

File No. CI17-01-05956

**THE QUEEN'S BENCH
WINNIPEG CENTRE**

BETWEEN:

LADCO COMPANY LIMITED.

applicant,

-and-

THE CITY OF WINNIPEG,

respondent,

**AFFIDAVIT OF ALAN A. BORGER
SWORN April 18, 2019**

MLT Aikins LLP
Barristers and Solicitors
30th Floor – 360 Main Street
Winnipeg, MB R3C 4G1

Keith J. Ferbers
Telephone: (204) 957-4691
Facsimile: (204) 957-4269

File No. 0080499-00026

Box #3

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AFFIDAVIT OF ALAN A. BORGER

I, Alan A. Borger, of the City of Winnipeg, in the Province of Manitoba, Businessman,

MAKE OATH AND SAY THAT:

1. I am the President of Ladco Company Limited ("Ladco") and have previously sworn an affidavit ("my initial affidavit") in these proceedings on February 27, 2018. I am swearing this affidavit now having had an opportunity to review the following affidavits filed on behalf of the City of Winnipeg:

- a. Affidavit of John Tyler Markowsky affirmed March 15, 2019 (the "Markowsky affidavit");
- b. Affidavit of John Hughes affirmed March 13, 2019 (the "Hughes affidavit"); and
- c. Affidavit of Valdene Lawson sworn March 14, 2019 (the "Lawson affidavit").

2. I stand by and maintain everything that I say in my initial affidavit sworn on February 27, 2018.

3. Mr. Markowsky suggests in paragraphs 15 and 16 of his Affidavit that exceptional population growth is putting significant pressure on the City "to adapt the scale and nature of public goods and services" (paragraph 15) and that as population increases so does "the demand for the entire range of public goods and services provided by the City.." (paragraph 16). I disagree with his assertion:

- a. first, Mr. Markowsky compares the period from 1990 to 2000 to the periods from 2000 to 2010 and from 2010 to date. This is misleading. In this regard I am attaching a summary I prepared showing the changes in population from 1921 to 2016 (attached as Exhibit "A") which is based on Stats Canada information from 1871 to 2016 (attached as Exhibit "B"). I am also attaching a chart showing single family and total housing starts in the Winnipeg Census Metropolitan Area based on information from the Canada Mortgage and Housing Corporation (attached as Exhibit "C") and a graph based on the chart (attached as Exhibit "D"). While population growth and housing starts were very weak during the period from 1990 to 2000 and were much stronger during the period from 2000 to 2010 and from 2010 to date, population growth and housing activity were even stronger during the 1970's and 1980's;
- b. second, the growth in population and development during the period from 2000 to 2010 and from 2010 to date has been accompanied by strong growth in Consolidated City of Winnipeg Revenues. I attach as Exhibit "E" the Consolidated Financial Statements Five-Year Reviews which are taken from the Annual Financial Reports for the City of Winnipeg for 2005, 2009, 2013 and 2017. These statements show Consolidate Revenues increasing from \$1,041,201,000 in 2001 to \$1,842,767,000 in 2017 which represents growth of 3.63% per annum.

In other words, the growth has not been all that exceptional and the City certainly has more revenue to deal with the growth that has occurred from 2000 to date. Furthermore:

- c. the cost benefit studies that have been prepared in accordance with Plan Winnipeg confirm that the new communities are sustainable and contribute relatively large net civic benefits to the City at large; and

d. as I explain in paragraph 34 of my initial affidavit, under the existing regulatory scheme governing the consideration and approval of development proposals, developers already make large contributions to the off-site and regional infrastructure.

4. In paragraph 17 of his affidavit, Mr. Markowsky uses the extension of the Chief Peguis Trail ("CPT") from Main Street to Route 90 as an example of a project where "A high percentage of these costs can be attributed to growth since the project would not be required without growth." He goes on to provide a numerical example where he claims that it would take 5,000 new homes 30 years to fund the extension of CPT based on the \$150 million cost, a 6% interest rate and an average City property tax bill of \$1,750, with 100% of the taxes going to fund the project.

5. In response to paragraph 17 of Mr. Markowsky's affidavit, I have the following comments:

a. I attach as Exhibit "F" an excerpt from the City's web-site. This summary states that: "The City of Winnipeg Transportation Master Plan (TMP) identifies the CPT as a major transportation facility and an important component of the City's strategic road network. The ultimate completion of the CPT Extension West will provide a continuous east-west link between Brookside Boulevard (Route 90) and Perimeter Highway (PTH 101). *The* CPT Extension West will support economic development, create recreational opportunities, and support the completion of the Strategic Inner Ring Road to reduce traffic on neighborhood streets to make them more accommodating for public transit, walking and cycling.";

b. with respect to Mr. Markowsky's illustration:

i. I do not know where Mr. Markowsky obtained his 6% interest rate. My research indicates that the City's 30 year bonds are yielding approximately 3.7%;

ii. I do not know why Mr. Markowsky would reference 30 years. I attach as Exhibit "G" an excerpt from the City of Winnipeg's Asset Management Plan which indicates that City roadways should have an average expected life of 73 years;

- iii. I also do not know where Mr. Markowsky gets his average of \$1,750 in City property taxes for a new home. It appears more likely that this number refers to an average single family home in the City at large (based on a 45% portion and 12.987 mill rate, this corresponds to an average assessed value of \$299,445). In the new area that Ladco is planning in Precinct G which is north of the extension of CPT and east of McPhillips, we estimate that the average new single family home will pay City property taxes of \$2,451.43 (assuming that single family homes on regular lots will be assessed at \$394,133 and that single family homes on lake lots will be assessed at \$563,033 which works out to a weighted average of \$419,468 [85% regular lots]). Furthermore the frontage levies would add approximately \$5.45 per front foot which would add approximately \$229 for each home (based on a 42 foot regular lot); and
- iv. finally while Mr. Markowsky states that his estimate would double if the other levels of government do not contribute towards the extension of CPT, there is no reason to believe that the Federal and Provincial Governments would not support this strategically important infrastructure that will benefit the entire City.

6. In paragraphs 33 to 39 of Mr. Markowsky's affidavit, he states that he has reviewed some of the studies referred to in the affidavits and notes that "they are based on highly speculative assumptions and projected over lengthy periods of time." He then goes on in paragraphs 34 to 39 to deal with the cost benefit studies generally and, in particular, the report prepared by ND Lea dated December 2004 for Waverley West (the "Cost Benefit Report"). While broadly criticizing the assumptions in the various cost benefit studies Mr. Markowsky's main concerns seem to related to:

- a. what he describes as the long time frame that was adopted (80 years in the Cost Benefit Report);
- b. the way inflation was handled; and

- c. the allowances made for the City's operating costs associated with a given development (in this case Waverley West).

As well, Mr. Markowsky states in paragraph 37 that "... these studies assumptions fundamentally misrepresent the way revenue is used to fund city services".

- 7. In response to the various statements by Mr. Markowsky I note as follows:
 - a. in addition the Cost Benefit Report, the City prepared its own cost benefit study for Waverley West dated December 10, 2004 (the "City Report"), MMM Group Limited prepared a cost benefit update in 2013 based on the actual data taken from the first 6 years of development (the "Cost Benefit Update"), and Deloitte LLP prepared a short report that, inter alia, examined the impact of the cost overruns associated with Kenaston (the "Deloitte Update"). All of these reports adopted the same basic methodology. In other words:
 - i. they all were prepared on a "real" cashflow basis (i.e. in constant, present, un-inflated dollars); and
 - ii. they all adopted an 80-year investment horizon;
 - b. while he criticizes the long time horizon, Mr. Markowsky does not mention that Plan Winnipeg specifically required that the cost benefit studies should measure the long term revenues and expenditures within a life cycle costing framework for infrastructure. The intent was to include in the analysis the inevitable repairs and maintenance of the infrastructure;
 - c. the City Report projected cash flow over an 80-year horizon and ended up with a lower-but still positive-net benefit to the City as described in paragraphs 45 to 47 of my initial affidavit;

d. while Mr. Markowsky criticizes the use of an 80-year investment horizon, he does not acknowledge that the various reports can also be used to examine shorter term results. In this regard, it is clear that Waverley West will provide substantial net civic or financial benefits to the City over both the long and the short term. As I describe in paragraph 42 of my initial affidavit, the Cost Benefit Report indicates that at full build out in 23 years Waverley West will have contributed net revenue of \$195 million and a NPV of \$108 million, all in 2003 dollars. The Cost Benefit Update and the Deloitte Update come to similar conclusions.

Furthermore, if one wishes to focus on the short term it is worth noting that:

- i. the Cost Benefit Report prepared by ND Lea projected that the City would only go "out of pocket" or negative in the first year, would be "made whole" the very next year, and thereafter the cumulative or total net cash flow is always positive; and
- ii. the Cost Benefit Update report prepared by MMM Group Ltd. (based on the first 6 years of actual development) projected that the City would go "out of pocket" in years 4 and 11, but in both cases the City would be "made whole" the very next year and thereafter the cumulative net cash flow is always positive;

e. while Mr. Markowsky criticizes the use of the long time horizon, it is important to remember that the asset that is created (the assessment base) and the corresponding infrastructure that is put in place, both have extraordinarily long lives. Furthermore the analysts, planners and engineers who contribute to these cost benefit reports have a great deal of data-including information from other older master planned communities that date as far back as the mid to late 1950's;

f. while Mr. Markowsky criticizes the way inflation was handled in the cost benefit reports, he has not identified any assumptions or numbers or trends that he believes are wrong or that would significantly distort the results. In this regard, he simply offers an example where he indicates that an item that cost \$100 in 1939 would be worth \$1,757 in 2019 based

on a 3.65% rate of inflation. However, this simple example is misleading because Mr. Markowsky ignores the fact the City's revenues would also obviously grow and presumably keep pace with inflation as shown by the excerpts from the City's Consolidated Financial Statements Five-Year Reviews which are attached as Exhibit "E" and which show that City revenues have grown from \$1,041,201,000 in 2001 to \$1,842,767,000 in 2017 which represents compound growth of 3.63%. As well it should be noted that if \$100 is grown for 80 years at 2% based on current expectations it becomes \$487.54, but when it is discounted at 4%, the \$100 is only worth \$21.15;

- g. while Mr. Markowsky takes issue with the way that the various cost benefit studies have dealt with inflation, it's worth noting that ND Lea and others specifically addressed this question. For example the Cost Benefit Report states that "For consistency, all of our estimates and projections have been stated in constant 2003 or real dollars. In other words, we implicitly assume that municipal receipts and costs will keep pace with inflation. A single dollar estimate or net present value (NPV) was derived by discounting these constant dollars at a rate of 4%.". As well these are assumptions that can be tested with actual data and through sensitivity analysis;
- h. in paragraph 35 Mr. Markowsky quotes from the ND Lea's Cost Benefit Report and reproduces the following: "Our research suggests that compared to the City at large or compared to some of the older neighborhoods it will cost significantly less to provide basic services to the residents of a new subdivision such as Waverley West". He continues with the following: "Policing and fire protection are not as significant in newer developments due to socio-economic conditions." Then Mr. Markowsky states in paragraph 36 that these assumptions might be wrong, that even if they are correct there is no way of knowing how long they will continue to be true, and that the residents of the new neighborhoods may use more of other City services. I have several comments:
 - i. first, ND Lea's statement is much broader. On page 19 of the Cost Benefit Report ND Lea states that "Policing and fire protection are not as significant in newer developments due to socio-economic conditions and physical development standards (i.e. more stringent building codes, fewer back alleys).";

- ii. second, ND Lea specifically indicated that they were relying on research to support their assumptions;
- iii. third, the City used the same approach and made the same types of assumptions in the City Report;
- iv. fourth, while Mr. Markowsky refers generally to studies that suggest that the residents of newer neighborhoods may need less police service but they may make lengthier commutes on public roads, he does not identify the studies or suggest how this would change the numbers or the conclusion and-as noted in paragraph 36 of my initial affidavit-ND Lea prepared a Traffic Study that specifically informed its Cost Benefit Report;
- v. fifth, while Mr. Markowsky asserts that "The ND Lea report underestimates the extent to which access to essential public services like police and fire is required by newer developments like Waverley West" he does not identify any specific studies or evidence and his assertion is not consistent with the assumptions contained in the City Report;
- vi. sixth, the large cumulative net benefits or NPV's that are predicted by the various cost benefit reports constitute a significant "cushion" that protects the overall conclusion (i.e. that Waverley West is sustainable)-even if some of the assumptions or some of the numbers should change in the future; and
- vii. seventh, Ladco's Chief Financial Officer ("CFO") has prepared and I attach as Exhibit "H" an analysis that takes the Cost Benefit Update prepared by MMM and then increases the amount of the City's operating costs by 92%. The NPV falls from \$247.3 million to \$46.5 million which strongly suggests that Waverley West is sustainable and in fact profitable for the City-even if the amount of the operating costs "allocated" to the development are almost doubled;

i. in paragraph 37, Mr. Markowsky objects to any characterization of the any "excess of taxes over services" as "subsidizing" the rest of the City. He goes on to state that "these studies (sic) assumptions fundamentally misrepresent the way revenue is used to fund City services." However, the cost benefit studies were prepared in accordance with Plan Winnipeg, and the large NPV's certainly suggest that the developments are sustainable and provide a net benefit to the City at large;

j. while Mr. Markowsky is critical of the models that were prepared, in approving the amendment to Plan Winnipeg that paved the way for the Waverley West development, City Council's minutes specifically state that:

"In reaching this conclusion the Hearing Body notes that the City is empowered under its Charter with sufficient authority to ensure that development agreements and conditions of land use approvals fully recover all costs that will be incurred by the City which benefit or will benefit the lands in question. This can ensure residents of other neighborhoods do not subsidize the development of these lands.";

k. in paragraph 38 of his Affidavit, Mr. Markowsky suggests that the models are deficient because they don't reflect "ability to pay". I have several comments:

- i. first, the cost benefit studies are supposed to examine the impact on the City's finances over the long term. They should be focused on determining the actual incremental impacts. They are not supposed to accomplish other goals;
- ii. second, the large NPV's associated with these developments suggest that the existing regulatory scheme already reflects an overall sharing of City costs based on an ability to pay; and

iii. third, Ladco's CFO has prepared a spreadsheet (Exhibit "H") that starts with MMM's Cost Benefit Update for Waverley West, but increases or grosses up the forecast of the City's operating costs by 92% (based on the ratio of the projected property tax assessment and corresponding City property taxes for a single family home in Waverley West, to the average property tax assessment and corresponding City property taxes for a single family home in the City as a whole). Interestingly the NPV is positive (\$46.5 million) and the numbers still confirm that the development is sustainable-without Impact Fees; and

i. finally, Mr. Markowsky states in paragraph 39 that "even if offsite infrastructure costs as well as maintenance and operating expenses for new infrastructure and services have traditionally been paid for by the City, they are still directly related to the new development." I am not sure what Mr. Markowsky means by this but obviously the developer makes a substantial contribution to off-site and regional infrastructure as noted in paragraph 34 of my initial affidavit.

8. In paragraph 48 of her affidavit, Ms. Lawson states that "typically the costs for which a developer is responsible under a Development Agreement are the costs of infrastructure within and in the vicinity of a particular development that are required to service and support that development. With few exceptions Development Agreements are specific to a particular development and do not recover the wider costs to the City as a whole that are associated with growth."

9. In response to paragraph 48 of Ms. Lawson's affidavit, while it is true that the developer typically pays for or makes some other contribution towards infrastructure "in the vicinity" of a particular development, it is not accurate to suggest:

- a. that the developer is not making a substantial contribution to "the costs of the City as a whole associated with growth"; or
- b. that the infrastructure in question is "required to service and support that development."

10. As I indicate in paragraph 34 of my initial affidavit, developers make substantial contributions to the cost of off-site and regional infrastructure-which certainly qualify as contributions to the "costs to the City as a whole associated with growth" -even if they happen to be "in the vicinity".

11. For example back in 1993 Ladco and the Manitoba Housing & Renewal Corporation's (the "MHRC") developed Phase I of Royalwood in south east Winnipeg. Pursuant to the Development Agreement Parameters, the Joint Venture paid for one lane of Bishop Grandin adjacent to the development based on an estimate of the then-current (i.e. 1993) prices. However:

- a. Bishop Grandin is a strategic roadway that is part of the City's "inner beltway"; and
- b. that particular stretch of Bishop Grandin was constructed in 1978.

In other words, Ladco and the MHRC made a contribution to the City's regional infrastructure, and the infrastructure was built to service the entire City-not for Royalwood which was developed 15 years later.

12. In response to paragraphs 48 and 57 of Ms. Lawson's affidavit, where she refers to the "wider costs to the City as a whole that are associated with growth" (paragraph 48) and the "costs to the City as a whole associated with accommodating and managing growth and development" (paragraph 57), I have the following comments:

- a. Ms. Lawson does not define what these costs are or explain how they are determined; and
- b. If Ms. Lawson means costs that will primarily benefit the City as a whole and existing development, and that have no reasonable association with or relationship to a particular development, then new development is being singled out to make a special contribution to any such infrastructure.

13. In response to paragraphs 58 to 71 of her affidavit, I have the following comments:

- a. In paragraph 61 Ms. Lawson states that "Areas identified as "New Communities" or "Emerging Communities" are areas of Winnipeg where significant development or growth is currently being undertaken or is anticipated to be undertaken in the near future." However, this is not the way that "New Communities" or "Emerging Communities" are described and defined in Our Winnipeg and Complete Communities.
- b. In paragraph 65 Ms. Lawson states that the areas included in Schedule A to the Impact Fee By-law were "not chosen arbitrarily or at random". However, she does not:
- i. explain why only residential development in "New Communities" and "Emerging Communities" were targeted with Impact Fees in phase one;
 - ii. explain how "New Communities" and "Emerging Communities" have greater responsibility for what she describes as the "wider costs to the City as a whole that are associated with growth" or the "costs to the City as a whole associated with accommodating and managing growth and development";
 - iii. explain why the presence or absence of a local area plan should determine whether residential development in a "Recent Community" is caught or exempt under phase one; or
 - iv. explain how the presence of a local area plan is associated with what she describes as the "wider costs to the City as a whole that are associated with growth" or the "costs to the City as a whole associated with accommodating and managing growth and development", such that a "Recent Community" with a local area plan is caught under the Impact Fee By-law while a "Recent Community" without a local area plan is exempt under phase one; and
- c. In paragraph 62 Ms. Lawson truncates the definition of "New Communities" as contained in Our Winnipeg and Complete Communities.

