$7.87**
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10	$7.19	**$9.49**	**$10.99**	**$12.28**	**$13.58**
Private meter	$0.50	**$0.56**	**$0.61**	**$0.65**	**$0.68**

4. That Council approve a four-year increase of overstrength sewage rates based on per kilogram (kg) effective March 1, 2020, January 1, 2021, January 1, 2022 and January 1, 2023 as follows:

Compound	Approved 2019	**Recommended March 1, 2020**	**Recommended January 1, 2021**	**Recommended January 1, 2022**	**Recommended January 1, 2023**
Total Nitrogen (TN per kg)	$5.00	**$5.60**	**$5.75**	**$6.00**	**$6.20**
Total Phosphorus (TP per kg)	$15.00	**$24.00**	**$24.80**	**$26.00**	**$27.00**

5. That Council approve a four-year increase per cubic metre (m^3) for Hauled Wastewater Disposal rate effective March 1, 2020, January 1, 2021, January 1, 2022 and January 1, 2023 as follows:

Hauled Wastewater Disposal	Approved 2019	**Recommended March 1, 2020**	**Recommended January 1, 2021**	**Recommended January 1, 2022**	**Recommended January 1, 2023**
Rate (per m3)	$9.35	**$12.30**	**$12.90**	**$13.20**	**$13.60**

6. That Council approve a four-year increase per property for the sewer service 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 March 1, 2020, January 1, 2021, January 1, 2022 and January 1, 2023 as follows:

Sewer Services Buy-In Charge		Approved rate/property	**Recommended rate/property**	**Recommended rate/property**	**Recommended rate/property**	**Recommended rate/property**
Water Meter Size (inches)	**MWD (litres/sec)**	2019	**March 1, 2020**	**January 1, 2021**	**January 1, 2022**	**January 1, 2023**
5/8"	0.0-0.9	$2,500	**$2,600**	**$2,680**	**$3,000**	**$3,100**
3/4"	0.91-1.3	$3,700	**$3,800**	**$3,940**	**$4,500**	**$4,600**
1"	1.31-2.4	$6,200	**$6,400**	**$6,550**	**$7,500**	**$7,700**
1 1/2"	2.41-3.8	$12,500	**$12,800**	**$13,200**	**$15,200**	**$15,600**
2"	3.81-7.6	$19,900	**$20,500**	**$21,100**	**$24,300**	**$25,000**
3"	>7.6	$37,300	**$38,400**	**$39,560**	**$45,600**	**$47,000**
4"	>7.6	N/A	**$66,300**	**$68,300**	**$70,350**	**$72,500**

7. That Council approve a new Water Meter Renewal Reserve to fund a program for the replacement and renewal of water meters with advanced water meters, which Reserve would be funded by customers through the Daily Basic Charge, with the Director of Water and Waste as the Fund Manager.

8. That Council approve the introduction of a Turn Off/Turn On Fee for By-law Enforcement as authorized by section 5 of the Water By-law No. 107/2015 of $113.00 per transaction effective March 1, 2020.

9. Subject to the approval of Recommendation 8, Council approve the deletion of the Turn Off/Turn On Fee for Non-Payment effective March 1, 2020.

10. That Council approve an increase to the Property Account Balance Confirmation for Law Firms Fee from $17.00 to $25.00 per transaction effective March 1, 2020.

11. That Council authorize spending of $15.334 million from the 2019 Capital Budget for the NEWPCC Upgrade Project 2: Biosolids Facilities to proceed with engineering services for the project.

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

REASON FOR THE REPORT

Increases in water and sewer rates above inflation, the introduction of a new fee, and the establishment of a new reserve require Council approval.

IMPLICATIONS OF THE RECOMMENDATIONS

The Public Service is requesting an increase to the water and sewer rates effective March 1, 2020, January 1, 2021, January 1, 2022 and January 1, 2023.

The water and sewer financial plan assumes a Class 3 cost estimate for projects 1 and 2 of the NEWPCC Upgrade: Power Supply and Facilities, and NEWPCC Upgrade: Biosolids Facilities - for a total estimate of $961 million ($928 million, plus capitalized financing of $33 million) including funding of $589 million from other levels of government.

Project 3 NEWPCC Upgrade: Biological Nutrient Removal Facilities Class 3 cost estimate of $828 million has not been incorporated into the financial plan pending further funding discussions with other levels of government.

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 will require the Public Service to report back to Council.

HISTORY/DISCUSSION

The Water and Waste Department (WWD) employs industry best practices to establish water and sewer rates. The rates are designed to fund all costs of operations and capital projects related to water and sewer quality, city growth and regulatory requirements.