14. In paragraph 65, Ms. Lawson states that "It is my understanding that the areas included in Schedule A are those areas that are either considered to be a "New Community", namely any area shown as a "New Community" on the maps identified in paragraph 42 herein, or considered to be an "Emerging Community", namely any area shown as a "Recent Community" on the maps identified in paragraph 43 herein for which an adopted local area plan is in place." However, it appears that there are a few anomalies. In this regard I attach the following:

- a. as Exhibit "I" the Urban Structure Map found on page 29 of Our Winnipeg (the "Urban Structure Map);
- b. as Exhibit "J" Map 1 attached as Schedule A to By-law No. 127/2016 ("Map 1"); and
- c. as Exhibit "K" Map 10 attached as Schedule A to By-law No. 127/2016 ("Map 10").

15. Section 13(1) of the Impact Fee By-law states that:

"The Impact Fee only applies to those areas identified on Map 1, and further depicted in detail on Maps 2 to 11, inclusive, all attached as Schedule "A"."

16. On the Urban Structure Map and on Map 1 and Map 10 I have circled in blue a small area located on the western-most part of Winnipeg that is being slowly developed as a commercial shopping center commonly known as "Westport Festival".

17. If Ms. Lawson is correct in her understanding (as indicated in paragraph 65 of her affidavit), then Westport Festival should have been included on Maps 1 and 10 because it is a "New Community" as shown on the Urban Structure Map. Furthermore if Westport Festival was included on Maps 1 and 10, then:

- a. Impact Fees would be payable commencing on May 1, 2017 on any residential development; and

b. Impact Fees would or could eventually be payable on all types of development including commercial and retail, but no earlier than November 1, 2018 as part of what would become phase two of the Impact Fee implementation.

18. However, because this area is not included on Maps 1 and 10, presumably this area is somehow exempt and does not have to pay Impact Fees.

19. Similarly on the Urban Structure Map and on Map 1, I have also identified in red an area located in the west part of Winnipeg parts of which are designated as "Mature Communities", and parts of which are designated as "Recent Communities".

20. I attach as Exhibit "L" the Winnipeg Airport Vicinity Development Plan which the City considers a local area plan. Based on Ms. Lawson's understanding and the definitions apparently used by the City, those parts of the area identified in red that are "Recent Communities" are also "Emerging Communities". However, this whole area was not picked up on Map 1 and accordingly this area is exempt.

21. In response to paragraph 14 of the affidavit by Mr. Hughes, I do not understand what he means.

22. In paragraph 25 of his affidavit, Mr. Hughes states that "there are innumerable costs associated with a functioning city that cannot be reasonably connected to a particular subdivision or neighbourhood." In response to his statement I note that it is possible to estimate the "innumerable costs" and to relate them to a particular subdivision or development using the City's Budgets. This is in fact what has been done in the various cost benefit studies.

23. In response to paragraph 26 of the affidavit by Mr. Hughes, I agree that "it is reasonable that at least some of the infrastructure costs associated with new development should not be paid by city taxpayers generally but should be borne by developers, builders and ultimately residents and businesses who directly benefit from the new development". In fact as indicated in paragraph 34 of my initial affidavit, developers already make substantial contributions to the infrastructure associated with development.

24. In response to paragraph 29 of the affidavit by Mr. Hughes, Mr. Hughes states that the "purpose of the Assignment was to examine the costs associated with growth to the City as a whole." However, I cannot find a clear explanation and if the "costs associated with growth to the City as a whole" include City-wide costs, then to the extent that the Impact Fees seek to recover these types of costs-certain residential builders and homeowners in certain areas will be singled out to make a contribution.

25. In response to paragraph 40 of the affidavit by Mr. Hughes, if the forecasts are too high then any Impact Fees predicated on those forecasts will also be too high. The homeowner who has paid an excessive Impact Fee based on an inflated forecast will not be compensated by the fact that in the long term fewer growth related projects will occur or that in the future the forecast might eventually be revised.

26. In response to paragraphs 5, 13, 28, 33, 35, 36, 37, 38 and 41 of the affidavit by Mr. Hughes, the infrastructure projects selected and the allocations to new development or growth are not reasonable and he has not responded to the concerns that I identified in paragraphs 64 to 81 (and Exhibit "Q") of my initial affidavit.

27. In response to paragraph 41 of the affidavit by Mr. Hughes, the City will not be responsible for the Extension of Provincial Trunk Highway #6 and, as such, no part of this infrastructure should be attributed to growth or development.

28. In response to paragraph 43 of the affidavit by Mr. Hughes the sewer and water utilities are self-financing utilities and the cost of all of the infrastructure is included in the rate structure. In this regard I am attaching as Exhibit "M" the 2016 Water and Sewer Rates report (the "2016 Report") and as Exhibit "N" the 2019 Water and Sewer Rates report (the "2019 Report") (the 2016 Report and the 2019 Report are referred to below as the "Reports"). I note as follows:

- a. the Reports both contain the following statements in the "History/Discussion" section of the report: "Water and Sewer Rates are designed to fund all cost of operations and capital projects related to water and sewer quality, city growth and regulatory requirements";


- b. the 2016 Report states that: "The sewer rate is increasing primarily due to the \$1.3 billion in sewage treatment improvements of which \$1.1 billion are associated either directly or indirectly with provincially mandated licensing requirements"; and
- c. the 2019 Report states that: "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 licenses".

In other words, as noted in paragraphs 75 to 79 of my initial affidavit, if any City-wide costs for sewer and water projects are included in the list used to determine Impact Fees then:

- d. those costs may be recovered twice-once from the builder or the homeowner as an Impact Fee, and then again when the homeowner pays their water bills; and
- e. residential builders and homeowners in certain areas are being singled out to make contributions to these projects.

29. I make this affidavit *bona fide*.

SWORN before me)
 in the City of Winnipeg,)
 in the Province of Manitoba,)
 this 18th day of April, 2019.)



 A Notary Public in and for
 the Province of Manitoba



 ALANA BORGER

This is Exhibit "A" referred to in the
Affidavit of Alan A. Borger sworn
before me this 18th day of April, 2019.

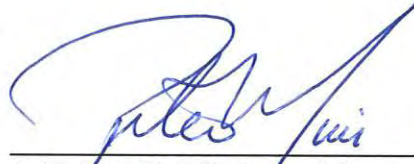
A handwritten signature in blue ink, appearing to be "Peter J. ...", written over a horizontal line.

A Notary Public in and for
the Province of Manitoba.

Ladco Company Limited
 Population Summary for the City of Winnipeg
 Based on Stats Canada as reproduced in Wikipedia

Year	Population	10 Yrs Change	5 Yrs Change
1921	179,097		
1931	218,785	39,688	
1941	221,969	3,184	
1951	235,710	13,741	
1961	265,420	29,710	
1966	257,005		(8,415)
1971	246,246	(19,174)	(10,759)
1976	560,974		314,728
1981	564,373	318,127	3,399
1986	592,551		28,178
1991	616,790	52,417	24,239
1996	618,477		1,687
2001	619,544	2,754	1,067
2006	633,451		13,907
2011	663,617	44,073	30,166
2016	705,244		41,627

This is Exhibit "B" referred to in the
Affidavit of Alan A. Borger sworn
before me this 18th day of April, 2019.

A handwritten signature in blue ink, appearing to be "Alan A. Borger", written over a horizontal line.

A Notary Public in and for
the Province of Manitoba.

Ladco Company Limited
Demographics of Winnipeg
Prepared based on information from
Wikipedia
Supported by references listed 1-28

The attached is the Wikipedia page on the demographics of Winnipeg.
Population history, languages, ethnicities, immigration, income, education.
References 1-28 are compiled Statistics Canada census data, City of Winnipeg prepared data, and other media references.

Demographics of Winnipeg

The **demographics of Winnipeg** reveal the city to be a typically Canadian one: multicultural and multilingual. Winnipeg is also prominent in the size and ratio of its First Nations population, which plays an important part in the city's makeup. About 11% of Winnipeggers are of First Nations descent, which vastly exceeds the national average of 4.3%.

Contents

Population history

Population

Languages

Ethnicities

Racial history

Immigration

Religions

Income

Education

References

Population history

Population history			Metro population		
Year	Pop.	±%	Year	Pop.	±%
1871	241	—	1991	660,450	—
1881	7,995	+3217.4%	1996	667,209	+1.0%
1891	26,529	+231.8%	2001	671,274	+0.6%
1901	42,540	+60.4%	2006	694,668	+3.5%
1911	136,035	+219.8%	2011	730,018	+5.1%
1921	179,097	+31.7%	2016	778,489	+6.6%
1931	218,785	+22.2%			
1941	221,969	+1.5%			
1951	235,710	+6.2%			
1961	265,420	+12.6%			
1966	257,005	−3.2%			
1971	246,246	−4.2%			
1976	560,874	+127.8%			
1981	564,373	+0.6%			
1986	592,551	+5.0%			
1991	616,790	+4.1%			
1996	618,477	+0.3%			
2001	619,544	+0.2%			
2006	633,451	+2.2%			
2011	663,617	+4.8%			
2016	705,244	+6.3%			

Sources:^{[7][8]}

The drastic population increase between 1971 and 1976 was due in part to Winnipeg's amalgamation in 1972.^{[1][2][3][4][5][6]}

Population

As of the Canada 2016 Census there were 705,244 people living in Winnipeg proper,^[9] with 778,489 living in the Winnipeg CMA.^[10] The median age of the population is 39 years old,^[11] 38 for men and 40 for women.

Languages

In 2011, Tagalog was officially the second most common mother tongue in Winnipeg, accounting for about 5% of the population,^[12] followed by French which is the mother-tongue for about 4% of the population.

Ethnicities

The Aboriginal community is large in Winnipeg. Winnipeg not only has the highest percentage of Aboriginals (11.1%) for any major Canadian city (population 100,000+),^[15] but also has the highest total number of Aboriginals living off of the reserves in one city, despite only being the 7th largest city in Canada. There are 72,335 who live in Winnipeg as of 2011, approximately 20,000 more than 10 years ago. That number is more than 30,000 more Aboriginals than the second city with 41,985, which is Edmonton. Winnipeg also has the highest Metis population in both percentage (6.3%) and numbers (41,235), and the 4th highest First Nations percentage (4.6%), however the most in numbers (29,485).

Ethnic Origins ^{[13][14]}		
	Population	Percentage
English	137,075	20.7
Scottish	113,465	17.1
Canadian	108,955	16.4
German	105,910	16.0
Ukrainian	98,860	14.9

Winnipeg also has the largest Filipino community ratio (8.7%) for any major Canadian city, however the city of Toronto has more Filipinos by total population (132,445) than Winnipeg (56,400). Winnipeg's Filipino population is largely concentrated in the West End and North End areas of the city. The neighborhood around Sargent Avenue and Arlington Street is 45% Filipino,^[16] and the neighborhood around Sargent Avenue and Wall Street is 47% Filipino.^{[17][18]}

Irish	85,800	12.9
French	85,025	12.8
Filipino	58,255	9.0

Winnipeg also has the largest multiracial population of any large Canadian city - if Metis people are included in the counting. Metis people are of a mixed race background, however are not categorized with the "more than one visible minority" category on the 2011 National Household Survey; they have their own category. Nonetheless, there are 45,005 people of mixed race backgrounds in Winnipeg, making that both the highest ratio (6.9%) and in total numbers (Toronto is second with 42,795).

Top 20 Ethnic Origins in the Winnipeg CMA (2011; ^[19] Total Responses)	Population	%	2006 ^[20]	Population	%
English	153,060	21.4	English	156,290	22.8
Scottish	126,320	17.7	Scottish	126,740	18.5
Canadian	123,445	17.3	German	121,565	17.7
German	121,470	17.0	Canadian	117,225	17.1
Ukrainian	115,230	16.1	Ukrainian	110,335	16.1
French	97,720	13.7	French	97,410	14.2
Irish	94,820	13.3	Irish	95,185	13.9
Filipino	58,535	8.2	Polish	58,050	8.5
Polish	58,440	8.2	Métis	42,175	6.1
Métis	46,070	6.4	Filipino	38,275	5.6
First Nations	40,010	5.6	First Nations	36,515	5.3
Dutch	29,060	4.1	Dutch	30,310	4.4
Russian	25,415	4.1	Russian	23,385	3.4
Chinese	20,410	2.9	Italian	18,580	2.7
East Indian	19,855	2.8	Icelandic	17,655	2.6
Italian	18,410	2.6	Chinese	16,695	2.4
Icelandic	18,210	2.5	East Indian	13,545	2.0
Swedish	13,910	1.9	Swedish	13,470	2.0
Norwegian	12,340	1.7	Jewish	12,210	1.8
Jewish	11,995	1.7	Welsh	11,350	1.6
Portuguese	11,490	1.6	Belgian	10,680	1.6
Total population	727,500	100	Total population	686,040	100

Visible minority and Aboriginal population ^{[21][22][23]}					
Population group	Population (2011)	% of total population (2011)	Population (2006)	% of total population (2006)	
European	438,470	67.5%	460,045	73.5%	
Visible minority group	South Asian	22,940	3.5%	15,080	2.4%
	Chinese	14,975	2.3%	12,660	2%
	Black	17,410	2.7%	14,200	2.3%
	Filipino	56,400	8.7%	36,820	5.9%
	Latin American	6,475	1%	5,390	0.9%
	Arab	2,670	0.4%	2,115	0.3%
	Southeast Asian	6,990	1.1%	5,325	0.9%
	West Asian	1,970	0.3%	1,885	0.3%
	Korean	2,690	0.4%	2,065	0.3%
	Japanese	1,400	0.2%	1,725	0.3%
	Visible minority, n.i.e.	1,495	0.2%	1,585	0.3%
Multiple visible minorities	3,770	0.6%	3,060	0.5%	
Total visible minority population	139,190	21.4%	101,910	16.3%	
Aboriginal group	First Nations	29,485	4.6%	24,950	4%
	Métis	41,235	6.3%	37,385	6%
	Inuit	370	0.1%	280	0%
	Aboriginal, n.i.e.	530	0.1%	770	0.1%
	Multiple Aboriginal identities	745	0.1%	355	0.1%
Total Aboriginal population	72,335	11.1%	63,745	10.2%	
Total population	649,995	100%	625,700	100%	

Racial history

Racial Group	1996		2001		2006	
	%	population	%	population	%	population
European	81%	495,485	77.9%	473,920	73.5%	
Visible Minority	Black	1.6%	9,845	1.9%	11,275	2.3%
	East Asia ¹	2.2%	13,560	2.2%	13,390	2.7%
	Latin America	0.6%	3,890	0.7%	4,500	0.9%
	South Asian	1.9%	11,330	2.0%	12,165	2.4%
	Southeast Asia ²	4.9%	29,725	5.8%	35,030	6.7%
	West Asian & Arab	0.3%	1,600	0.3%	1,880	0.6%
	Multiracial ³	0.2%	1,305	0.3%	1,710	0.5%
	Other	0.2%	1,435	0.3%	1,960	0.3%
	Total	11.9%	72,690	13.5%	81,910	16.3%
Aboriginal ⁴	First Nations	3.2%	19,535	3.6%	22,070	4.0%
	Métis	3.7%	22,730	4.8%	29,010	6.0%
	Total	7.1%	43,460	8.6%	52,420	10.2%

Notes:

- ¹ Includes the markings of; Chinese, Japanese and Korean
- ² Includes the markings of; *Filipino and Southeast Asian*
- ³ Does not include the marking of; *Metis*
- ⁴ Includes all Aboriginal markings; *First Nations, Metis, Inuit (Inuk), Multiple Aboriginals and Other Aboriginals*

Immigration

According to the 2011 National Household Survey,^[14] in the past 10 years (2001 to 2011), Winnipeg has had 62,200 immigrants, which is just under 10% of the population (9.6%). Most of which (44,780) came in the last 5 years.

Rank	Country	Population #	% of immigrants
1	Philippines	21,360	47.7%
2	India	5,625	12.6%
3	China	2,420	5.4%
4	South Korea	1,065	2.4%
5	Nigeria	865	1.9%
6	Ukraine	735	1.6%
7	United States of America	600	1.3%
8	Ethiopia	580	1.3%
9	Pakistan	560	1.3%
10	Israel	505	1.1%

Religions

In 2001, 21% of Winnipeg was not religious,^[24] which has increased by about 8 percent in 10 years, as in 2011 28.7% of the population was not religious.

Religion	Population	Percent of Population
<i>Christian</i>	414,270	63.73%
<i>Hindu</i>	6,795	1.05%
<i>Buddhist</i>	6,260	0.96%
<i>Jewish</i>	10,535	1.62%
<i>Muslim</i>	11,230	1.73%
<i>Sikh</i>	9,800	1.51%
<i>Traditional (Aboriginal) Spirituality</i>	1,775	0.27%
<i>Other Religion</i>	2,835	0.44%
<i>No Religion</i>	186,510	28.69%
Total Population	650,000	100%

About 32% of males in Winnipeg are not religious, while about 26% of females are non-religious.^[25]

Income

The 2011 National Household Survey data showed that Winnipeg's after-tax median household income was \$50,537.^[23] This marking was slightly lower than the national average (\$54,098),^[26] although is still in the bottom 10 of lowest median incomes in Canada.^[27] A study in 2013 showed that Winnipeg had two of the three poorest postal-code areas in all of Canada (R3A and R3B, both located in the inner-city) in regards to family income, in fact the two poorest that are located in cities (the poorest was a First Nations reserve in the Cape Breton area).^[28]

8,610 of Winnipeg's residents (who earn income) make and keep over \$100,000 a year, which is 1.7% of the population. This ratio is higher nationally, at 2.6%.