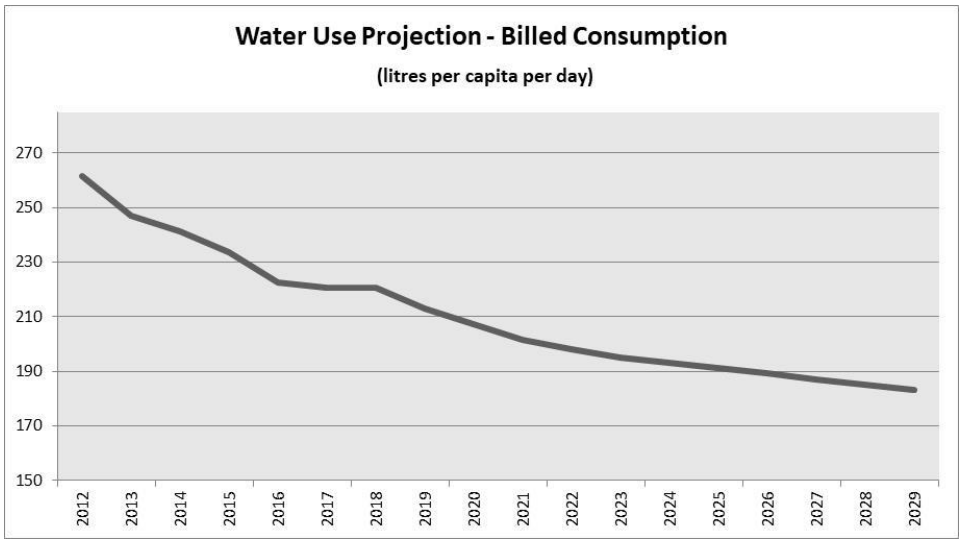
A. WHAT DRIVES RATES

1. Consumption

For rate purposes, billed water consumption is estimated to marginally decline, approximately 0.29 % 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.

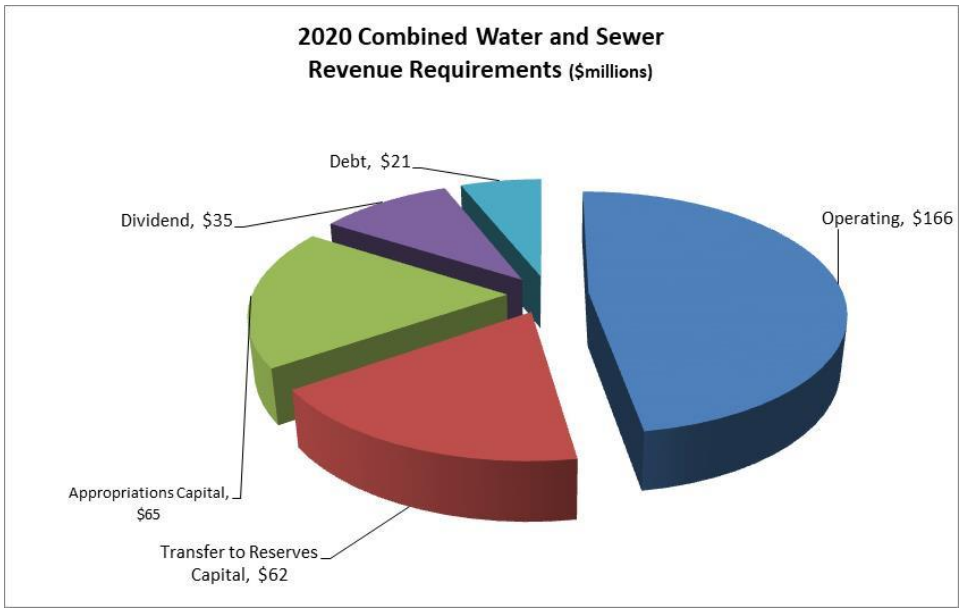
Declining consumption is a factor of technology (Appendix B), consumer preference and is consistent with cities surveyed (Appendix D).

City of Winnipeg, billed consumption as measured in litres per capita per day has been steadily decreasing. What was once considered typical consumption for a family of four at 60 cubic metres per quarter is now estimated at 50 cubic metres per quarter.



2. Revenue Requirements

For 2020, total water and sewer revenue requirements are estimated at $349 million and will fund capital spending, transfers to reserves, transfer to land drainage, operating costs, debt servicing and the dividend. Budgets incorporate target reduction options of $55.42 million as set forth in the City of Winnipeg's 2020-2023 multi-year budget strategy.



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 (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 and helps to mitigate rate increases in any given year.

The 10-year financial plan incorporates the following funding assumptions:

NEWPCC Upgrade

- NEWPCC Upgrade: Power Supply and Headworks at $408 million, as approved by Council on February 28, 2019.
- NEWPCC Upgrade: Biosolids Facilities, as approved by Council on September 26, 2019 subject to final written confirmation of federal and provincial funding satisfactory to the Chief Financial Officer.
- Federal and Provincial Funding of $589 million towards these projects.
- It does not include $828 million for NEWPCC Upgrade: Biological Nutrient Removal Facilities pending funding discussions with the other levels of government.

The power supply and headworks projects are underway and while they have a regulatory component, they will be replacing significant end of life infrastructure.

It is imperative that the City start Project 2 as all biosolids are treated at the NEWPCC and the existing facility has finite capacity. Recent, unprecedented growth is using up capacity that could restrict future industrial and residential growth in the City and service sharing agreements with neighbouring municipalities.

Combined Sewer Overflow (CSO) Mitigation

- Capital spending of approximately $25 to $30 million per year.
- Assumes no federal or provincial funding.
- Does not meet the completion date of December 31, 2045 for CSO mitigation as specified by the Province on November 13, 2019. The accelerated timeline of 2045 could require annual spending to increase up to four times as much as currently planned when factoring in construction and program inflation, and inefficiencies in coordination with other works such as road renewals. Capital costs of this magnitude, without cost sharing with other governments, would increase customer bills by roughly 26% or $300 per year in 2020 with higher increases for the duration of the program. To date, the City has not applied for or secured any funding from other levels of government for CSO mitigation.
- The Public Service will continue discussions with the provincial regulator.

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 sewage treatment 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 Expenditure [1]	Project Financing				
		Volume Rate [2]	Fed/Prov	Debt	Retained Earnings	Total
To 2018	269,541	274,054	61,763	24,000	101,535	461,352
2019	93,471	94,138	3,837	80,000	12,327	190,302
2020	**144,570**	**18,755**	**38,538**	**96,335**	**37,577**	**191,205**
2021	**100,181**	**22,982**	**11,000**	**-**	**15,256**	**49,238**
2022	**78,599**	**22,582**	**42,400**	**-**	**17,883**	**82,865**
2023	**146,655**	**21,358**	**78,000**	**-**	**-**	**99,358**
2024	**152,210**	**20,564**	**84,000**	**-**	**-**	**104,564**
2025	**134,365**	**20,186**	**78,000**	**-**	**-**	**98,186**
2026	**188,155**	**20,164**	**115,000**	**-**	**-**	**135,164**
2027	**163,248**	**20,142**	**97,000**	**27,046**	**-**	**144,188**
2028	**176,886**	**20,140**	**84,923**	**71,823**	**-**	**176,886**
2029	**62,747**	**20,138**	**-**	**42,610**	-	**62,748**
2030	52,854	25,000	-	-	-	25,000
2031	49,505	30,000	-	-	-	30,000
2032	35,822	35,000	-	-	-	35,000
2033	36,896	40,000	-	-	-	40,000
2034	38,003	40,000	-	-	-	40,000
2035	39,143	40,500	-	-	-	40,500
2036	40,317	41,000	-	-	-	41,000
2037	41,527	41,500	-	-	-	41,500
2038	42,773	42,000	-	-		42,000
2039	44,057	42,500	-	-	-	42,500
Total 10 Year 2020-2029	**1,347,615**	**207,011**	**628,861**	**237,814**	**70,716**	**1,144,402**
Total to 2039	**2,131,523**	**952,702**	**694,461**	**341,814**	**184,578**	**2,173,555**

[1] Includes management fees

[2] Includes interest

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

- Sewer rates include consumption allocations that are dedicated to funding EPR projects. Volume rate funding for the 10-year financial plan is estimated at $207 million.
- Federal and provincial funding for the 10-year financial plan is estimated at $629 million, of which $589 million assumes new government funding for the NEWPCC Upgrade projects 1 and 2.
- Debt funding for the 10-year financial plan is estimated at $238 million which assumes completion of the SEWPCC Upgrade, NEWPCC Upgrade projects 1 and 2, and current CSO mitigation strategy.

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. 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. The Department will monitor reserve balances and adjust contributions according to anticipated program requirements.

d. Water Meter Renewal Reserve (WMtrRR)

The Public Service 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 2020 Capital Budget includes a project to review and update the 2011 Advanced Water Metering Business Case and further proposes a multi-year AMS implementation beginning in 2025, subject to a report back to Council.

The City of Winnipeg owns approximately 211,000 water meters, installed in homes and businesses for billing purposes, of which 62% are due for replacement. 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 the 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 their property
- improving theft detection
- detecting reverse flows, which would alert the 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

An Automated Meter Read (AMR) pilot project was introduced in 2019 with the object to develop, test and evaluate policies and processes required for larger automated meter system implementation along with providing an opportunity to update meter accuracy data for residential meters of a variety of ages. Data gathered to date confirms benefits such as early leak detection and 99.5% meter read success.

5. Debt Servicing

The Public Service 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, equity and government funding. This manages the impact on short-term rate increases and supports intergenerational equity.

The Public Service 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 utility's debt servicing as a percent of revenue is not to exceed 20%.

Debt Strategy

On October 28, 2015, Council adopted a Debt Strategy for Tax Supported, Utilities and total City borrowing. This report estimates debt requirements of $341,814,000. The prior February 28, 2019 report was estimating debt requirements of $1,044,181,000. This results in a reduction of $702,367,000 of long-term debt financing. This is largely due to excluding project 3 NEWPCC Upgrade: Biological Nutrient Removal and incorporating anticipated federal/provincial funding of $589 million.

$170 million of Tax Supported and $110 million of Utilities borrowing capacity will remain if Council approves this report. 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	63.4%
Utilities net debt as a percentage of revenue not to exceed	220%
Forecasted peak rate including proposed debt from this report	91.1%
Total City net debt as a percentage of revenue not to exceed	90%
Forecasted peak rate including proposed debt from this report	76.4%
Tax Supported debt servicing as a percent of revenue not to exceed	10%
Forecasted peak rate including proposed debt from this report	5.5%
Utilities debt servicing as a percent of revenue not to exceed	20%
Forecasted peak rate including proposed debt from this report	9.7%

Total City debt servicing as a percent of revenue not to exceed	11%
Forecasted peak rate including proposed debt from this report	6.8%
Tax Supported Debt per Capita not to exceed	1,500
Forecasted peak rate including proposed debt from this report	1,126
Utilities Debt per Capita not to exceed	1,500
Forecasted peak rate including proposed debt from this report	791
Total City Debt per Capita not to exceed	2,800
Forecasted peak rate including proposed debt from this report	2,030

6. Dividends

Based on the recommended rate increases, the Water and Waste projected dividends are as follows:

$000s	Budget 2019	**Recommended 2020**	**Recommended 2021**	**Recommended 2022**	**Recommended 2023**
Water	$13,862	**$14,262**	**$14,637**	**$15,132**	**$15,637**
Sewer	$20,350	**$20,325**	**$21,044**	**$21,560**	**$22,084**
Total	$34,212	**$34,587**	**$35,681**	**$36,692**	**$37,721**

The annual dividend represents the City's return on investment in the utility. On March 20, 2019 Council approved that the utility dividend policy be adjusted from 12% to 11% of budgeted gross water and sewer sales. The 10-year financial plan assumes no change to the 11% rate.