The gender differences in income were less in Winnipeg by about 9% compared to the national medians. The median income for a male in Winnipeg is \$31,300, where as for a female the median is \$23,739. This means a male on average makes about 31.9% more money than a female. This ratio is 40.5% nationwide.

Education

According to the 2011 National Household survey,^[23] for those aged 25 to 64;

- 12.7% had no diploma, degree or certificate
- 87.3% had a high school diploma (or equivalent too)
- 62.1% had a post-secondary education
 - 34.0% had a university education
 - 28.1% had a non-university education (trades, colleges, apprenticeships, etc.)

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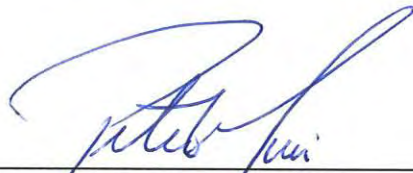
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This is Exhibit "C" referred to in the
Affidavit of Alan A. Borger sworn
before me this 18th day of April, 2019.

A handwritten signature in blue ink, appearing to read "Peter J. ...", written over a horizontal line.

A Notary Public in and for
the Province of Manitoba.

Ladco Company Limited
Summary of Winnipeg CMA Housing Starts
Prepared based on information from
Dianne Himbeault - Senior Market Analyst
Canada Mortgage & Housing Corporation

Winnipeg Historic Starts (CMA, source CMHC)

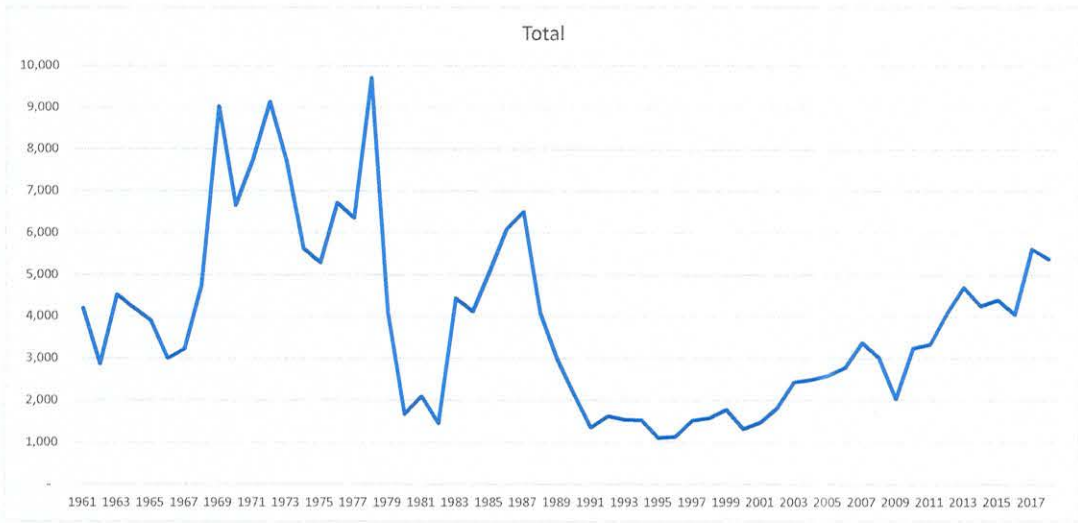
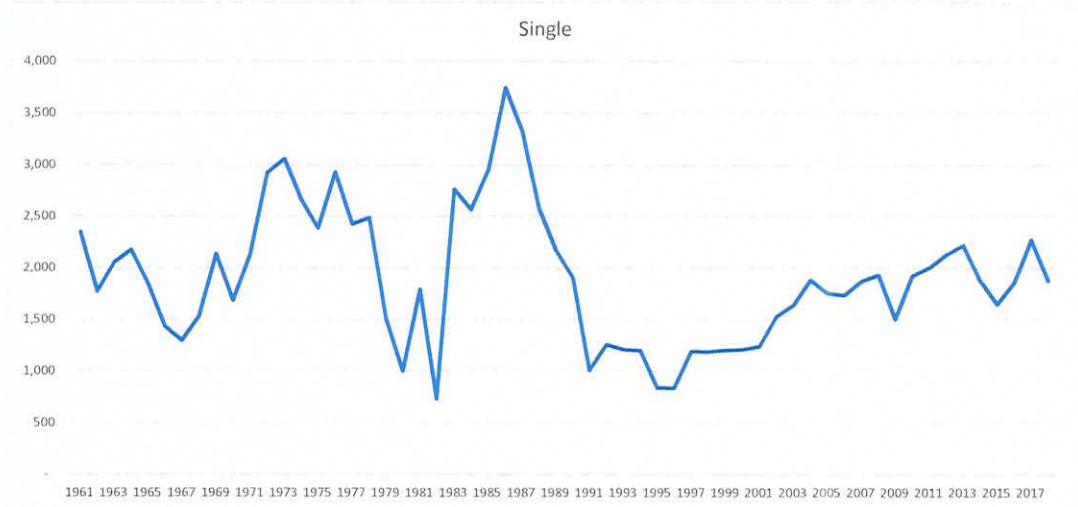
	Single	Semi	Row	Apartment	Multi	Total
1961	2,345	244	41	1,557	1,842	4,187
1962	1,771	166	105	815	1,086	2,857
1963	2,056	172	177	2,114	2,463	4,519
1964	2,176	194	237	1,582	2,013	4,189
1965	1,849	220	69	1,760	2,049	3,898
1966	1,435	168	11	1,378	1,557	2,992
1967	1,298	190	305	1,423	1,918	3,216
1968	1,533	157	143	2,906	3,206	4,739
1969	2,134	355	361	6,180	6,896	9,030
1970	1,685	767	868	3,341	4,976	6,661
1971	2,129	666	696	4,235	5,597	7,726
1972	2,925	788	236	5,185	6,209	9,134
1973	3,061	268	93	4,276	4,637	7,698
1974	2,665	557	287	2,119	2,963	5,628
1975	2,381	510	264	2,139	2,913	5,294
1976	2,927	558	859	2,374	3,791	6,718
1977	2,424	799	684	2,446	3,929	6,353
1978	2,485	1,395	928	4,898	7,221	9,706
1979	1,514	222	363	1,992	2,577	4,091
1980	1,000	26	151	491	668	1,668
1981	1,793	32	23	240	295	2,088
1982	731	58	-	655	713	1,444
1983	2,759	28	56	1,589	1,673	4,432
1984	2,564	54	308	1,185	1,547	4,111
1985	2,946	44	90	1,989	2,123	5,069
1986	3,744	82	212	2,051	2,345	6,089
1987	3,321	28	227	2,932	3,187	6,508
1988	2,573	94	242	1,162	1,498	4,071
1989	2,171	20	113	673	806	2,977
1990	1,905	32	6	204	242	2,147
1991	1,006	-	-	343	343	1,349
1992	1,261	4	10	345	359	1,620
1993	1,210	24	24	282	330	1,540
1994	1,201	2	105	221	328	1,529
1995	840	8	49	207	264	1,104
1996	838	54	61	182	297	1,135
1997	1,192	86	22	218	326	1,518
1998	1,190	62	46	277	385	1,575
1999	1,204	48	9	511	568	1,772
2000	1,210	14	27	66	107	1,317
2001	1,238	34	32	169	235	1,473
2002	1,528	24	9	260	293	1,821
2003	1,641	48	36	705	789	2,430
2004	1,882	50	32	525	607	2,489
2005	1,756	34	104	692	830	2,586
2006	1,737	94	51	895	1,040	2,777
2007	1,870	16	93	1,392	1,501	3,371
2008	1,930	34	113	932	1,079	3,009
2009	1,505	38	87	403	528	2,033
2010	1,921	42	140	1,141	1,323	3,244
2011	2,002	38	333	958	1,329	3,331
2012	2,129	118	188	1,630	1,936	4,065
2013	2,218	114	449	1,924	2,487	4,705
2014	1,877	130	427	1,814	2,371	4,248
2015	1,649	294	382	2,075	2,751	4,400
2016	1,858	208	353	1,635	2,196	4,054
2017	2,272	412	620	2,317	3,349	5,621
2018	1,874	206	548	2,756	3,510	5,384

This is Exhibit "P" referred to in the
Affidavit of Alan A. Borger sworn
before me this 18th day of April, 2019.

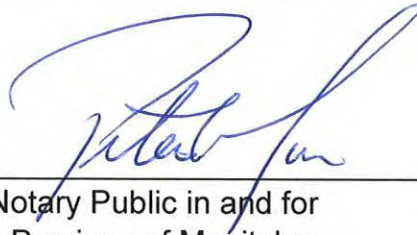
A handwritten signature in blue ink, appearing to be "Peter J. [unclear]", written over a horizontal line.

A Notary Public in and for
the Province of Manitoba.

Ladco Company Limited
Graph of Winnipeg CMA Housing Starts
Prepared based on information from
Dianne Himbeault - Senior Market Analyst
Canada Mortgage & Housing Corporation



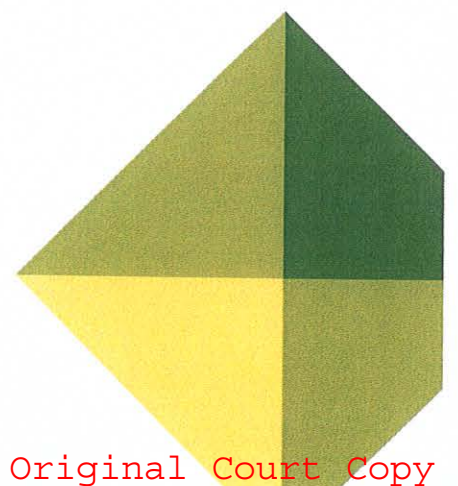
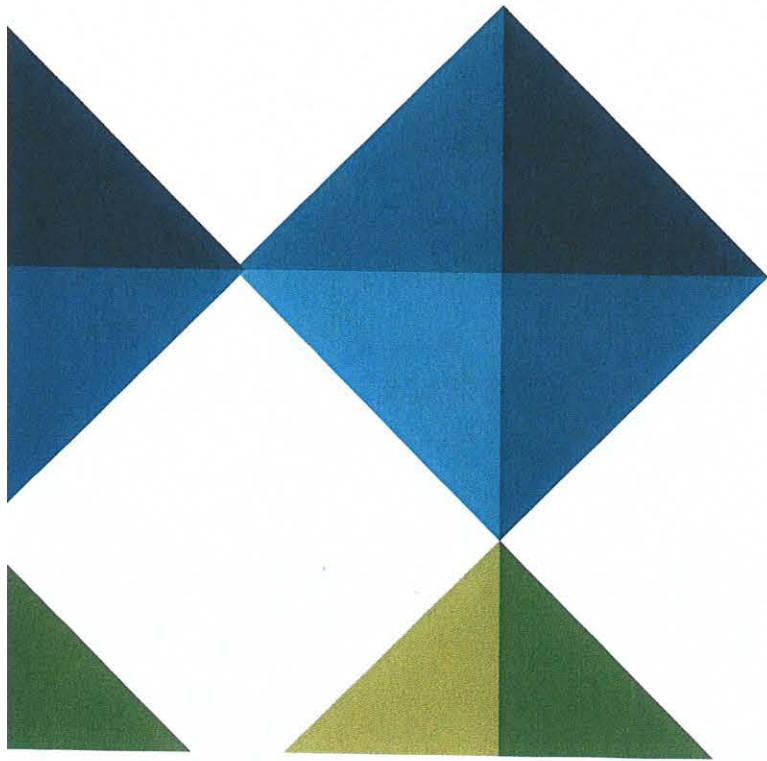
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before me this 18th day of April, 2019.

A handwritten signature in blue ink, appearing to be "Peter J. ...", written over a horizontal line.

A Notary Public in and for
the Province of Manitoba.



The City of Winnipeg
2017 Annual Financial Report



CONSOLIDATED FINANCIAL STATEMENTS FIVE-YEAR REVIEW

December 31 ("\$" amounts in thousands of dollars, except as noted) (Unaudited)	2017	2016	2015	2014	2013
1. Population (as restated per Statistics Canada)	749,500	735,600	718,400	709,253	698,696
Unemployment rate (as restated per Statistics Canada)					
- Winnipeg	5.8%	6.5%	6.0%	5.8%	5.9%
- National average	6.4%	6.9%	6.9%	6.9%	7.1%
2. Average annual headcount	10,444	10,426	10,253	10,206	10,143
3. Number of taxable properties	231,360	228,941	226,736	223,411	220,942
Payments-in-lieu of taxes					
Number of properties	1,433	1,469	1,195	988	1,042
4. Assessment (see note below)					
- Residential	\$ 67,339,104	\$ 66,197,564	\$ 60,492,101	\$ 59,439,781	\$ 51,599,866
- Commercial and industrial	17,649,138	17,637,524	15,295,925	15,102,472	13,501,469
- Farm and golf	356,731	369,954	330,042	313,569	245,037
	\$ 85,344,973	\$ 84,205,042	\$ 76,118,068	\$ 74,855,821	\$ 65,346,372
Assessment per capita (in dollars)	\$ 113,869	\$ 115,302	\$ 105,955	\$ 105,542	\$ 93,526
Commercial and industrial as a percentage of assessment	20.68%	20.95%	20.09%	20.18%	20.66%
5. Tax arrears	\$ 52,599	\$ 51,550	\$ 58,121	\$ 54,825	\$ 49,592
6. Tax arrears – per capita (in dollars)	\$ 70.18	\$ 70.08	\$ 80.90	\$ 77.30	\$ 70.98
7. Municipal mill rate	13.063	12.766	13.682	13.372	14.600
- Adjustment for tax increase	2.3%	2.3%	2.3%	3.0%	3.9%
- Adjustment for general assessment	0.0%	-8.8%	0.0%	-11.0%	0.0%
8. Winnipeg consumer price index (per Statistics Canada – annual average)					
- 2002 base year 100	130.2	128.1	126.6	124.9	122.6
- Percentage increase	1.6%	1.2%	1.3%	1.9%	2.2%
9. Consolidated revenues					
- Taxation	\$ 712,209	\$ 691,016	\$ 660,323	\$ 640,801	\$ 611,813
- User charges	607,912	569,641	545,637	526,330	507,869
- Government transfers	351,258	333,793	372,987	378,847	292,258
- Interest and other revenue	171,388	140,396	176,338	170,558	207,318
	\$ 1,842,767	\$ 1,734,846	\$ 1,755,285	\$ 1,716,536	\$ 1,619,258
10. Consolidated expenses by function					
- Municipal operations	\$ 1,122,153	\$ 1,118,943	\$ 1,053,957	\$ 1,067,090	\$ 994,365
- Public utilities	398,148	383,922	370,219	378,584	347,652
- Civic corporations	71,604	69,847	61,810	58,185	54,783
	\$ 1,591,905	\$ 1,572,712	\$ 1,485,986	\$ 1,503,859	\$ 1,396,800
11. Growth in accumulated surplus	\$ 250,862	\$ 162,134	\$ 269,299	\$ 212,677	\$ 222,458

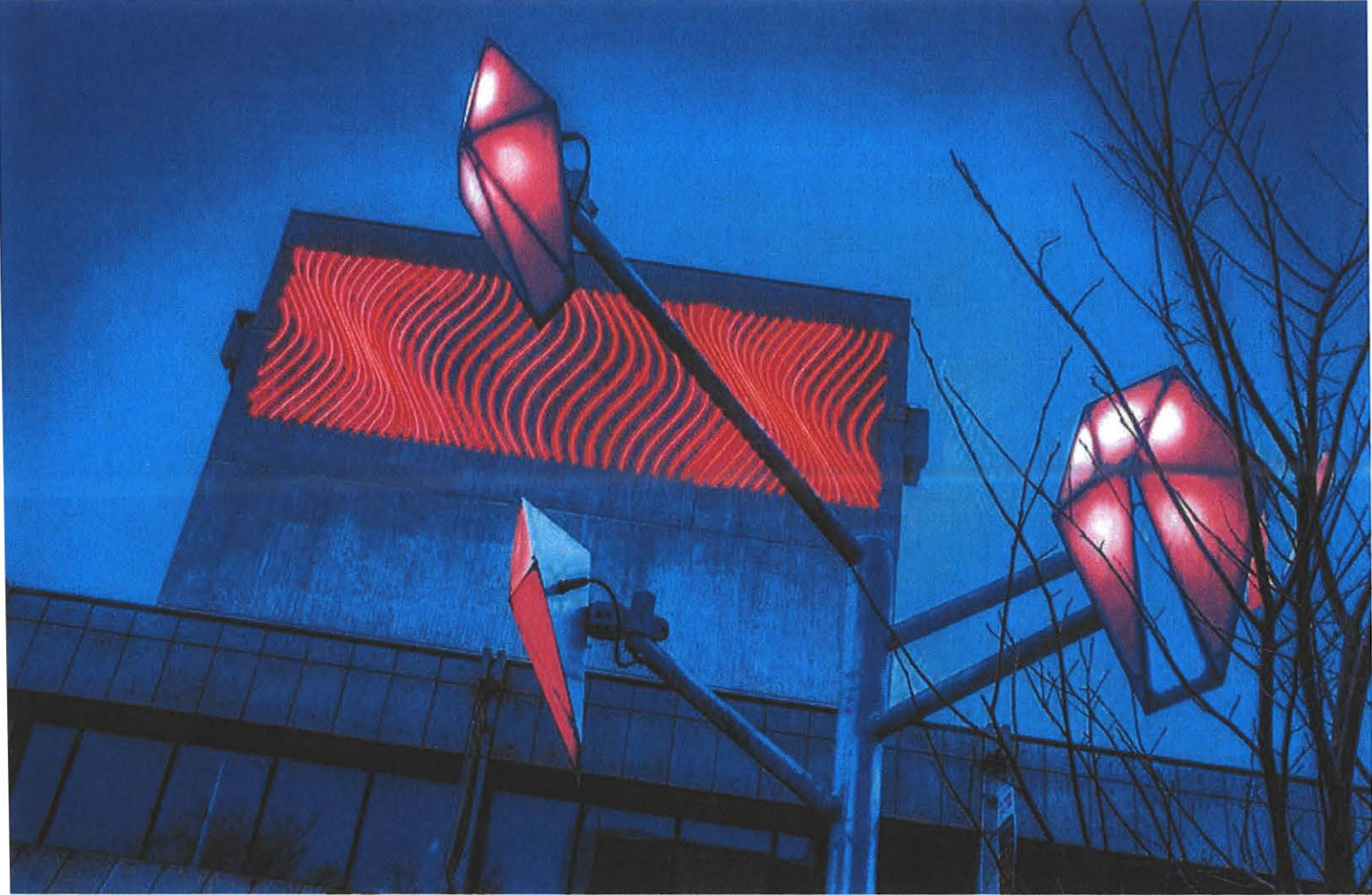
Note: Current provincial legislation requires that a general assessment be performed every two years. A general assessment occurred in 2014 and 2016. In the year of a general assessment, the mill rate is adjusted to offset the effect of market value changes of the entire assessment base.

CONSOLIDATED FINANCIAL STATEMENTS FIVE-YEAR REVIEW

Continued

<i>December 31 (" \$" amounts in thousands of dollars, except as noted) (Unaudited)</i>	2017	2016	2015	2014	2013
12. Consolidated expenses by object					
Salaries and benefits	\$ 845,087	\$ 836,857	\$ 805,889	\$ 779,586	\$ 730,133
Goods and services	412,614	414,575	387,853	428,012	376,614
Amortization	245,941	235,235	221,358	208,074	198,106
Interest	52,834	51,799	56,130	53,715	54,732
Other expenses	35,429	34,246	14,756	34,472	37,215
	\$ 1,591,905	\$ 1,572,712	\$ 1,485,986	\$ 1,503,859	\$ 1,396,800
13. Payments to school authorities	\$ 667,369	\$ 645,823	\$ 606,821	\$ 579,245	\$ 550,039
14. Debt					
Tax-supported	\$ 702,014	\$ 725,602	\$ 688,484	\$ 687,586	\$ 557,781
Transit	112,019	93,594	93,669	97,125	103,936
City-owned utilities	214,010	216,250	185,789	198,737	248,719
Other	82,126	78,144	81,135	84,816	74,848
Total gross debt	1,110,169	1,113,590	1,049,077	1,068,264	985,284
Less: Sinking Funds	67,468	65,677	53,116	125,630	195,237
Total net long-term debt	\$ 1,042,701	\$ 1,047,913	\$ 995,961	\$ 942,634	\$ 790,047
Percentage of total assessment	1.22%	1.24%	1.31%	1.26%	1.21%
15. Acquisition of tangible capital assets	\$ 475,911	\$ 475,619	\$ 558,409	\$ 525,559	\$ 543,938
16. Net financial (liabilities) assets	\$ (630,786)	\$ (660,468)	\$ (584,798)	\$ (517,041)	\$ (411,063)
17. Accumulated surplus					
Invested in tangible capital assets	\$ 5,638,975	\$ 5,396,951	\$ 5,217,274	\$ 4,890,347	\$ 4,637,548
Reserves					
Capital	143,413	145,970	135,829	127,051	114,548
Special Purpose	74,608	81,244	91,471	82,810	77,863
Stabilization	79,764	67,410	75,632	81,784	85,753
	297,785	294,624	302,932	291,645	278,164
Surpluses					
Manitoba Hydro long-term receivable	220,238	220,238	220,238	220,238	220,238
Other surpluses	169,443	153,880	140,001	185,214	221,901
Unfunded expenses	(290,992)	(281,106)	(257,992)	(227,104)	(210,188)
	98,689	93,012	102,247	178,348	231,951
	\$ 6,035,449	\$ 5,784,587	\$ 5,622,453	\$ 5,360,340	\$ 5,147,663
18. Government-specific indicators					
Assets-to-liabilities	4.46	4.34	4.47	4.49	4.79
Financial assets-to-liabilities	0.64	0.62	0.64	0.66	0.70
Public debt charges-to-revenues	0.03	0.03	0.03	0.03	0.04
Own-source revenues-to-taxable assessment	0.02	0.02	0.02	0.02	0.02
Government transfers-to-revenues	0.19	0.19	0.21	0.22	0.18

2013 THE CITY OF WINNIPEG ANNUAL FINANCIAL REPORT



Consolidated Financial Statements

Five-Year Review

December 31 ("\$" amounts in thousands of dollars, except as noted) (Unaudited)	2013	2012	2011	2010	2009
1. Population (as restated per Statistics Canada)	699,300	689,300	677,800	669,400	663,000
Unemployment rate (as restated per Statistics Canada)					
Winnipeg	6.0%	5.6%	5.8%	5.7%	5.5%
National average	7.2%	7.3%	7.5%	7.5%	8.3%
2. Average annual headcount	10,143	10,080	10,039	9,942	9,827
3. Number of taxable properties	220,393	218,973	216,997	215,224	213,574
Payments-in-lieu of taxes – Number of properties	1,042	1,317	1,181	1,238	903
4. Assessment (see note)					
Residential	\$ 50,851,841	50,738,087	44,052,618	43,431,201	24,048,221
Commercial and industrial	11,843,015	13,310,247	12,054,712	12,033,087	8,242,789
Farm and golf	223,708	244,951	179,736	183,279	128,611
	\$ 62,918,564	64,293,285	56,287,066	55,647,567	32,419,621
Assessment per capita (in dollars)	\$ 89,974	93,273	83,044	83,131	48,898
Commercial and industrial as a percentage of assessment	18.82%	20.70%	21.42%	21.62%	25.43%
5. Tax arrears	\$ 49,592	37,960	34,747	34,387	30,036
6. Tax arrears–per capita (in dollars)	\$ 70.92	55.07	51.26	51.37	45.30
7. Municipal mill rate	14.600	14.056	15.295	15.295	25.448
Adjustment for tax increase	3.9%	3.5%	0.0%	0.0%	0.0%
Adjustment for general assessment	0.0%	-11.2%	0.0%	-39.9%	0.0%
8. Winnipeg consumer price index (per Statistics Canada) (annual average)					
2002 base year 100	122.6	119.9	118.1	114.8	113.9
Percentage increase	2.3%	1.5%	2.9%	0.8%	0.5%
9. Consolidated revenues					
Taxation	\$ 611,813	587,578	563,779	550,994	534,571
User charges	507,869	483,339	460,452	425,164	413,243
Government transfers	292,258	280,237	298,086	251,886	256,823
Interest and other revenue	207,318	145,987	147,293	125,812	139,011
	\$ 1,619,258	1,497,141	1,469,610	1,353,856	1,343,648
10. Consolidated expenses by function					
Municipal operations	\$ 994,365	910,177	891,823	851,469	842,003
Public utilities	347,652	338,028	334,154	301,637	278,848
Civic corporations	54,783	51,518	47,257	31,532	29,582
	\$ 1,396,800	1,299,723	1,273,234	1,184,638	1,150,433
11. Growth in accumulated surplus	\$ 222,458	197,418	196,376	169,218	193,215

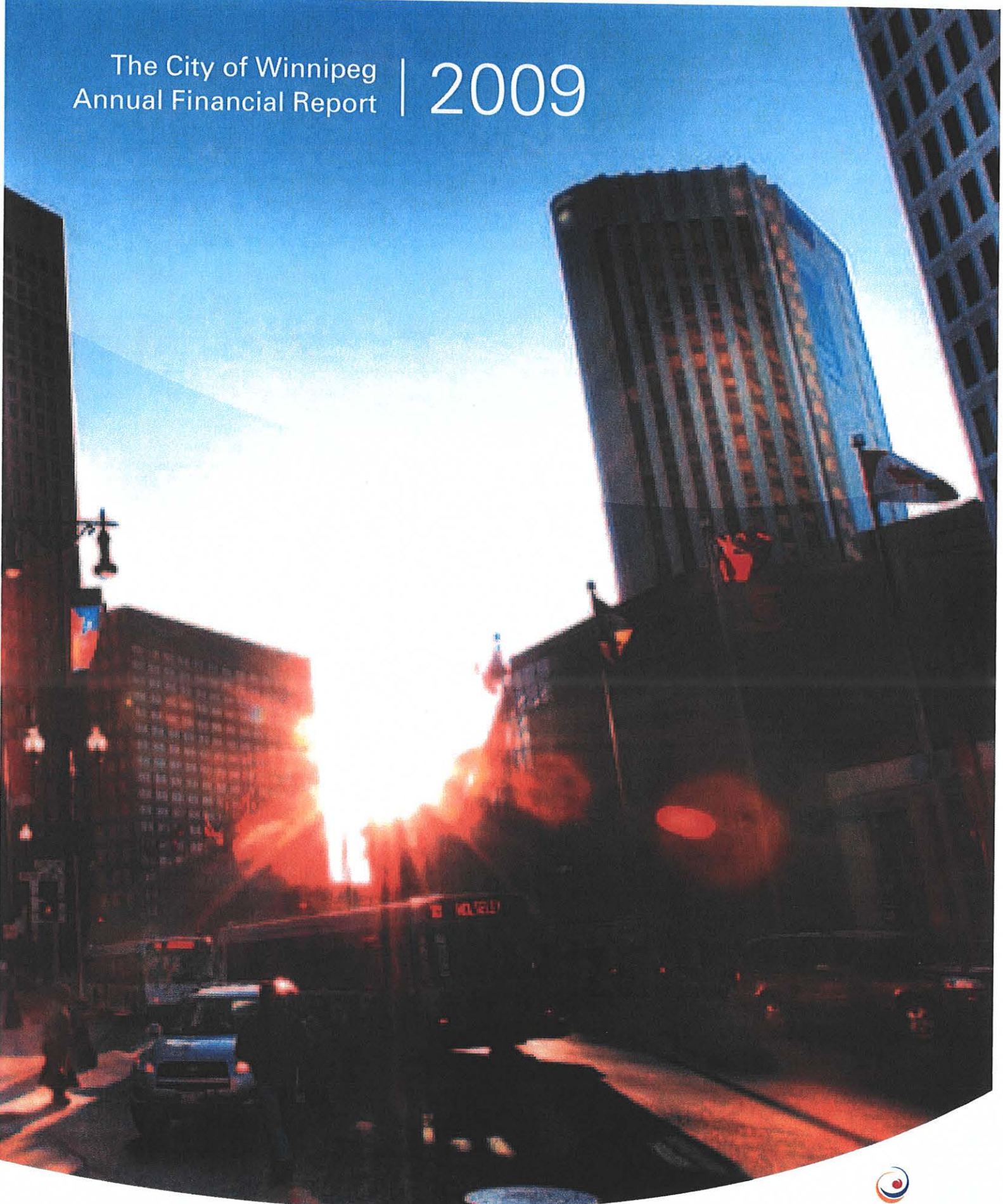
Note: Current provincial legislation requires that a general assessment be performed every two years. A general assessment occurred in 2010 and 2012. In the year of a general assessment, the mill rate is adjusted to offset the effect of market value changes of the entire assessment base.

Consolidated Financial Statements

Five-Year Review

December 31 ("\$" amounts in thousands of dollars, except as noted) (Unaudited)	2013	2012	2011	2010	2009
12. Consolidated expenses by object					
Salaries and benefits	\$ 730,133	695,849	664,221	623,232	598,576
Goods and services	376,614	344,217	357,008	324,119	314,746
Amortization	198,106	188,432	175,765	165,857	155,382
Interest	54,732	53,587	43,954	46,233	49,588
Other expenses	37,215	17,638	32,286	25,197	32,141
	\$ 1,396,800	1,299,723	1,273,234	1,184,638	1,150,433
13. Payments to school authorities	\$ 550,039	521,322	497,237	497,907	474,445
14. Debt					
Tax-supported	\$ 557,781	560,073	334,359	274,838	294,449
Transit	103,936	109,709	110,449	81,408	22,088
City-owned utilities	248,719	296,868	285,799	290,605	288,899
Other	74,848	80,012	70,321	68,238	73,081
Total gross debt	985,284	1,046,662	800,928	715,089	678,517
Less: Sinking Funds	195,237	264,037	242,528	218,687	199,025
Total net long-term debt	\$ 790,047	782,625	558,400	496,402	479,492
Percentage of total assessment	1.26%	1.22%	0.99%	0.89%	1.48%
15. Acquisition of tangible capital assets	\$ 543,938	653,993	486,320	333,851	384,110
16. Net financial (liabilities) assets	\$ (411,063)	(325,605)	(55,176)	48,603	36,903
17. Accumulated surplus					
Invested in tangible capital assets	\$ 4,637,548	4,397,884	4,197,895	3,983,440	3,803,787
Reserves					
Capital	114,548	114,907	107,716	97,376	98,329
Special Purpose	77,863	90,219	81,981	71,973	81,941
Stabilization	85,753	80,404	85,305	81,582	78,397
	278,164	285,530	275,002	250,931	258,667
Surpluses					
Manitoba Hydro long-term receivable	220,238	220,238	220,238	220,238	226,640
Other surpluses	221,901	199,539	205,043	236,686	230,630
Unfunded expenses	(210,188)	(190,683)	(183,088)	(172,581)	(170,228)
	231,951	229,094	242,193	284,343	287,042
	\$ 5,147,663	4,912,508	4,715,090	4,518,714	4,349,496
18. Government-specific indicators					
Assets-to-liabilities	4.79	4.85	5.62	6.00	6.05
Financial assets-to-liabilities	0.70	0.75	0.95	1.05	1.04
Public debt charges-to-revenues	0.04	0.04	0.03	0.03	0.04
Own-source revenues-to-taxable assessment	0.02	0.02	0.02	0.02	0.03
Government transfers-to-revenues	0.18	0.19	0.20	0.19	0.19

The City of Winnipeg | 2009
Annual Financial Report



Winnipeg

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Consolidated Financial Statements Five-Year Review

December 31

("\$" amounts in thousands of dollars, except as noted)

(Unaudited)

	2009	2008	2007	2006	2005
1. Population (as restated per Statistics Canada)	675,100	665,900	658,900	653,500	650,900
Unemployment rate (per Statistics Canada)					
Winnipeg	5.4%	4.3%	4.7%	4.6%	4.8%
National average	8.3%	6.1%	6.0%	6.3%	6.8%
2. Average annual headcount (restated)	9,827	9,623	9,552	9,536	9,534
3. Number of taxable properties	213,574	211,048	209,127	206,658	206,170
Payments-in-lieu of taxes – Number of properties	903	908	945	922	874
4. Assessment (see note)					
Residential	\$ 24,048,221	23,666,110	23,223,839	22,800,354	18,460,471
Commercial and industrial	8,242,789	8,161,490	8,095,206	7,959,866	7,209,121
Farm and golf	128,611	131,414	156,357	162,390	102,742
	\$ 32,419,621	31,959,014	31,475,402	30,922,610	25,772,334
Assessment per capita (in dollars)	\$ 48,022	47,994	47,770	47,318	39,595
Commercial and industrial as a percentage of assessment	25.43%	25.54%	25.72%	25.74%	27.97%
5. Tax arrears	\$ 30,036	29,893	38,038	41,350	37,698
6. Tax arrears - per capita (in dollars)	\$ 44.49	44.89	57.73	63.27	57.92
7. Municipal mill rate	25.448	25.448	25.448	25.448	29.686
- Percentage change adjusted for portioning and reassessment	0.00%	0.00%	0.00%	0.00%	0.00%
8. Winnipeg consumer price index (per Statistics Canada) (annual average)					
2002 base year 100	113.9	113.3	110.8	108.5	106.5
Percentage increase	0.5%	2.3%	2.1%	1.9%	2.7%
9. Consolidated revenues					
Taxation	\$ 534,571	521,684	515,197	518,661	503,594
User charges	413,243	412,984	381,273	356,761	339,539
Government transfers	256,823	213,310	188,563	152,300	120,725
Interest and other revenue	139,011	123,280	135,781	77,811	75,266
	\$ 1,343,648	1,271,258	1,220,814	1,105,533	1,039,124
10. Consolidated expenses by function					
Municipal operations	\$ 842,003	773,303	765,732	729,753	712,630
Public utilities	278,848	258,788	242,797	231,306	225,133
Civic corporations	29,582	29,383	25,000	24,174	25,636
	\$ 1,150,433	1,061,474	1,033,529	985,233	963,399
11. Growth in accumulated surplus	\$ 193,215	209,784	187,285	120,300	75,725

(Note: In 2006, the City conducted a general reassessment which moved from a 1999 level of value to a 2003 level of value.)