Dividend policies exist in other cities surveyed. (Appendix D)

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 approximately 8% or between 30 to 60 days cash and investments on hand.

The water and sewer funds adhere to a set of operating principles. (Appendix E).

B. WHAT ARE THE RECOMMENDED RATES (Appendix A)

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 March 1, 2020 and January 1 for years 2021 to 2023. 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 F.

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 March 1, 2020 and January 1 for years 2021 to 2023. Sewer rate includes a consumption allocation to fund the 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 G.

3. Daily Basic Charge

The Public Service is recommending an increase in the daily basic charge (DBC) for all meter sizes, effective March 1, 2020 and January 1 for years 2021 to 2023. Billed on a daily basis, this charge is based on meter size and covers the fixed cost of water meters (including meter maintenance and meter 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.

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 Public Service is recommending an increase to Total Nitrogen (TN), and Total Phosphorus (TP), effective March 1, 2020 and January 1 for years 2021 to 2023.

5. Hauled Wastewater Rate

Hauled wastewater disposal rate (HWR) recovers the cost of receiving and treating sewage effluent discharged by haulers at the wastewater treatment plant. The Public Service is recommending an increase to the Hauled Wastewater Rate, effective March 1, 2020 and January 1 for years 2021 to 2023. Increases to the HWR reflect recovery of costs associated with capital improvements at the NEWPCC disposal site for hauled wastewater disposal.

6. Turn off/Turn On Fee for By-law Enforcement

The Public Service is recommending the deletion of the Turn Off/Turn On Fee for Non Payment and introduction of a Turn Off/Turn On Fee for By-law Enforcement of $113.00 effective March 1, 2020.

Section 5 of the Water By-law No. 107/2015 provides authority for the City to turn off in certain situations, including:

- where an owner or occupant has failed to pay the water account for more than 30 days
- where an owner or occupant has denied the City access to read, inspect or exchange the water meter
- where the property owner is using water in violation of a declared water usage restriction
- where the property owner has failed to have a premise isolation device installed.

Currently, the Turn Off/Turn On Fee for Non Payment only pertains to the section of the by-law applicable to non-payment of accounts. The introduction of a Turn Off/Turn On Fee for By-law Enforcement will provide a consistent approach to enforcement and would apply to all the grounds set out in Section 5 for turning off and turning on the water supply beginning 2020.

Increases for future years beyond 2020 will be incorporated in the annual fees and charges process as approved by the Chief Financial Officer.

7. Property Account Balance Confirmation for Law Firms

The Public Service is recommending an increase to the Property Account Balance Confirmation for Law Firms fee effective March 1, 2020. The recommended increase will bring the fee for a manual search for property account balances, which include water utility accounts and/or property assessment/tax balances, in line with the electronic searches as offered via the Lawyer Gateway Portal.

The recommended increase will ensure the fee for manual processing of account balance searches is not less than the fee for automated processing.

Increases for future years beyond 2020 will be incorporated in the annual fees and charges process as approved by the Chief Financial Officer

8. Capital Region Sewer Service Sharing Buy-In Charge

The Public Service is recommending an increase to the buy-in charge for service sharing agreements, effective March 1, 2020 and January 1 for years 2021 to 2023.

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 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).

C. CUSTOMER IMPACT

Historically, for benchmarking purposes, consumption for a family of four was estimated at 60 cubic metres per quarter. The benchmark has now changed from 60 cubic metres to 50 cubic metres per quarter and is based on updated billed consumption data and supported by studies conducted by WWD Engineering Water Planning.

A residential customer, a family of four, with an estimated consumption of 50 cubic metres per quarter, can expect an increase over the four year period as follows:

Residential Customer Quarterly Bill (50 m3 per quarter family of four)	2019	**2020**	**2021**	**2022**	**2023**
Water	$91	**$93**	**$95**	**$98**	**$100**
Sewer	$140	**$141**	**$143**	**$145**	**$148**
DBC	$50	**$56**	**$60**	**$63**	**$67**
Total Quarterly Bill	$281	**$289**	**$298**	**$306**	**$315**
Overall $ Change		**$8**	**$9**	**$8**	**$9**
Overall % Change		**3.0%**	**3.0%**	**2.8%**	**2.8%**

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

D. WHAT MAY INFLUENCE FUTURE RATES

1. Financial Projection Risks

The detailed financial projections and rate plans are contained in Appendices E (water) and F (sewer).

Primary risks associated with the 10-year financial projections in the 2020-2023 water and sewer rate report are licencing requirements and government funding:

a. NEWPCC Upgrade Project:

i. No Federal and Provincial Funding: The amount of federal and/or provincial funding realized will impact rates, borrowing, and/or the planned sewage treatment upgrade projects. On September 26, 2019 City Council approved an application to the Investing in Capital Infrastructure Program which included NEWPCC Upgrade: Headworks Facilities and NEWPCC Upgrade: Biosolids Facilities.

ii. Class Estimate: The NEWPCC Upgrade class 3 estimate is $1.8 billion ($1.6 billion, plus $155 million in financing) for all three projects. Given the project schedule, complexity and risks to complete, the class 3 estimate could range from +30% to -20% or from $2.1 billion to $1.3 billion, plus financing.

iii. Three-Project Approach: Project 1, Power Supply and Headworks Facilities and Project 2, Biosolids Facilities engineering costs are included in the WWD 2020 capital budget submission. The projects are being completed in order of process criticality. There are interdependencies between the projects, for example, elements of Project 1 must be completed prior to elements of Project 2 coming online. Full licence compliance will only be achieved at the completion of all three projects. Project 3, Biological Nutrient Removal Facilities, remains on the unfunded capital list. Successful completion of projects 2 and 3 are dependent on government funding.

b. Combined Sewer Overflow (CSO) Mitigation:

i. 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 August 31, 2019, based upon Control Option No. 1 (85% capture in a representative year). The approval of the Preliminary Proposal also indicated that the City of Winnipeg is to implement the CSO Master Plan for Control Option No. 1 by December 31, 2045, unless otherwise approved by the Director, Manitoba Conservation and Climate. The

CSO Master Plan was submitted to the regulator on August 28, 2019. On November 17, 2019 the regulator approved the CSO Master Plan submission and required additional submissions the City is working to complete. In the regulator approval of the CSO Master Plan, the completion date remains unchanged. The City will continue discussions with the regulator on this issue. The CSO Master Plan carries a Class 5 (-50% +100%) planning level cost estimate of $2.3 billion, or from $1.2 billion to $4.6 billion.

c. Debt:

i. 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, the resulting estimated debt levels may not meet Council-approved Debt Strategy limits and increased costs would be borne by customers.

d. **New Legislation**:

i. 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 an 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.

- **Land Drainage Rate Planning:** For 2020 to 2023, the sewer rate will fund a total of $37.1 million for land drainage and flood control operating and capital costs, $17.7 million for land drainage operating costs and $19.4 million for capital. A separate land drainage fee is a common practice in other cities surveyed across Canada (Appendix D). 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 2019, Winnipeg ranks second out of five cities for affordability for a residential and commercial customer. (Appendix I)

F. COMMUNICATION

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

Strategy	Timeline
MyUtilityBill Website updated with new rates	February 2020
Message on utility bill	February to April 2020

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	February 2020
Wastewater haulers	February 2020

FINANCIAL IMPACT

Financial Impact Statement

Date: December 4, 2019

Project Name:

2020 TO 2023 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

WINNIPEG CLIMATE ACTION PLAN ALIGNMENT

n/a

SUBMITTED BY

Department:	Water and Waste
Division:	Finance and Administration
Prepared by:	Mwaka Kaonga, Sheila Ilagan, Lucy Szkwarek
Date:	December 13, 2019
File No:	010-07-20-01-00
	010-07-20-02-00

Appendices:

APPENDIX A	2020 to 2023 Recommended Rates
APPENDIX B	Consumption
APPENDIX C	Capital Spending
APPENDIX D	Benchmarking
APPENDIX E	Water and Sewer Utility Principles of Operations
APPENDIX F	Water Works System Fund Financial Projections
APPENDIX G	Sewage Disposal System Fund Financial Projections
APPENDIX H	Customer Bill Impact
APPENDIX I	Competitiveness to Other Canadian Cities

APPENDIX A
2020 TO 2023 RECOMMENDED RATES

Category	Approved 2019	Recommended March 1, 2020	Recommended January 1, 2021	Recommended January 1, 2022	Recommended January 1, 2023
Water Rate (per m3)	$1.82	**$1.86**	**$1.90**	**$1.95**	**$2.00**
Sewer Rate (per m3)	$2.80	**$2.81**	**$2.86**	**$2.91**	**$2.96**
Allocated to EPR (per m3)	$0.40	**$0.35**	**$0.35**	**$0.35**	**$0.35**

Category	Approved 2019	Recommended March 1, 2020	Recommended January 1, 2021	Recommended January 1, 2022	Recommended January 1, 2023
Daily Basic Charge (per day per meter size)					
5/8" meter	$0.55	**$0.61**	**$0.66**	**$0.70**	**$0.73**
3/4" meter	$0.57	**$0.64**	**$0.69**	**$0.73**	**$0.77**
1" meter	$0.62	**$0.71**	**$0.77**	**$0.82**	**$0.88**
1.5" meter	$0.69	**$0.81**	**$0.89**	**$0.95**	**$1.02**
2" meter	$0.90	**$1.08**	**$1.20**	**$1.31**	**$1.41**
3" meter	$2.39	**$3.08**	**$3.53**	**$3.91**	**$4.30**
4" meter	$2.94	**$3.82**	**$4.39**	**$4.88**	**$5.37**
6" meter	$4.24	**$5.55**	**$6.40**	**$7.13**	**$7.87**
8" meter	$5.71	**$7.52**	**$8.69**	**$9.71**	**$10.72**
10" meter	$7.19	**$9.49**	**$10.99**	**$12.28**	**$13.58**
Private meter	$0.50	**$0.56**	**$0.61**	**$0.65**	**$0.68**

Category	Approved 2019	Recommended March 1, 2020	Recommended January 1, 2021	Recommended January 1, 2022	Recommended January 1, 2023
Overstrength Sewage Rate					
Total Nitrogen (per kg)	$5.00	**$5.60**	**$5.75**	**$6.00**	**$6.20**
Total Phosphorus (per kg)	$15.00	**$24.00**	**$24.80**	**$26.00**	**$27.00**