Consolidated Financial Statements Five-Year Review

December 31

("\$" amounts in thousands of dollars, except as noted)

(Unaudited)

	2009	2008	2007	2006	2005
12. Consolidated expenses by object					
Salaries and benefits	\$ 598,576	565,071	539,405	530,881	510,928
Goods and services	314,746	291,061	291,032	271,530	270,707
Amortization	155,382	141,099	133,635	125,681	122,718
Interest	49,588	50,952	46,950	45,665	50,283
Other expenses	32,141	13,291	22,507	11,476	8,763
	\$ 1,150,433	1,061,474	1,033,529	985,233	963,399
13. Payments to school authorities	\$ 474,445	465,001	452,937	437,317	435,205
14. Debt					
Tax-supported	\$ 294,449	378,872	379,836	411,043	429,287
Transit	22,088	24,914	25,464	26,813	27,520
City-owned utilities	288,899	304,834	206,261	207,581	151,700
Other	73,081	44,472	34,587	24,893	5,160
Total gross debt	678,517	753,092	646,148	670,330	613,667
Less: Sinking Funds	199,025	276,158	248,686	222,723	198,965
Total net long-term debt	\$ 479,492	476,934	397,462	447,607	414,702
Percentage of total assessment	1.48%	1.49%	1.26%	1.45%	1.61%
15. Acquisition of tangible capital assets	\$ 384,110	330,344	352,149	263,066	199,313
16. Net financial assets	\$ 36,903	77,850	52,440	71,767	81,020
17. Accumulated surplus					
Surpluses					
Invested in tangible capital assets	\$ 3,834,764	3,568,485	3,434,876	3,181,870	3,038,586
Unamortized gain on Winnipeg Hydro sale	226,640	232,679	238,376	243,751	253,539
Other surpluses	199,653	253,225	187,543	215,383	192,331
Unfunded liabilities	(170,228)	(150,518)	(157,724)	(152,059)	(138,345)
	4,090,829	3,903,871	3,703,071	3,488,945	3,346,111
Reserves					
Capital	98,329	94,156	89,887	114,359	159,772
Special Purpose	81,941	73,574	74,920	74,679	69,025
Stabilization	78,397	84,680	78,619	81,229	64,004
	258,667	252,410	243,426	270,267	292,801
	\$ 4,349,496	4,156,281	3,946,497	3,759,212	3,638,912
18. Government specific indicators					
Assets-to-liabilities	6.05	5.88	5.89	5.61	5.98
Financial assets-to-liabilities	1.04	1.09	1.06	1.09	1.11
Public debt charges-to-revenues	0.04	0.04	0.04	0.04	0.05
Own-source revenues-to-taxable assessment	0.03	0.03	0.03	0.03	0.04
Government transfers-to-revenues	0.19	0.17	0.15	0.14	0.12



Winnipeg

2005 ANNUAL FINANCIAL REPORT



CONSOLIDATED FINANCIAL STATEMENTS FIVE-YEAR REVIEW

As at December 31 (" \$" amounts in thousands of dollars, except as noted)

(Unaudited)	2005	2004	2003	2002	2001
1. Population (as restated per Statistics Canada)	650,100	646,800	642,800	639,800	637,000
Unemployment rate (per Statistics Canada)					
• Winnipeg	4.8%	5.5%	5.2%	5.3%	5.1%
• National average	6.8%	7.2%	7.6%	7.7%	7.2%
2. Average total employees	8,749	8,788	8,385	8,333	8,870
3. Number of taxable properties	201,262	200,193	199,118	198,827	198,252
Payments-in-lieu					
• Number of properties	813	783	872	825	859
4. Assessment					
• Residential	\$ 18,460,471	18,277,925	18,069,819	17,803,696	16,950,454
• Commercial and industrial	7,209,121	7,132,230	7,099,635	7,046,756	6,242,499
• Farm and golf	102,742	101,769	104,099	106,062	106,799
	\$ 25,772,334	25,511,924	25,273,553	24,956,514	23,299,752
Assessment per capita (in dollars)	\$ 39,644	39,443	39,318	39,007	36,577
Commercial and industrial as a percentage of assessment	27.97%	27.96%	28.09%	28.24%	26.79%
5. Tax arrears	\$ 37,698	40,436	42,761	47,978	45,283
6. Tax arrears per capita (in dollars)	\$ 57.99	62.52	66.52	74.99	71.09
7. Municipal mill rate	29.686	29.686	29.686	29.686	32.140
• Percentage change adjusted for portioning and reassessment	0.00%	0.00%	0.00%	-2.00%	-2.42%
8. Winnipeg consumer price index (annual average)					
• 1992 base year 100	131.20	127.90	125.50	123.30	121.50
• Percentage increase	2.58%	1.91%	1.78%	1.48%	2.88%
9. Consolidated revenue					
• Taxation	\$ 503,397	491,698	489,996	484,220	480,974
• User charges	344,207	328,206	318,605	295,893	416,408
• Government transfers	102,509	94,100	97,082	94,026	93,741
• Interest and other revenue	53,378	54,879	55,746	56,769	50,078
• Gain on sale of Hydro	-	-	-	227,476	-
	\$ 1,003,491	968,883	961,429	1,158,384	1,041,201
10. Consolidated expenses by function					
• Municipal operations	\$ 711,334	681,533	662,902	640,692	627,964
• Public utilities	218,855	217,171	218,246	223,814	324,858
• Civic corporations	28,644	31,214	29,855	30,307	27,758
	\$ 958,833	929,918	911,003	894,813	980,580
11. Growth in Surplus for the year	\$ 67,442	20,398	46,196	275,655	33,830
(Decline) Growth in Reserves for the year	\$ (22,784)	18,567	4,230	(12,084)	26,791

(Note: In 2002, the City conducted a general reassessment which moved from a 1996 level of value to a 1999 level of value.)

(Note: For 2001, the revenue, expenses, change in surplus, and net financial assets (liabilities) figures have not been restated for CentreVenture Development Corporation.)

(Note: For 2003 - 2001, the revenue, expenses, change in surplus, and net financial assets (liabilities) figures have not been restated for compensated absences and developer deposits.)


(Note: The 2001 figures include Winnipeg Hydro's operations.)

CONSOLIDATED FINANCIAL STATEMENTS FIVE-YEAR REVIEW

As at December 31 ("\$" amounts in thousands of dollars, except as noted)

(Unaudited)	2005	2004	2003	2002	2001
12. Consolidated expenses by object					
• Salaries and benefits	\$ 511,312	496,048	465,442	433,185	437,557
• Goods and services	300,889	285,594	290,573	283,703	340,983
• Debt interest and repayment	121,970	129,042	133,537	143,856	176,253
• Grants and other expenses	24,662	19,234	21,451	34,069	25,787
	\$ 958,833	929,918	911,003	894,813	980,580
13. Payments to school authorities	\$ 435,205	439,062	425,053	414,140	395,404
14. Debt					
• Tax-supported	\$ 429,287	486,790	489,974	576,659	631,332
• Transit	27,520	35,092	33,606	38,007	42,607
• City-owned utilities	151,700	175,050	177,429	204,833	419,957
• Other	38,315	37,739	39,372	39,890	40,892
	646,822	734,671	740,381	859,389	1,134,788
• Less: Sinking Fund	198,965	239,831	245,709	363,097	405,865
• Total net long-term debt	\$ 447,857	494,840	494,672	496,292	728,923
Percentage of total assessment	1.74%	1.94%	1.96%	1.99%	3.13%
15. Acquisition of tangible capital assets					
Gross purchase	\$ 182,872	143,286	164,384	157,511	135,693
Less: internally financed					
• Combined Sewer Renewal	21,163	16,290	15,398	18,074	16,957
• Watermain Renewal	7,299	6,281	6,541	8,964	7,940
• Sewage Disposal System	6,815	5,019	4,514	3,412	3,749
• Other	6,377	6,553	3,837	2,681	1,709
• Waterworks System	1,335	3,115	1,080	1,635	1,601
• General Revenue	718	347	5,072	3,900	4,645
• Aqueduct Rehabilitation	416	1,120	3,458	8,242	5,659
• Transit Bus Replacement	-	5,499	9,237	4,865	3,686
• General Purpose	-	1,192	4,170	-	-
• Environmental Projects	-	950	1,187	935	453
• Frontage levies	-	-	-	10,000	-
• Equipment and Material Services	-	-	-	301	6,727
	44,123	46,366	54,494	63,009	53,126
	\$ 138,749	96,920	109,890	94,502	82,567
16. Net financial assets (liabilities)	\$ 14,864	8,745	(46,874)	(98,690)	(576,326)
17. Reserves and Surplus					
• Reserves	\$ 293,684	316,468	297,901	293,671	305,755
• Surplus	\$ 681,041	613,599	596,284	550,088	270,076
18. Area in acres at the end of the year	116,000	116,000	116,000	116,000	116,000
19. Construction					
• Permits issued	8,931	8,977	8,344	8,719	7,938
• Value	\$ 656,350	674,619	649,071	427,028	372,969
Housing starts	2,177	2,335	2,208	1,451	1,290

This is Exhibit "F" referred to in the
Affidavit of Alan A. Borger sworn
before me this 18th day of April, 2019.

A handwritten signature in blue ink, appearing to be "R. J. [unclear]", written over a horizontal line.

A Notary Public in and for
the Province of Manitoba.

Chief Peguis Trail Extension West

From Main Street to Brookside Boulevard

From 2014 to 2016, a Functional Design Study was conducted for the Chief Peguis Trail (CPT) Extension West. The intent of the study was to gain insight into the use and expectations for the CPT Extension West from Main Street to Brookside Boulevard. The CPT Extension West will be approximately 10 kilometers in length and will support economic development, create recreational opportunities, and support the completion of the Strategic Inner Ring Road to reduce traffic on neighborhood streets to make them more accommodating for public transit, walking and cycling.

A Preliminary Design Study is now being completed for the CPT Extension West.

The Preliminary Design Study will recommend a final design for the CPT Extension West from Main Street to Brookside Boulevard. The design will:


- Accommodate forecast traffic flow on CPT;
- Relieve traffic on neighbourhood streets;
- Provide connections to surrounding neighbourhoods;
- Include pedestrian and cycling infrastructure along the route and connections to community destinations;
- Include potential locations for public art; and,
- Limit the loss of higher quality natural areas.

Updates


October 2018 - A draft preliminary design was presented to the public for feedback as part of the study of CPT Extension West from Main Street to Brookside Boulevard at an open house on November 7, 2017. Since then, the preliminary design is being further refined and is expected to be completed later this year, after which an Administrative Report with recommendations will be presented for Council's consideration.

March 2018 - The preliminary design is expected to be complete by late spring/early summer 2018. Following the conclusion of the preliminary design, an Administration Report will be presented to Council.

Engage

Engagement during this phase of the project is now complete. A [public engagement report](#)  is now available within the documents tab of this project page.

Thank you to the more than 400 people who came out to view a [video simulation of the proposed route](#) and ask questions at an information session at the Red River Community Centre on November 7, 2017. At the event we received over 160 exit surveys. The final round of public engagement in November 2017 also included another series of land owner and stakeholder meetings.

View the [information session boards](#) .


The intent of the public engagement process for the Preliminary Design Study was to provide information and collect local feedback to:

- Inform the community and stakeholders of the intended plans and share any changes to the design;
- Help plan pedestrian and cycling infrastructure and amenities;

- Help identify connections to community destinations;
- Ensure the project complements adjacent development;
- Address the requirements of the Environmental License; and,
- Meet with affected landowners and identify property requirements.

Previous Engagement

From 2014 to 2016, four public engagement events were held to collect feedback for the Chief Peguis Trail Extension West Functional Design Study. A public information session held on June 29, 2016 at Red River Community Centre had 244 people in attendance. An online survey closed on July 12, 2016 with 84 responses. Comments received through this public engagement process indicated a repeated desire for an uninterrupted flow of traffic and fewer traffic lights; this feedback was considered in the latest phase of the design. Read more about what was said during previous public engagement activities under the related links tab.

Following the 2016 engagement events, a series of landowner and stakeholder meetings were facilitated from February 2017 to June 2017, including a public information session which was held on June 6, 2017 at the Red River Community Centre, where 244 individuals signed-in and 113 comment forms were collected. An online survey received 112 responses. A summary of these engagement events and the feedback received from the public, stakeholder and landowners is available online [here](#) .

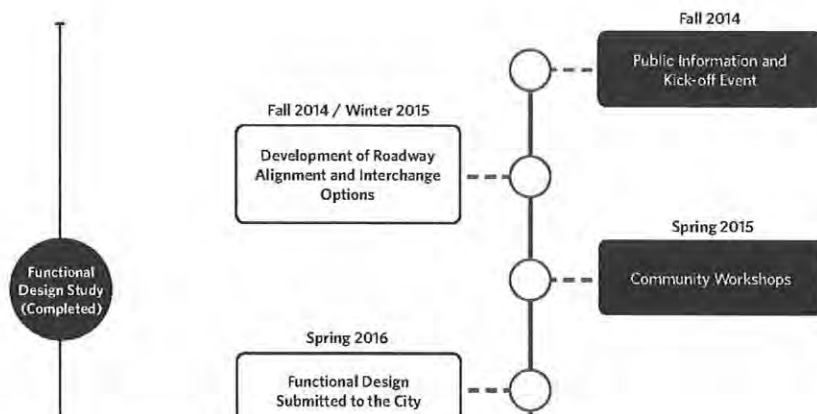
Background

The City of Winnipeg Transportation Master Plan (TMP) identifies the CPT as a major transportation facility and an important component of the City’s strategic road network. The ultimate completion of the CPT Extension West will provide a continuous east-west link between Brookside Boulevard (Route 90) and Perimeter Highway (PTH 101). The CPT Extension West will support economic development, create recreational opportunities, and support the completion of the Strategic Inner Ring Road to reduce traffic on neighborhood streets to make them more accommodating for public transit, walking and cycling.

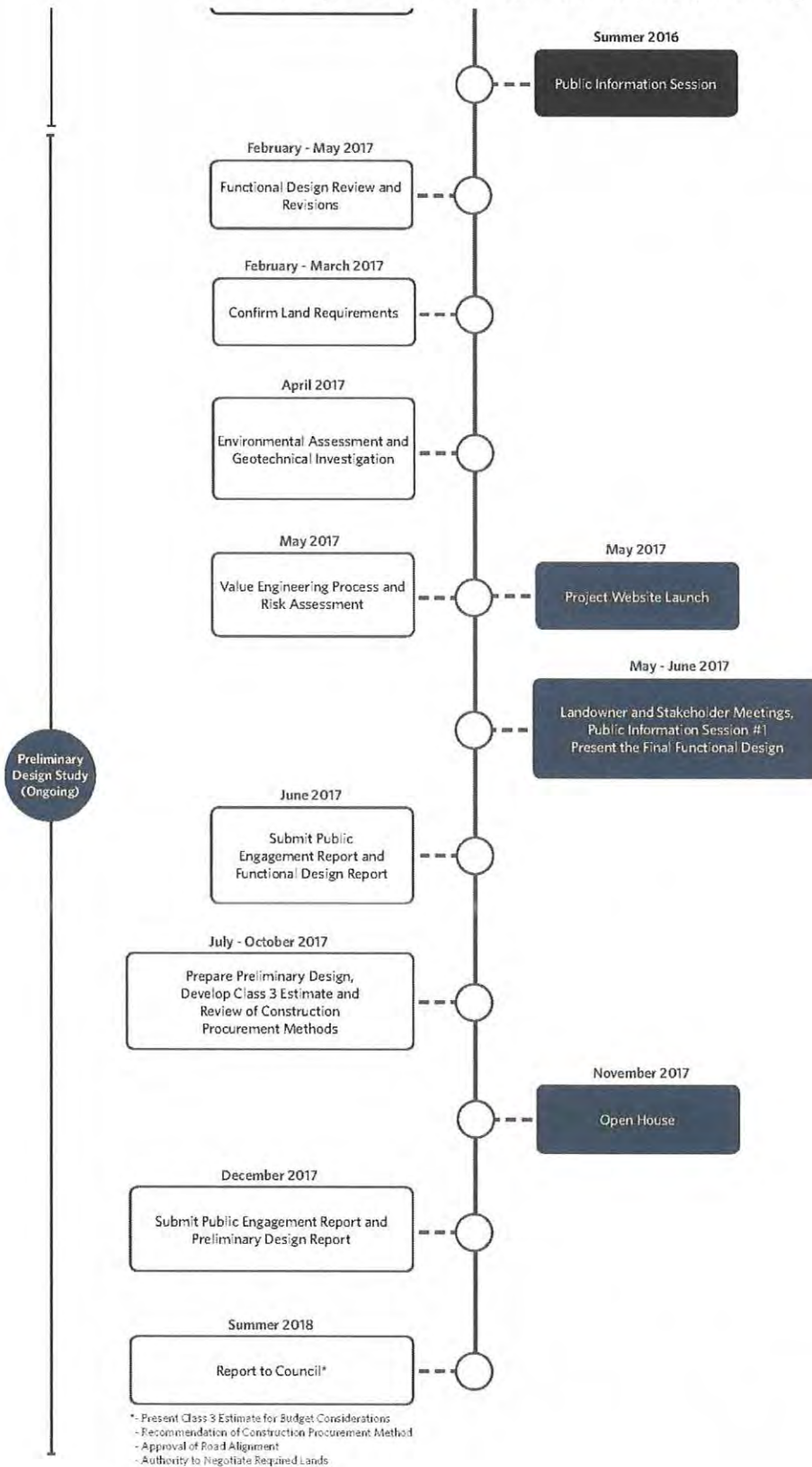
The City's TMP identified the western extension of the CPT between Main Street and McPhillips Street as a medium term project to be implemented by 2021, and a further western extension between McPhillips Street and Brookside Boulevard (Route 90) as a long term project to be implemented by 2031. On April 25, 2012 City Council approved an amendment to the TMP, which resulted in the CPT between Main Street and Brookside Boulevard becoming a short term project.

From 2014 to 2016, the City completed the Functional Design Study for the CPT Extension West and hosted public engagement events to gain insight into the use and expectations for the extension from Main Street to Brookside Boulevard. A Preliminary Design Study is now being undertaken for the CPT Extension West.

Project Timeline





















Chief Peguis Trail Extension West - Public Works - City of Winnipeg



Timeline

Documents

Document Name	Date	Type
Phase 2: Public Engagement Report 	2018-01-03	Report
Phase 2: Public Information Session Boards 	2017-11-07	Storyboards
Phase 2: News Release 	2017-10-26	News Release
Phase 2: Table Maps		
<ul style="list-style-type: none"> ▪ Initial: Brookside Boulevard to Pipeline Road  ▪ Initial: McPhillips Street to Main Street  	2017-10-26	Maps
Phase 1: Public Engagement Summary 	2017-08-15	Report
Phase 1: Public Engagement Report 	2017-08-14	Report
Phase 1: Public Information Session Boards 	2017-06-06	Storyboards
Phase 1: Table Maps		
<ul style="list-style-type: none"> ▪ Initial - Brookside Blvd to Pipeline Rd  ▪ Initial - McPhillips St to Main St  ▪ Ultimate - Brookside Blvd to Dr. Jose Rizal Way  ▪ Ultimate - Pipeline Rd to Main St  	2017-05-26	Maps
Phase 1: News Release	2017-05-25	News Release
Functional Design Study: Public Information Session Boards 	2016-06-29	Storyboards
Functional Design Study: Map 	2016-06-03	Map
Functional Design Study: Project Newsletter 	2016-06-03	Newsletter
Functional Design Study: Public Workshop Information Boards 	2015-06-03	Storyboards
Functional Design Study: Kick-Off Event Information Boards 	2014-11-25	Storyboards
Functional Design Study: Kick-Off Event Invitation 	2014-11-25	Community Letter

Frequently Asked Questions

1. What is the purpose of the Preliminary Design Study?

This study will prepare a recommended final design for the CPT Extension West from Main Street to Brookside Boulevard. The design will:

- Provide efficient traffic flow on CPT;
- Relieve traffic on neighbourhood streets;
- Provide connections to surrounding neighbourhoods;
- Include pedestrian and cycling infrastructure along the route and connections to community destinations;

- Include potential locations for public art; and,
- Limit the loss of higher quality natural areas.