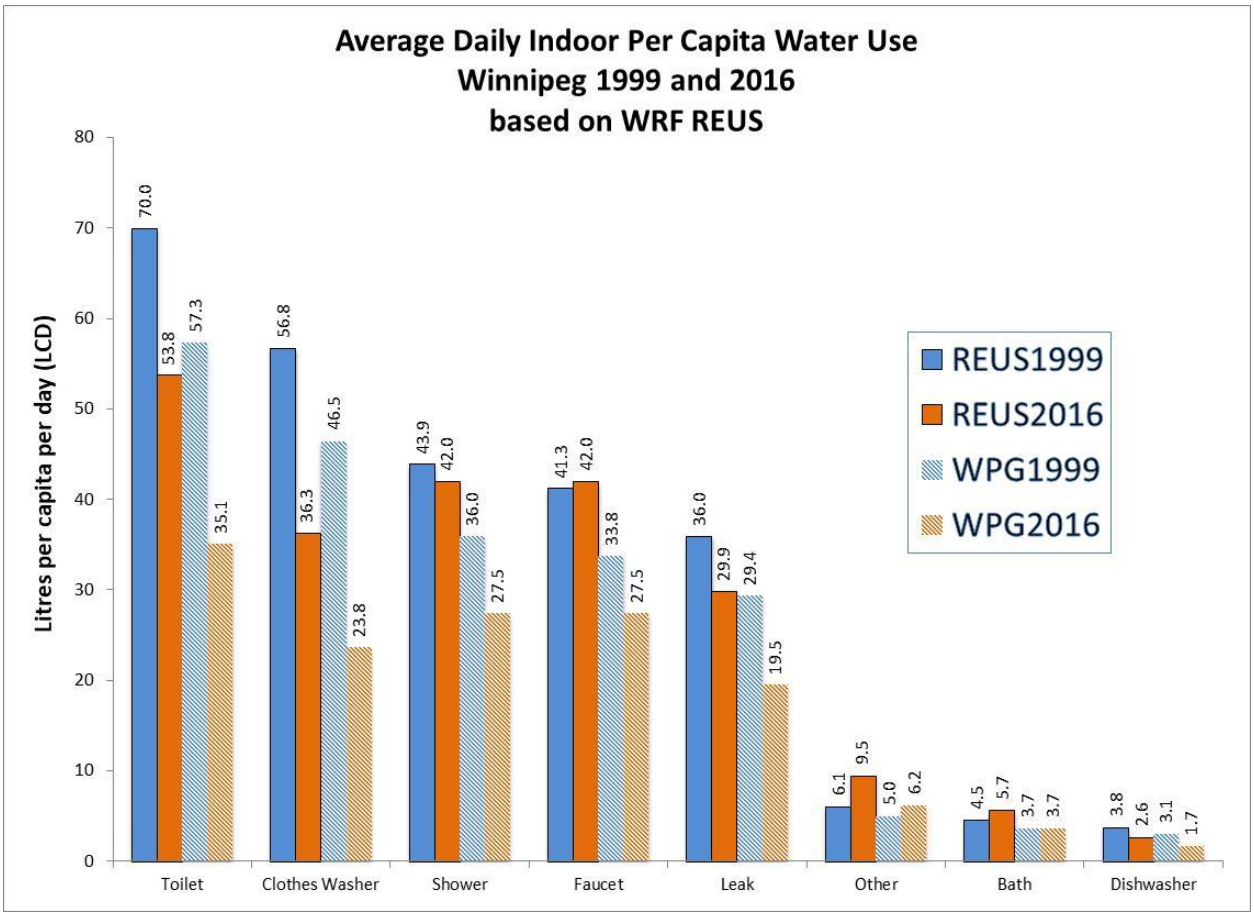
Category	Approved 2019	Recommended March 1, 2020	Recommended January 1, 2021	Recommended January 1, 2022	Recommended January 1, 2023
Hauled Wastewater Disposal (per m3)	$9.35	**$12.30**	**$12.90**	**$13.20**	**$13.60**

Category	Approved 2019	Recommended March 1, 2020	Recommended January 1, 2021	Recommended January 1, 2022	Recommended January 1, 2023
Sewer Service Sharing					
5/8" meter - 0.0-0.9 MWD(litre/sec)	$2,500	**$2,600**	**$2,680**	**$3,000**	**$3,100**
3/4" meter - 0.91-1.3MWD(litre/sec)	$3,700	**$3,800**	**$3,940**	**$4,500**	**$4,600**
1" meter - 1.31-2.4 MWD(litre/sec)	$6,200	**$6,400**	**$6,550**	**$7,500**	**$7,700**
1.5" meter - 2.41-3.8 MWD(litre/sec)	$12,500	**$12,800**	**$13,200**	**$15,200**	**$15,600**
2" meter - 3.81-7.6 MWD(litre/sec)	$19,900	**$20,500**	**$21,100**	**$24,300**	**$25,000**
3" meter - >7.6 MWD(litre/sec)	$37,300	**$38,400**	**$39,560**	**$45,600**	**$47,000**
4" meter - >7.6 MWD(litre/sec)	N/A	**$66,300**	**$68,300**	**$70,350**	**$72,500**

Category	Approved 2019	Recommended March 1, 2020
Other		
Turn Off/Turn On for By-law Enforcement (per transaction)	n/a	**$113.00**
Property Account Balance Confirmation for Law Firms (per transaction)	$17.00	**$25.00**