2.**Will properties be impacted?**

The City of Winnipeg has reserved some land along the corridor for the CPT Extension West. Where the alignment will require additional lands, meetings will be held with landowners prior to the public information session.

3.**What will the impact be on Little Mountain Park?**

Little Mountain Park is outside of the study area and beyond the scope of this project. However, the alignment for CPT Extension west of Brookside Boulevard should not impact Little Mountain Park.

4.**How is this study different from the Functional Design study?**

The Functional Design Study determined conceptual roadway alignments and initial interchange and intersection requirements for the CPT Extension West.

The Preliminary Design Study will confirm land requirements, address the requirements of the Environmental License, include pedestrian and cycling infrastructure, identify potential locations for park and ride lots, identify potential locations for public art, and include greater detail of all of the design elements (i.e., lane width, intersections, etc.).

5.**Has the design changed from the Functional Design Study?**

A few changes have been made to the design that was presented in 2016. These changes were influenced by both technical requirements and public input and include:

- Shifting the alignment of the CPT Extension West to the north between Pipeline Road and McPhillips Street to minimize impact on the Ferrier Forest and to plan for a future interchange at Pipeline Road;
- An interchange at McPhillips Street and CPT Extension West for opening day;
- Reconfiguring the interchange at Main Street and CPT Extension West to allow free flow traffic on CPT; and,
- Other minor adjustments after additional traffic analysis was completed.

6.**When will construction start?**

The project is subject to Council and funding approval. There is no anticipated construction date at this time.

7.**Will pedestrian and cycling infrastructure be included in the plan?**

Yes, pedestrian and cycling infrastructure will be included in the plan and will connect to existing and planned pedestrian and cycling infrastructure.

8.**How are you considering impacts on the natural environment?**

An environmental assessment is being conducted. The environmental assessment will include field visits for species of conservation concern and ecological valuation of trees, wooded areas and wetlands. An Environmental Act license is required by the Province when opening new major roadways.

Maps



[Area Map](#)

Detailed maps:

- [Brookside Boulevard to Pipeline Road](#)
- [McPhillips Street to Main Street](#)

Videos

Chief Peguis Trail Extension – Proposed Interchanges

Related Links & Documents

- [Public Workshop from the Functional Design Study](#)
- [Public Information Session Boards from the Functional Design Study](#)
- [Project Newsletter from the Functional Design Study](#)

Last update: October 3, 2018

This is Exhibit "6" referred to in the
Affidavit of Alan A. Borger sworn
before me this 18th day of April, 2019.

A handwritten signature in blue ink, appearing to be "Peter J. ...", written over a horizontal line.

A Notary Public in and for
the Province of Manitoba.



City of Winnipeg
**2018 City Asset
Management Plan**





City Asset Management Plan Contents

Photo: Tyler Walsh, courtesy Tourism Winnipeg
Cover Photo: Mike Peters, courtesy Tourism Winnipeg

Section 1
Overview

Section 2
Introduction

Section 3
**State of Local
Infrastructure**

Section 4
**Expected Levels
of Service**

Section 5
**Asset Management
Strategy**

Section 6
**Financial Review of the
Infrastructure Deficit**

Section 7
**Plan Improvement
and Monitoring**

Appendix A
**Assets Included
in the Plan**

Appendix B
Asset Details

Appendix C
**Comparative View of
Historical and Future
Capital Planning and
2009/2018 Deficits**

Appendix D
**Acronyms and
Abbreviations**

Appendix E
**List of Tables
and Figures**

1.5 Summary of Age Per Infrastructure Element

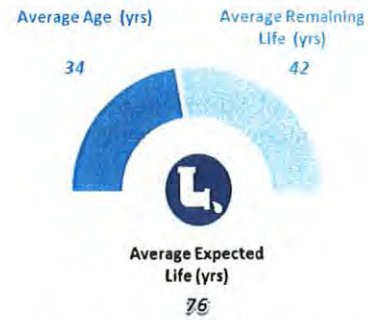
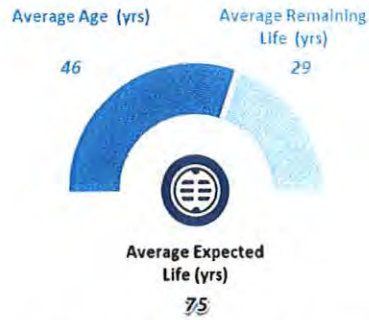
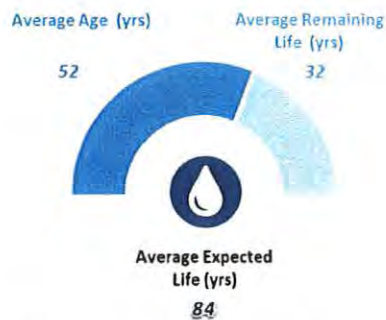
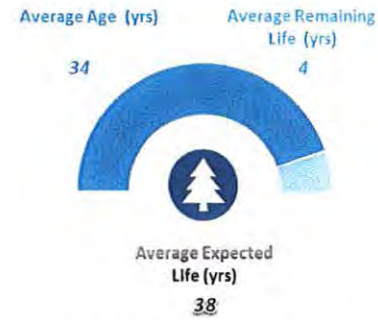
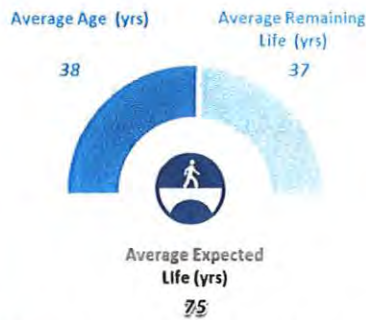
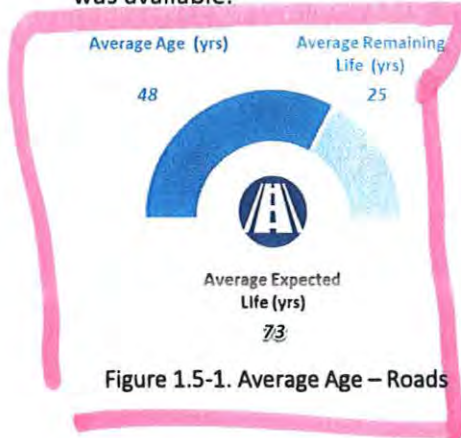
When using the average age of an asset as a performance indicator, consideration must be given to a number of other factors related to an asset's age profile. On its own, age provides insight as to how long an asset has been part of the City's inventory.

Typically, the beginning of an asset's life correlates to its original construction date, the date it was manufactured, the date it was placed into service, or when it has been completely replaced. In these instances, the average expected life will reset and the asset's whole lifecycle will be determined using industry recognized standards that are unique to that particular asset.

What is more critical to understand when evaluating the performance of the asset based on age, is that the level of service provided by an asset is linked to its average remaining life, which is calculated by taking the average expected life and subtracting the average age.

The average remaining life shows the number of years an asset can continue to perform at the desired level of service benchmarks. The average remaining life of an asset can be extended by implementing strategic, preventative maintenance programs, and well-timed capital investments.

The figures below provide the age profiles for the City's major infrastructure elements, where age data was available.



SECTION 1 – OVERVIEW

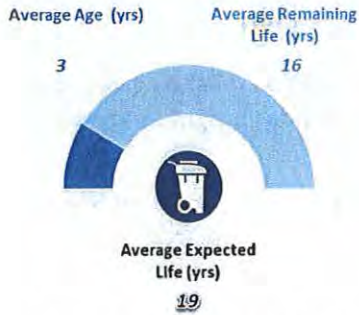


Figure 1.5-7. Average Age – Solid Waste Utility

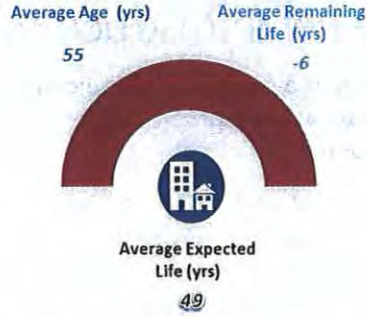


Figure 1.5-8. Average Age – Municipal Properties

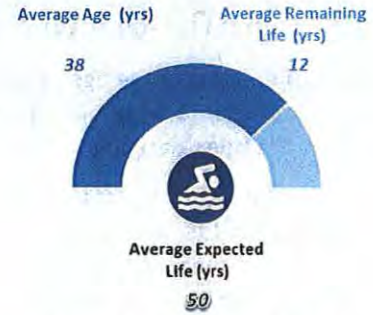


Figure 1.5-9. Average Age – Community Services

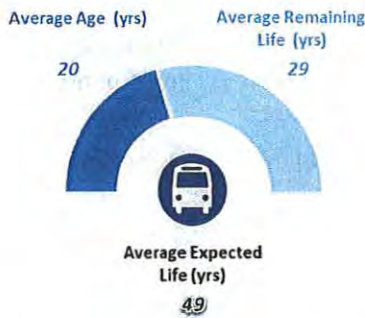


Figure 1.5-10. Average Age – Transit

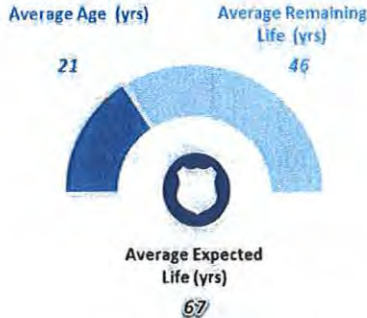


Figure 1.5-11. Average Age – Police Services

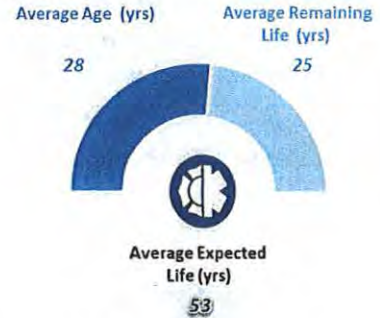


Figure 1.5-12. Average Age – Fire & Paramedic Services

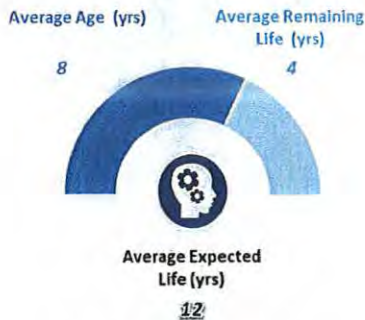


Figure 1.5-13. Average Age – Information Technology

When reviewing the age profiles shown above, the majority of assets are left with approximately 48% of their remaining life. This is strictly based on the age of the asset, rather than its ability to effectively deliver a service. Because many departments may not have correlated measurable levels of service with remaining life, this would not be an accurate representation of performance.

For instance, Municipal Properties is reporting an average remaining life that is 6 years beyond the expected life of its building assets. This does not mean that services are not being provided, although they may be provided at a lower level than expected. Rather, based on the year these assets were constructed and the prescribed expected life of buildings being 75 years, the remaining life has been exhausted.

Note that these calculations are based on using a weighted average methodology that considers the replacement value of the assets. Therefore, the results will emphasize the overall age of assets that are

Ladco Company Limited
Spreadsheet Analysis
Based on the Cost Benefit Analysis Update
Prepared by MMM Group Limited
April 17, 2019

The attached spreadsheet maintains all of the basic assumptions set out in the cost benefit analysis update prepared by MMM Group Limited (MMM) for Waverley West dated December, 2013 (the Cost Benefit Update) updating the previous cost benefit prepared by ND Lea Engineers & Planners Inc. (ND Lea) for Waverley West dated July 2004 (revised December 2004) (the Cost Benefit Report).

The cashflow analysis prepared by MMM in the Cost Benefit Analysis Update was repeated except that the operating costs (ie. the City's operating costs) were grossed up by a factor of 192% based on the ratio of:

1. ND Lea's forecast of the average assessed value of the single family homes that would be constructed in Waverley West as identified in the Cost Benefit Report, and
2. to the average assessed value of a single family home in the City of Winnipeg as identified in the Cost Benefit Report.

With this adjustment the net present value (NPV) falls from the \$247.3 million identified in the Cost Benefit Update to \$46.5 million.

Waverley West: 2013 Cost Benefit Analysis Update

Projected to project build out (25 years), and through to 80 years

* all in year 2013 dollars; revenues and expenditures not adjusted for inflation or time value of money.

FISCAL BENEFITS:

DIRECT REVENUE TO THE CITY OF WINNIPEG	Build-out Year	26					27					28					29					30					After 30 Years					After 40 Years					After 50 Years														
		2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057					
SINGLE FAMILY¹	Avg Assessed Value																																																		
Total Units	8601																																																		
Units per Year	0																																																		
Annual Municipal Tax per Dwelling	\$443,100																																																		
Total Municipal Tax	\$25,038,947																																																		
MULTI-FAMILY²	Avg Assessed Value																																																		
Total Units	6328																																																		
Units per Year	0																																																		
Annual Municipal Tax per Dwelling	\$235,993																																																		
Total Municipal Tax	\$9,811,400																																																		
COMMERCIAL³	Avg Assessed Value																																																		
Total Acres	100																																																		
Acres per Year	0																																																		
Annual Municipal Tax per Acre	\$2,000,000																																																		
Total Municipal Tax	\$1,898,000																																																		
BUSINESS/OFFICE⁴	Avg Assessed Value																																																		
Total Acres	75																																																		
Acres per Year	0																																																		
Annual Municipal Tax per Acre	\$1,900,000																																																		
Total Municipal Tax	\$1,352,325																																																		
Business Taxes (est. 10% comm & bus tax) ⁵	0.1																																																		
FEES																																																			
City Permit Fees																																																			
Single Family Homes (\$1,065 per house) ⁶	\$1,065																																																		
Multi-Family Units (\$1,069 per unit) ⁷	\$1,069																																																		
Commercial/Office (estimated at \$3,660 per acre) ⁸	\$3,660																																																		
Development Fees																																																			
Per Acre Administration Fee (3000 acres) ⁹	\$1,200																																																		
Lot Fee ¹⁰	\$35.60																																																		
Infrastructure Levy ¹¹	\$0.00																																																		
TOTAL REVENUE:																																																			
Cumulative Total:																																																			

FISCAL COSTS:

DIRECT COSTS TO THE CITY OF WINNIPEG:	Build-out Year	26					27					28					29					30					After 30 Years					After 40 Years					After 50 Years														
		2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057					
Capital Costs¹² (City costs directly attributed to Waverley West development):																																																			
Extension of Waverley Street ¹³	\$9,235,477																																																		
Improvements to Existing Waverley Street ¹⁴	\$5,447,344																																																		
Intersection Improvements Waverley/Bison ¹⁵	\$3,250,000																																																		
Extension of Bison Drive ¹⁶	\$9,000,000																																																		
Extension of Kenaston Boulevard ¹⁷	\$9,789,098																																																		
Offsite Transportation Improvements ¹⁸	\$35,100,000																																																		
Fire and Paramedic Services ¹⁹	\$18,600,000																																																		
Police ²⁰	\$4,200,000																																																		
Community Services ²¹	\$39,400,000																																																		
Miscellaneous Capital Contingency ²²	\$25,300,000																																																		
Infrastructure Renewal approx. 50 Years ²³	\$159,400,000																																																		
Total Capital Cost:	\$318,721,919																																																		
Annual City of Winnipeg Operating Costs:																																																			
Residential ²⁴	\$2,553.60																																																		
Commercial/Business/Office ²⁵	\$2,230,178																																																		
Annual Transit Subsidy ²⁶	\$5,859,450																																																		
Total Operating Costs:	\$30,391,404																																																		
TOTAL CITY OF WINNIPEG COSTS:																																																			
Cumulative Total:																																																			

SUMMARY:

Year	26	27	28	29	30	After 30 Years	31	32	33	34	35	36	37	38	39	40	After 40 Years	41	42	43	44	45	46	47	48	49	50	After 50 Years	
TOTAL REVENUE:	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$776,458,172	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$1,160,715,216	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$1,544,972,260
TOTAL CITY OF WINNIPEG COSTS:	\$31,991,404	\$32,201,079	\$34,110,753	\$34,145,428	\$31,230,103	\$659,003,915	\$31,439,778	\$31,649,453	\$31,859,128	\$32,068,802	\$32,278,477	\$32,488,151	\$32,697,825	\$32,907,500	\$33,117,174	\$33,326,848	\$33,536,522	\$995,233,810	\$37,375,225	\$37,794,575	\$38,213,925	\$38,633,274	\$40,142,949	\$38,052,624	\$38,471,974	\$38,891,323	\$39,310,673	\$40,230,023	\$1,382,850,375
DIFFERENCE:	\$6,434,301	\$6,224,626	\$4,314,951	\$4,280,276	\$7,195,601	\$117,454,256	\$6,985,926	\$6,776,252	\$6,566,577	\$6,356,902	\$6,147,227	\$5,937,552	\$5,727,877	\$5,518,202	\$5,308,527	\$5,098,852	\$4,889,177	\$165,481,406	\$1,050,479	\$631,129	\$211,780	(\$207,570)	(\$1,717,245)	\$373,080	(\$46,269)	(\$465,619)	(\$1,384,968)	(\$1,604,318)	\$162,121,885
Cumulative Difference:	\$95,438,802	\$101,663,428	\$105,978,379	\$110,258,655	\$117,454,256		\$124,440,183	\$131,216,434	\$137,992,685	\$144,768,936	\$151,545,187	\$158,321,438	\$165,097,689	\$171,873,940	\$178,650,191	\$185,426,442	\$192,202,693	\$166,531,885	\$167,163,014	\$167,794,143	\$168,425,272	\$169,056,401	\$169,687,530	\$170,318,659	\$170,949,788	\$171,580,917	\$172,212,046	\$172,843,175	
Present Value																													
Net Financial Benefit at 80 Years	\$2,320,783	\$2,158,803	\$1,996,823	\$1,834,843	\$1,672,863	\$55,454,601	\$2,071,050	\$1,931,624	\$1,792,198	\$1,652,772	\$1,513,346	\$1,373,920	\$1,234,494	\$1,095,068	\$955,642	\$816,216	\$676,790	\$67,887,589	\$210,388	\$121,540	\$39,215	(\$36,957)	(\$293,990)	\$61,414	(\$7,324)	(\$70,865)	(\$202,678)	(\$253,890)	\$67,454,443
Net Present Value	\$46,547,271																												

INFRASTRUCTURE LEVY:

Year	26	27	28	29	30	After 30 Years	31	32	33	34	35	36	37	38	39	40	After 40 Years	41	42	43	44	45	46	47	48	49	50	After 50 Years	
Annual Revenue from Levy	\$3.75																												
Present Value of Levy	\$1,419,165	\$1,419,165	\$1,419,165	\$1,419,165	\$1,419,165	\$29,842,891	\$1,419,165	\$1,419,165	\$1,419,165	\$1,419,165	\$1,419,165	\$1,419,165	\$1,419,165	\$1,419,165	\$1,419,165	\$1,419,165	\$44,034,541	\$1,419,165	\$1,419,165	\$1,419,165	\$1,419,165	\$1,419,165	\$1,419,165	\$1,419,165	\$1,419,165	\$1,419,165	\$1,419,165	\$58,226,191	
Total Revenue from Levy	\$100,801,141																												
Net Present Value of Levy	\$23,869,672																												

Waverley West: 2013 Cost Benefit Analysis Update

Projected to project build out (25 years), and through to 80 years

* all in year 2013 dollars; revenues and expenditures not adjusted for inflation or time value of money.