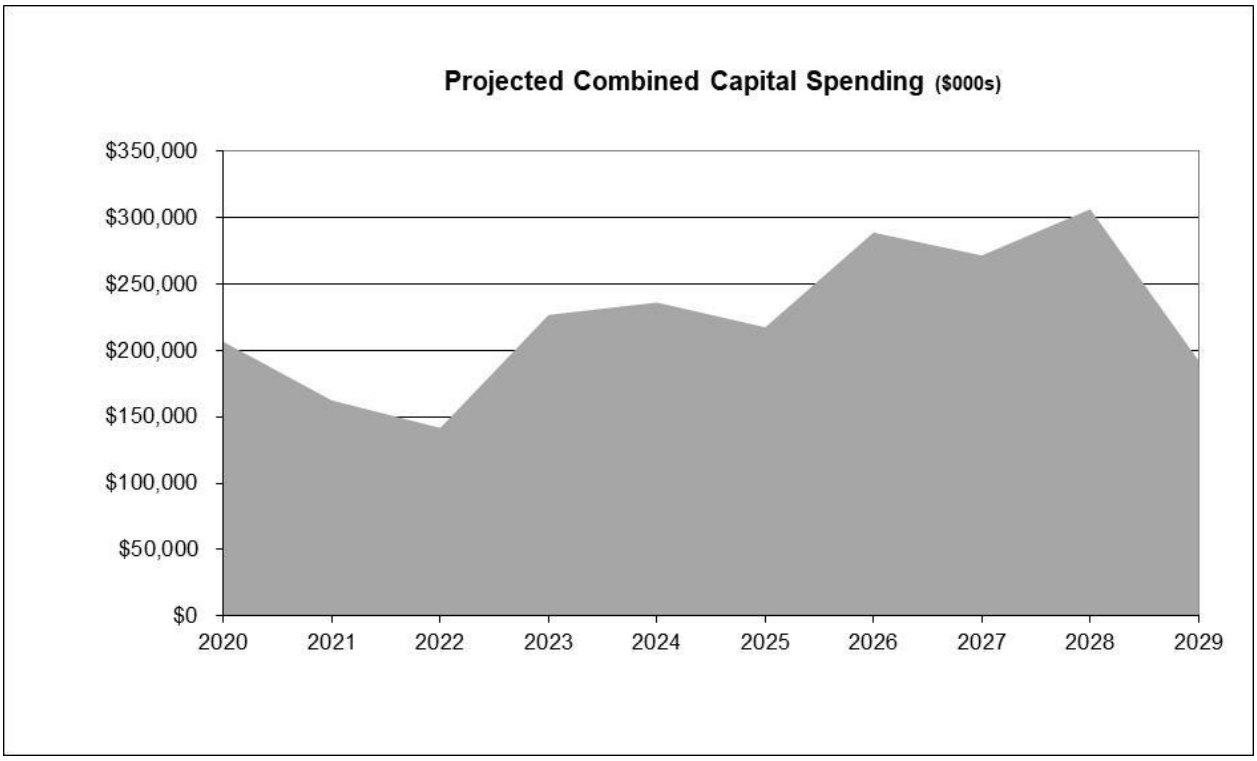
APPENDIX B
CONSUMPTION

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, land drainage, and retained earnings funded capital.



APPENDIX D
BENCHMARKING

BENCHMARKING - 2019 DATA

	Winnipeg	Calgary	Edmonton	Regina	Saskatoon
Dividends	Yes 11% budgeted gross 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	Reduced from 12% to 11% in 2019	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
Consumption	Declining	Declining	Declining	Declining	Declining
Separate land drainage fee	No	Yes	Yes	Yes	Yes
Rates based on cost of service	Yes	Yes	Yes	Yes	Yes
Advanced meter system	No	Yes	Yes	Yes	Yes
Frequency of rate approval	1-year for 2019 Recommending 4-year 2020-2023	4 year	5 year	2 year	3-year 2017-2019 Proposing 2-year for 2020-2021

APPENDIX E
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 F
WATER WORKS SYSTEM FUND FINANCIAL PROJECTIONS

WATERWORKS SYSTEM FUND
Financial Projection 2020-2029 ($000s)

Waterworks System	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
Revenue										
Sales Revenue	129,658	133,062	137,567	142,152	146,483	150,036	153,421	156,880	160,549	164,301
Other	5,114	5,376	5,628	5,890	6,055	6,352	6,661	6,982	7,317	7,656
Total Revenue	**134,772**	**138,438**	**143,195**	**148,042**	**152,538**	**156,388**	**160,082**	**163,862**	**167,867**	**171,957**
Expenditures and Appropriations to Capital										
Operating	107,197	110,639	114,198	117,152	121,156	122,661	125,057	127,700	130,379	133,093
Utility Dividend	14,262	14,637	15,132	15,637	16,113	16,504	16,876	17,257	17,660	18,073
Appropriations to Capital	15,585	13,322	12,640	16,222	19,580	18,241	16,500	17,000	17,500	18,000
Total Expenditures and Appropriations to Capital	**137,045**	**138,598**	**141,971**	**149,011**	**156,849**	**157,406**	**158,433**	**161,957**	**165,539**	**169,166**
Surplus(Deficit)	(2,273)	(160)	1,224	(969)	(4,312)	(1,019)	1,649	1,905	2,328	2,791
Opening Working Capital	17,785	15,512	15,352	16,576	15,606	11,295	10,276	11,925	13,830	16,158
Ending Working Capital	15,512	15,352	16,576	15,606	11,295	10,276	11,925	13,830	16,158	18,949
Water Rate ($dollars)	**1.86**	**1.90**	**1.95**	**2.00**	**2.05**	**2.10**	**2.15**	**2.21**	**2.26**	**2.32**
Long-Term Debt Summary										
New debt	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Debt outstanding closing balance	**113,054**	**107,747**	**102,203**	**96,413**	**90,365**	**84,048**	**77,735**	**71,139**	**64,246**	**57,043**

APPENDIX G
SEWAGE DISPOSAL SYSTEM FUND FINANCIAL PROJECTIONS

SEWAGE DISPOSAL SYSTEM FUND
Financial Projection 2020-2029 ($000s)

Sewage Disposal System	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
Revenue										
Sales Revenue	184,769	191,308	196,003	200,766	207,878	214,082	220,074	226,263	232,552	238,991
Other	10,782	10,905	11,027	11,153	10,835	11,092	11,354	11,620	11,911	12,262
Total Revenue	**195,551**	**202,213**	**207,031**	**211,919**	**218,713**	**225,174**	**231,428**	**237,883**	**244,463**	**251,253**
Expenditures and Appropriations to Capital										
Operating	142,643	149,786	155,115	158,720	170,535	176,889	180,878	184,605	189,465	195,013
Utility Dividend	20,325	21,044	21,560	22,084	22,867	23,549	24,208	24,889	25,581	26,289
Appropriations to Capital	49,484	29,550	33,328	28,173	25,107	24,597	27,148	26,329	30,581	31,252
Total Expenditures and Appropriations to Capital	**212,452**	**200,380**	**210,004**	**208,977**	**218,509**	**225,034**	**232,234**	**235,822**	**245,627**	**252,555**
Surplus(Deficit)	(16,900)	1,833	(2,973)	2,941	204	140	(805)	2,061	(1,164)	(1,302)
Opening Working Capital	26,801	9,900	11,734	8,760	11,702	11,906	12,045	11,240	13,301	12,137
Ending Working Capital	9,900	11,734	8,760	11,702	11,906	12,045	11,240	13,301	12,137	10,835
Sewer Rate $dollars	**$2.81**	**$2.86**	**$2.91**	**$2.96**	**$3.07**	**$3.16**	**$3.26**	**$3.36**	**$3.46**	**$3.56**
Long-Term Debt Summary										
New debt Environmental Projects	96,335	-	-	-	-	-	-	27,046	71,823	42,610
Estimated Debt outstanding closing balance	**196,958**	**193,090**	**189,150**	**185,133**	**181,039**	**176,864**	**172,605**	**195,305**	**262,167**	**298,329**

APPENDIX H
CUSTOMER BILL IMPACT

		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Residential 5/8" meter												
200 m3/yr	Water	$364	$371	$381	$390	$400	$410	$420	$431	$441	$452	$464
	Sewer	$560	$562	$572	$582	$592	$613	$632	$652	$672	$692	$712
Total volume charge		$924	$933	$952	$972	$992	$1,023	$1,052	$1,082	$1,113	$1,144	$1,176
Daily Basic Service Charge		$199	$223	$239	$253	$267	$277	$280	$282	$284	$286	$288
Land Drainage		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Annual Bill**		**$1,123**	**$1,157**	**$1,192**	**$1,225**	**$1,259**	**$1,300**	**$1,332**	**$1,364**	**$1,397**	**$1,430**	**$1,464**
Overall $ Change			$33	$35	$34	$34	$41	$31	$32	$33	$33	$34
Overall % Change			3.0%	3.0%	2.8%	2.8%	3.3%	2.4%	2.4%	2.4%	2.4%	2.4%
Commercial 2" meter												
1,600 m3/yr	Water	$2,912	$2,970	$3,044	$3,121	$3,199	$3,279	$3,361	$3,445	$3,531	$3,619	$3,709
	Sewer	$4,480	$4,496	$4,575	$4,655	$4,737	$4,904	$5,056	$5,213	$5,376	$5,535	$5,699
Total volume charge		$7,392	$7,466	$7,619	$7,776	$7,936	$8,183	$8,417	$8,658	$8,907	$9,154	$9,409
Daily Basic Service Charge		$327	$394	$438	$476	$514	$541	$544	$548	$551	$555	$558
Land Drainage		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Annual Bill		**$7,719**	**$7,860**	**$8,057**	**$8,252**	**$8,450**	**$8,723**	**$8,961**	**$9,206**	**$9,458**	**$9,709**	**$9,967**
Overall $ Change			$141	$197	$195	$198	$274	$237	$245	$252	$251	$258
Overall % Change			1.8%	2.5%	2.4%	2.4%	3.2%	2.7%	2.7%	2.7%	2.7%	2.7%
Large Restaurant 3" meter												
17,700 m3/yr	Water	$32,214	$32,858	$33,680	$34,522	$35,386	$36,271	$37,177	$38,106	$39,059	$40,036	$41,036
	Sewer	$49,560	$49,737	$50,608	$51,496	$52,403	$54,251	$55,932	$57,674	$59,476	$61,233	$63,049
Total volume charge		$81,774	$82,595	$84,287	$86,018	$87,788	$90,521	$93,109	$95,780	$98,534	$101,269	$104,085
Daily Basic Service Charge		$870	$1,121	$1,284	$1,425	$1,566	$1,663	$1,672	$1,681	$1,691	$1,700	$1,709
Land Drainage		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Annual Bill		**$82,644**	**$83,717**	**$85,571**	**$87,443**	**$89,354**	**$92,184**	**$94,781**	**$97,461**	**$100,225**	**$102,969**	**$105,794**
Overall $ Change			$1,072	$1,855	$1,872	$1,911	$2,830	$2,597	$2,680	$2,763	$2,744	$2,825
Overall % Change			1.3%	2.2%	2.2%	2.2%	3.2%	2.8%	2.8%	2.8%	2.7%	2.7%

APPENDIX I
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 annual customer impacts in cities of similar size using 2019 rates and select consumption per year -- residential (200 m^3), and commercial (1,600 m^3).