FISCAL BENEFITS:

DIRECT REVENUE TO THE CITY OF WINNIPEG	Build-out Year	71	72	73	74	75	76	77	78	79	80	After 80 Years
		2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	
SINGLE FAMILY ¹												
Total Units	8601	8601	8601	8601	8601	8601	8601	8601	8601	8601	8601	8601
Units per Year	0	0	0	0	0	0	0	0	0	0	0	0
Annual Municipal Tax per Dwelling	\$443,100	\$2,911	\$2,911	\$2,911	\$2,911	\$2,911	\$2,911	\$2,911	\$2,911	\$2,911	\$2,911	\$2,911
Total Municipal Tax		\$25,038,947	\$25,038,947	\$25,038,947	\$25,038,947	\$25,038,947	\$25,038,947	\$25,038,947	\$25,038,947	\$25,038,947	\$25,038,947	\$1,780,070,907
MULTI-FAMILY ²												
Total Units	6328	6328	6328	6328	6328	6328	6328	6328	6328	6328	6328	6328
Units per Year	0	0	0	0	0	0	0	0	0	0	0	0
Annual Municipal Tax per Dwelling	\$235,993	\$1,550	\$1,550	\$1,550	\$1,550	\$1,550	\$1,550	\$1,550	\$1,550	\$1,550	\$1,550	\$1,550
Total Municipal Tax		\$9,811,400	\$9,811,400	\$9,811,400	\$9,811,400	\$9,811,400	\$9,811,400	\$9,811,400	\$9,811,400	\$9,811,400	\$9,811,400	\$655,864,460
COMMERCIAL ³												
Total Acres	100	100	100	100	100	100	100	100	100	100	100	100
Acres per Year	0	0	0	0	0	0	0	0	0	0	0	0
Annual Municipal Tax per Acre	\$2,000,000	\$18,980	\$18,980	\$18,980	\$18,980	\$18,980	\$18,980	\$18,980	\$18,980	\$18,980	\$18,980	\$18,980
Total Municipal Tax		\$1,898,000	\$1,898,000	\$1,898,000	\$1,898,000	\$1,898,000	\$1,898,000	\$1,898,000	\$1,898,000	\$1,898,000	\$1,898,000	\$128,115,000
BUSINESS/OFFICE ⁴												
Total Acres	75	75	75	75	75	75	75	75	75	75	75	75
Acres per Year	0	0	0	0	0	0	0	0	0	0	0	0
Annual Municipal Tax per Acre	\$1,900,000	\$18,031	\$18,031	\$18,031	\$18,031	\$18,031	\$18,031	\$18,031	\$18,031	\$18,031	\$18,031	\$18,031
Total Municipal Tax		\$1,352,325	\$1,352,325	\$1,352,325	\$1,352,325	\$1,352,325	\$1,352,325	\$1,352,325	\$1,352,325	\$1,352,325	\$1,352,325	\$91,281,938
Business Taxes (est. 10% comm & bus tax) ⁵	0.1	\$325,033	\$325,033	\$325,033	\$325,033	\$325,033	\$325,033	\$325,033	\$325,033	\$325,033	\$325,033	\$21,939,694
FEES												
City Permit Fees												
Single Family Homes (\$1,065 per house) ⁶	\$1,065	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,160,065
Multi-Family Units (\$1,069 per unit) ⁷	\$1,069	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,764,632
Commercial/Office (estimated at \$3,660 per acre) ⁸	\$3,660	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$640,500
Development Fees												
Per Acre Administration Fee (3000 acres) ⁹	\$1,200	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,600,000
Lot Fee ¹⁰	\$35.60	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$306,196
Infrastructure Levy ¹¹	\$0.00	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL REVENUE:		\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$2,697,743,392
Cumulative Total:		\$2,351,912,052	\$2,390,337,756	\$2,428,763,461	\$2,467,189,165	\$2,505,614,870	\$2,544,040,574	\$2,582,466,278	\$2,620,891,983	\$2,659,317,687	\$2,697,743,392	\$2,697,743,392

FISCAL COSTS:

DIRECT COSTS TO THE CITY OF WINNIPEG:	Build-out Year	71	72	73	74	75	76	77	78	79	80	After 80 Years
		2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	
Capital Costs ¹² (City costs directly attributed to Waverley West development):												
Extension of Waverley Street ¹³	\$9,235,477	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,235,477
Improvements to Existing Waverley Street ¹⁴	\$5,447,344	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,447,344
Intersection Improvements Waverley/Bison ¹⁵	\$3,250,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,250,000
Extension of Bison Drive ¹⁶	\$9,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,000,000
Extension of Kenaston Boulevard ¹⁷	\$9,789,098	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,789,098
Offsite Transportation Improvements ¹⁸	\$35,100,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$35,100,000
Fire and Paramedic Services ¹⁹	\$18,600,000	\$0	\$0	\$0	\$0	\$1,550,000	\$0	\$0	\$0	\$0	\$0	\$18,600,000
Police ²⁰	\$4,200,000	\$0	\$0	\$0	\$0	\$450,000	\$0	\$0	\$0	\$0	\$0	\$4,200,000
Community Services ²¹	\$39,400,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$39,400,000
Miscellaneous Capital Contingency ²²	\$25,300,000	\$1,000,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$25,300,000
Infrastructure Renewal approx. 50 Years ²³	\$159,400,000	\$5,500,000	\$5,500,000	\$5,500,000	\$5,500,000	\$6,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$6,750,000	\$7,150,000	\$159,400,000
Total Capital Cost:	\$318,721,919	\$6,500,000	\$5,500,000	\$5,500,000	\$5,500,000	\$8,000,000	\$6,000,000	\$6,000,000	\$6,000,000	\$6,750,000	\$7,150,000	\$318,721,919
Annual City of Winnipeg Operating Costs:												
Residential ²⁴	\$2,553.60	\$34,310,425	\$34,310,425	\$34,310,425	\$34,310,425	\$34,310,425	\$34,310,425	\$34,310,425	\$34,310,425	\$34,310,425	\$34,310,425	\$1,927,615,884
Commercial/Business/Office ²⁵		\$3,431,042	\$3,431,042	\$3,431,042	\$3,431,042	\$3,431,042	\$3,431,042	\$3,431,042	\$3,431,042	\$3,431,042	\$3,431,042	\$190,069,200
Annual Transit Subsidy ²⁶		\$5,859,450	\$5,859,450	\$5,859,450	\$5,859,450	\$5,859,450	\$5,859,450	\$5,859,450	\$5,859,450	\$5,859,450	\$5,859,450	\$363,793,980
Total Operating Costs:		\$43,600,917	\$43,600,917	\$43,600,917	\$43,600,917	\$43,600,917	\$43,600,917	\$43,600,917	\$43,600,917	\$43,600,917	\$43,600,917	\$2,501,479,064
TOTAL CITY OF WINNIPEG COSTS:		\$50,100,917	\$49,100,917	\$49,100,917	\$49,100,917	\$51,600,917	\$49,600,917	\$49,600,917	\$49,600,917	\$50,350,917	\$50,750,917	\$2,820,200,983
Cumulative Total:		\$2,371,392,726	\$2,420,493,644	\$2,469,594,561	\$2,518,695,479	\$2,570,296,396	\$2,619,897,314	\$2,669,498,231	\$2,719,099,148	\$2,769,450,066	\$2,820,200,983	\$2,820,200,983

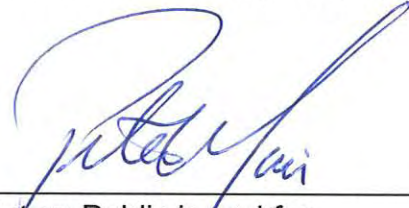
SUMMARY:

Year	71	72	73	74	75	76	77	78	79	80	After 80 Years	
TOTAL REVENUE:	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$38,425,704	\$2,697,743,392	
TOTAL CITY OF WINNIPEG COSTS:	\$50,100,917	\$49,100,917	\$49,100,917	\$49,100,917	\$51,600,917	\$49,600,917	\$49,600,917	\$49,600,917	\$50,350,917	\$50,750,917	\$2,820,200,983	
DIFFERENCE:	(\$11,675,213)	(\$10,675,213)	(\$10,675,213)	(\$10,675,213)	(\$13,175,213)	(\$11,175,213)	(\$11,175,213)	(\$11,175,213)	(\$11,925,213)	(\$12,325,213)	(\$122,457,592)	
Cumulative Difference:	(\$19,480,874)	(\$30,155,807)	(\$40,831,000)	(\$51,506,313)	(\$64,681,526)	(\$75,856,739)	(\$87,031,953)	(\$98,207,166)	(\$110,132,379)	(\$122,457,592)	(\$122,457,592)	
Present Value		-\$720,938	-\$633,835	-\$609,457	-\$586,016	-\$695,436	-\$567,181	-\$545,367	-\$524,391	-\$538,062	-\$534,721	\$46,547,271
Net Financial Benefit at 80 Years	(\$122,457,592)											
Net Present Value	\$46,547,271											

INFRASTRUCTURE LEVY:

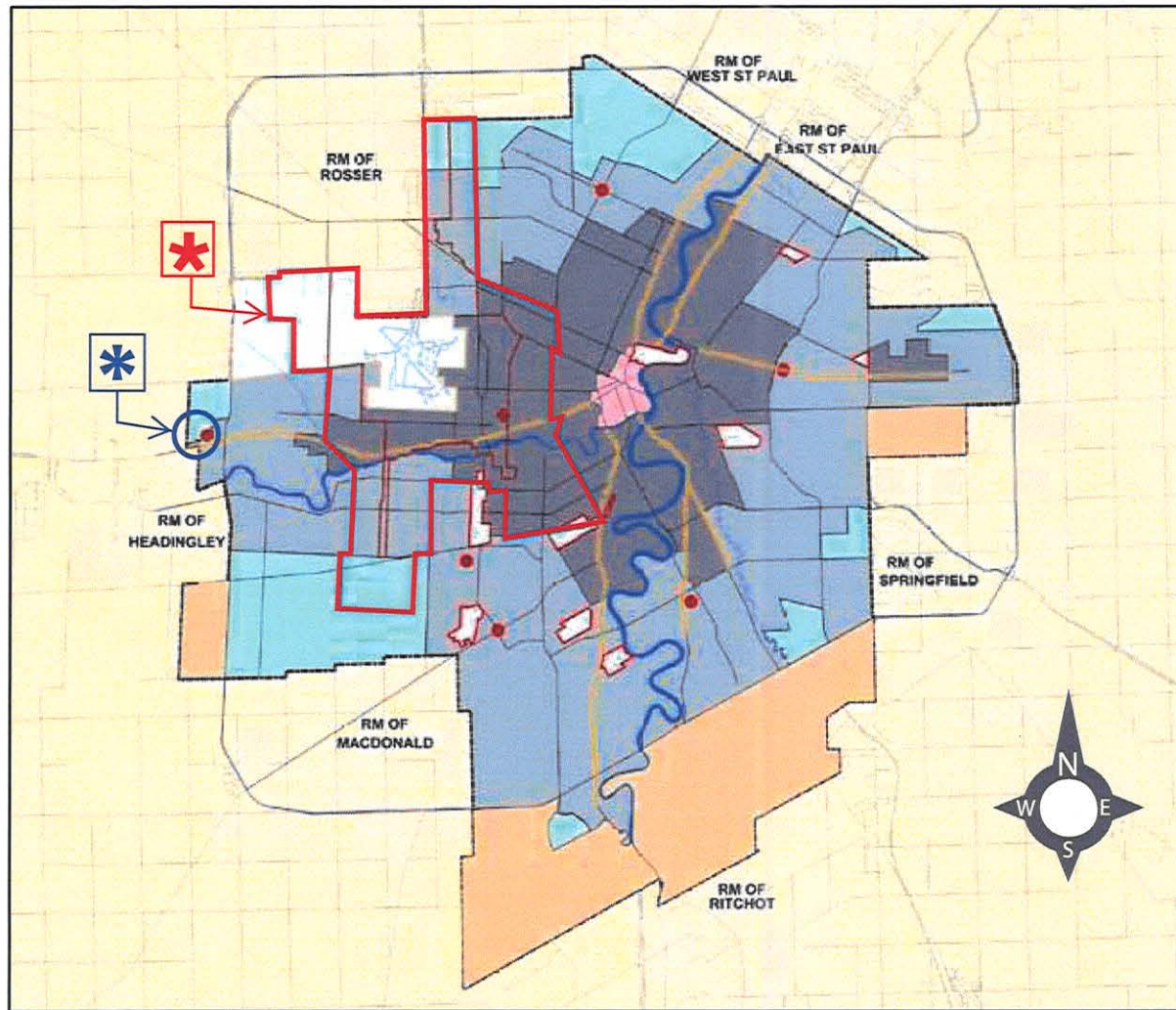
Year	71	72	73	74	75	76	77	78	79	80	After 80 Years
Annual Revenue from Levy	\$3.75	\$1,419,165	\$1,419,165	\$1,419,165	\$1,419,165	\$1,419,165	\$1,419,165	\$1,419,165	\$1,419,165	\$1,419,165	\$100,801,141
Present Value of Levy		\$87,633	\$84,262	\$81,021	\$77,905	\$74,909	\$72,028	\$69,257	\$66,594	\$64,032	\$23,869,672
Total Revenue from Levy	\$100,801,141										
Net Present Value of Levy	\$23,869,672										

This is Exhibit "I" referred to in the Affidavit of Alan A. Borger sworn before me this 18th day of April, 2019.

A handwritten signature in blue ink, appearing to read "Peter J. ...", written over a horizontal line.

A Notary Public in and for the Province of Manitoba.

URBAN STRUCTURE



LEGEND

-  Downtown
-  Major Redevelopment Sites
-  New Communities
-  Regional Mixed Use Centre
-  Regional Mixed Use Corridor
-  Mature Communities
-  Recent Communities
-  Rural and Agricultural
-  Airport Area
-  Airport Vicinity Protection Area 1
-  Airport Vicinity Protection Area 2

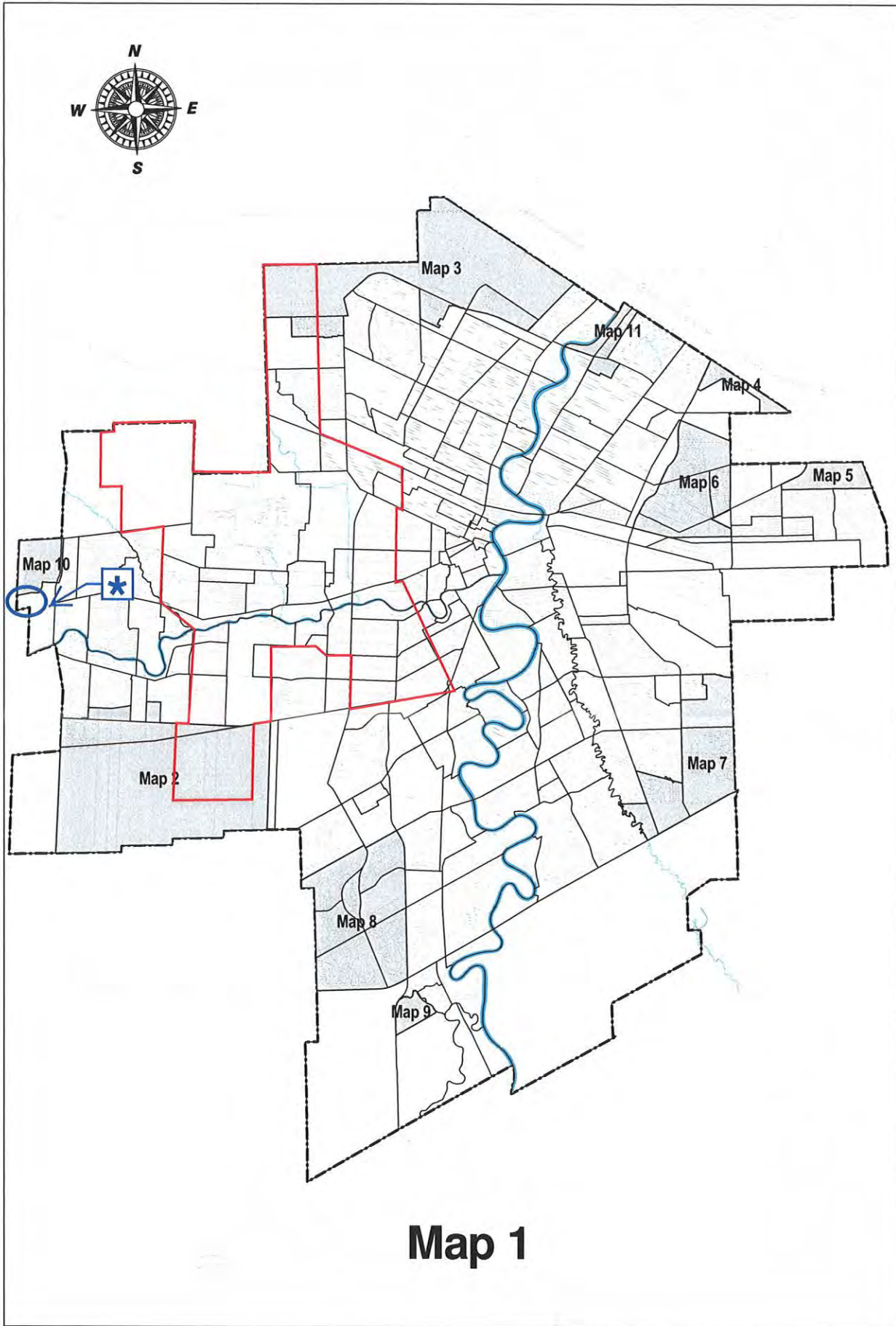
Figure 01a
Winnipeg's urban structure.

0 2 4 6 8 10
Kilometers

This is Exhibit "J" referred to in the
Affidavit of Alan A. Borger sworn
before me this 18th day of April, 2019.

A handwritten signature in blue ink, appearing to be "Peter J. ...", written over a horizontal line.

A Notary Public in and for
the Province of Manitoba.



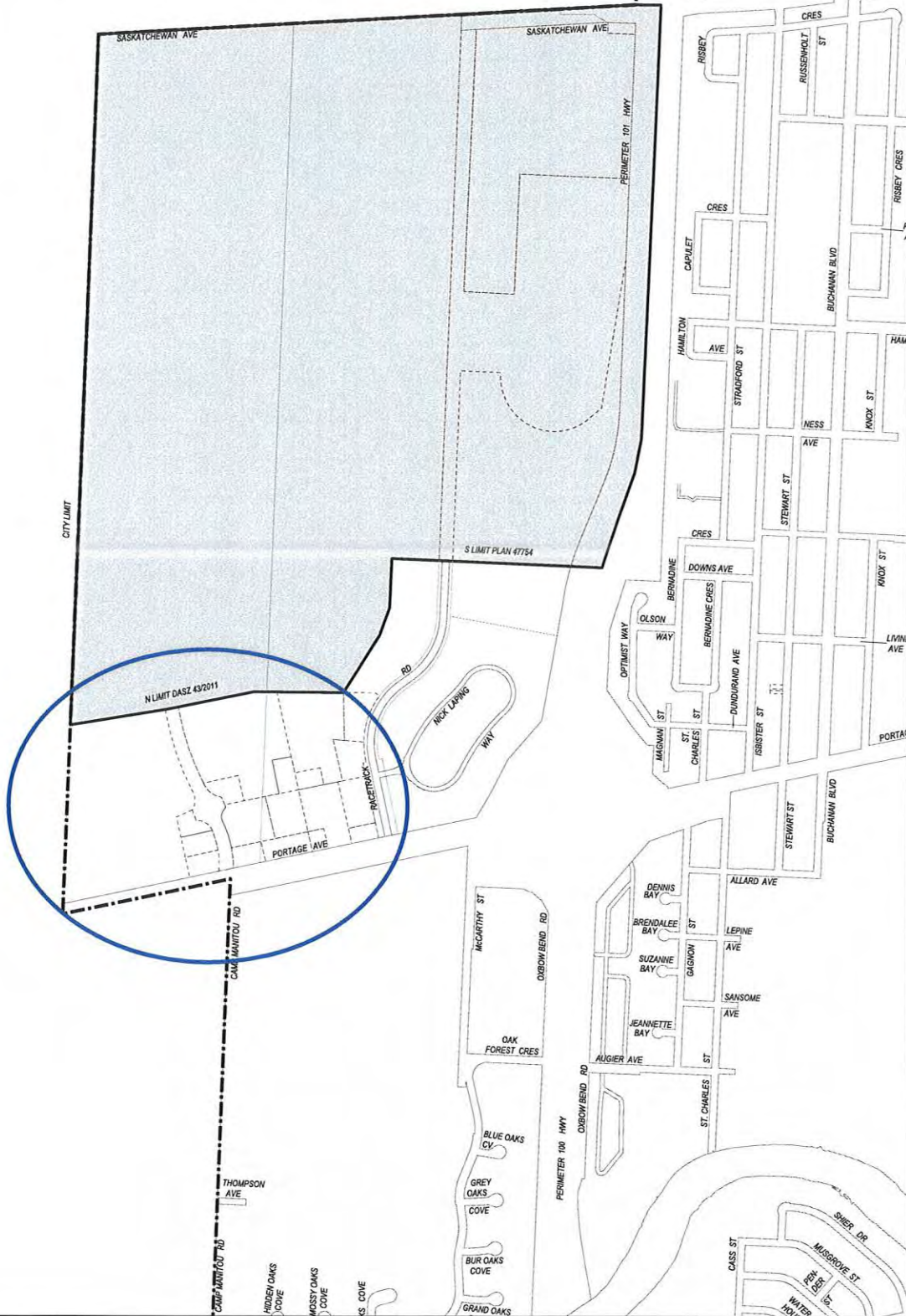
This is Exhibit "K" referred to in the
Affidavit of Alan A. Borger sworn
before me this 18th day of April, 2019.

A handwritten signature in blue ink, appearing to read "Peter J. ...", written over a horizontal line.

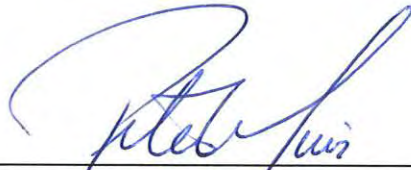
A Notary Public in and for
the Province of Manitoba.



Map 10



This is Exhibit " 4 " referred to in the
Affidavit of Alan A. Borger sworn
before me this 18th day of April, 2019.

A handwritten signature in blue ink, appearing to read "Peter J. ...", written over a horizontal line.

A Notary Public in and for
the Province of Manitoba.

reuben Exhibit C

This document is an office consolidation of by-law amendments which has been prepared for the convenience of the user. The City of Winnipeg expressly disclaims any responsibility for errors or omissions.

CONSOLIDATION UPDATE: APRIL 27, 2011

THE CITY OF WINNIPEG

**AIRPORT VICINITY PROTECTION AREA SECONDARY PLAN BY-LAW
NO. 6378/94**

A By-law of THE CITY OF WINNIPEG to adopt a secondary plan for the Airport Vicinity Protection Area established by Plan Winnipeg.

THE CITY OF WINNIPEG, in Council assembled, hereby establishes the attached document as amended, entitled "Winnipeg Airport Vicinity Development Plan" attached to and forming part of By-law No. 6378/94 as a secondary plan.
amended 7020/97

1. This By-law shall be referred to as the "Airport Vicinity Protection Area Secondary Plan By-law".
added 8162/2002

DONE AND PASSED in Council assembled, this 25th day of May, A.D., 1994.

A.V.D.P. Boundary

.....

The Airport Vicinity Development Plan (A.V.D.P.) boundaries are related directly to Noise Exposure Forecast contours. The 25 NEF contour approximates the outer limit of the A.V.D.P. area. The NEF configuration reflects the ultimate traffic volume at Winnipeg International Airport, and includes the potential for an additional runway to the northeast of the existing runway. Whenever possible, clear boundaries were chosen to avoid confusion. Major rights-of-way and individual property lines were selected in determining the location of the A.V.D.P. area. The Airport vicinity boundary will be reviewed and revised as necessary to reflect changes to the NEF contours.

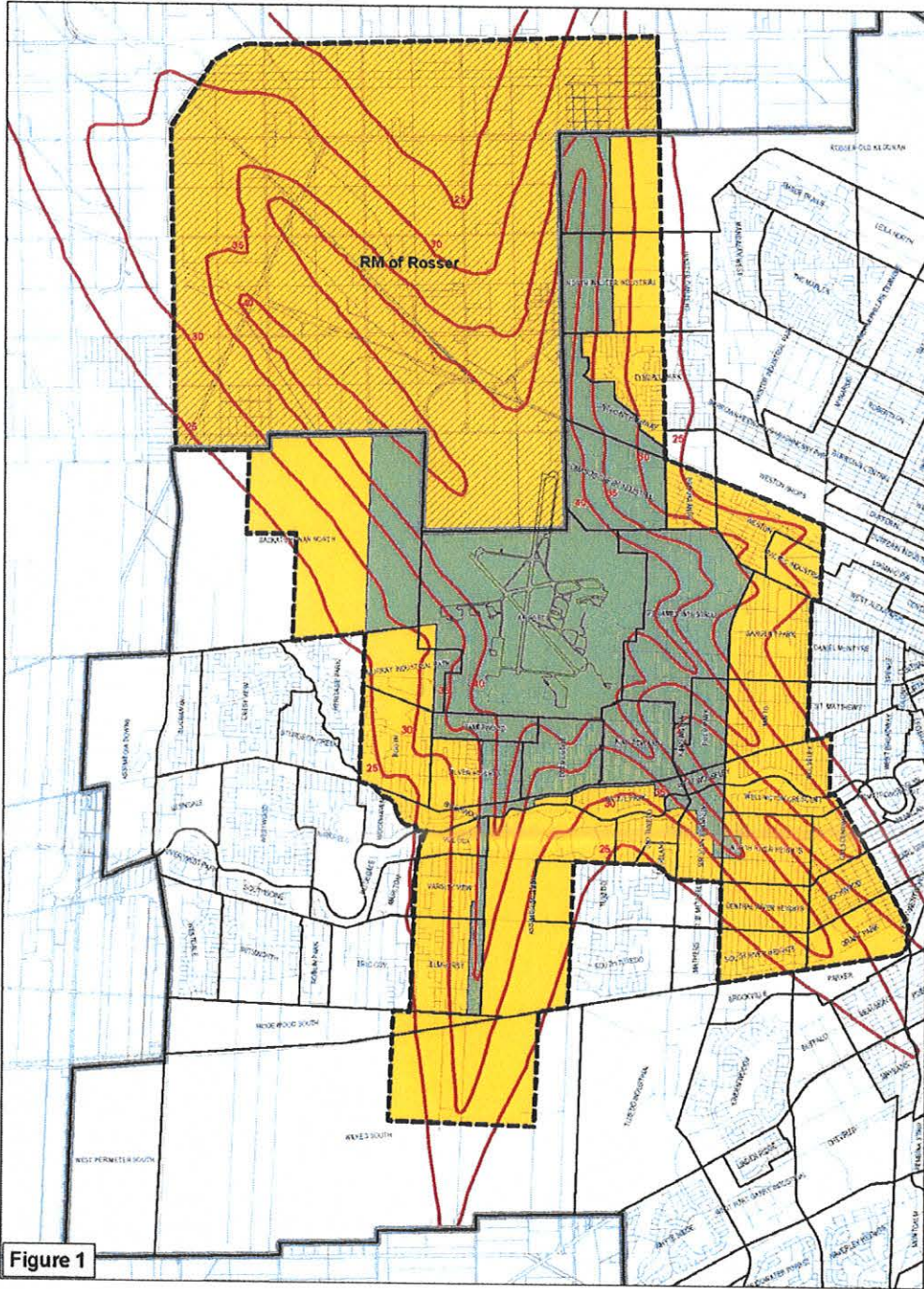
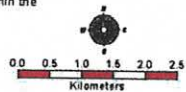


Figure 1

CITY OF WINNIPEG
 PLANNING, PROPERTY & DEVELOPMENT DEPT.
 LAND INFORMATION SERVICES

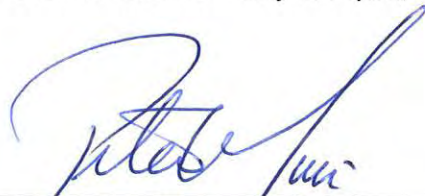
Winnipeg Airport Vicinity Development Plan Airport Vicinity Development Plan Boundaries

- Neighbourhood Characterization Boundaries
- City of Winnipeg Boundary
- 1995 Noise Exposure Forecast Contour
- AVDP Boundary
- Area I
- Area II
- Rural Municipality of Rosser contained within the Airport Vicinity Protection Area



amended 130/2010

This is Exhibit "M" referred to in the Affidavit of Alan A. Borger sworn before me this 18th day of April, 2019.

A handwritten signature in blue ink, appearing to be "Peter J. ...", written over a horizontal line.

A Notary Public in and for
the Province of Manitoba.

Minute No. 300

Report – Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – April 14, 2016

Item No. 1 2016 to 2018 Water and Sewer Rates

COUNCIL DECISION:

Council concurred in the recommendation of the Executive Policy Committee and adopted the following:

1. That a three-year increase to the water rate, based on the amount of water used in cubic metres (m3), be approved effective April 1, 2016, and effective January 1, 2017 and 2018 as follows:

Water	Approved Rate/m3 2015	Recommended Rate/m3 2016	Recommended Rate/m3 2017	Recommended Rate/m3 2018
Rate (0–272 m3/quarter)	\$1.45	\$1.63	\$1.78	\$1.82
Rate (over 272 m3/quarter)	\$1.38	\$1.63	\$1.78	\$1.82

2. That a three-year increase to the sewer rate, based on the amount of water used in cubic metres (m3), including the amount allocated for the Environmental Projects Reserve (EPR), be approved effective April 1, 2016, and effective January 1, 2017 and 2018:

Sewer	Approved Rate/m3 2015	Recommended Rate/m3 2016	Recommended Rate/m3 2017	Recommended Rate/m3 2018
Rate (m3/quarter)	\$2.28	\$2.40	\$2.55	\$2.80
Allocated to EPR	\$0.28	\$0.31	\$0.31	\$0.40

Report – Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – April 14, 2016

COUNCIL DECISION (continued):

3. That a three-year increase to the daily basic charge rate for all meter sizes be approved effective April 1, 2016, and effective January 1, 2017 and 2018.

Meter Size (inches)	Approved Rate / day 2015	Recommended Rate / day 2016	Recommended Rate / day 2017	Recommended Rate / day 2018
5/8	\$0.35	\$0.41	\$0.49	\$0.55
3/4	\$0.36	\$0.43	\$0.51	\$0.57
1	\$0.40	\$0.48	\$0.56	\$0.62
1.5	\$0.48	\$0.54	\$0.63	\$0.69
2	\$0.64	\$0.72	\$0.82	\$0.90
3	\$1.86	\$2.01	\$2.21	\$2.39
4	\$2.31	\$2.49	\$2.72	\$2.94
6	\$3.36	\$3.61	\$3.92	\$4.24
8	\$4.56	\$4.88	\$5.29	\$5.71
10	\$5.76	\$6.16	\$6.67	\$7.19
private meter	\$0.30	\$0.36	\$0.44	\$0.50

4. That a three-year increase per kilogram (kg) of overstrength compound Total Suspended Solids (TSS), Total Nitrogen (TN) and Total Phosphorus (TP) be approved effective April 1, 2016, and January 1, 2017 and 2018.

Overstrength Compound	Approved Rate/kg 2015	Recommended Rate/kg 2016	Recommended Rate/kg 2017	Recommended Rate/kg 2018
TSS	\$1.03	\$1.12	\$1.18	\$1.25
TN	\$3.00	\$3.50	\$4.00	\$4.60
TP	\$8.00	\$10.00	\$12.00	\$15.00

Report – Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – April 14, 2016

COUNCIL DECISION (continued):

5. That a per property buy-in charge for service sharing agreements for the years 2016 to 2018 and retroactive for year 2015, be approved based on water meter size in inches or equivalent maximum water demand (MWD) in litres per second (l/s). Retroactive approval is requested for 2015 as service sharing agreements in place for 2015 will be billed a buy-in charge in the first quarter of 2016.

Sewer Services Buy-In Charge 2015		Recommended Rate/property 2015	Recommended Rate/property 2016	Recommended Rate/property 2017	Recommended Rate/property 2018
Water Meter Size (inches)	MWD (litres/sec)				
5/8"	0.0-0.9	\$2,300	\$2,350	\$2,400	\$2,450
3/4"	0.91-1.3	\$3,400	\$3,500	\$3,550	\$3,600
1"	1.31-2.4	\$5,700	\$5,800	\$5,900	\$6,000
1 1/2"	2.41-3.8	\$11,400	\$11,700	\$11,900	\$12,100
2"	3.81-7.6	\$18,200	\$18,600	\$19,000	\$19,300
3"	> 7.6	\$34,100	\$34,800	\$35,500	\$36,200

6. 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 – April 14, 2016

DECISION MAKING HISTORY:

Moved by Councillor Mayes,

That the recommendation of the Executive Policy Committee be adopted.

In amendment,

Moved by Councillor Schreyer,

Seconded by Councillor Wyatt,

WHEREAS the City's sewage treatment system has allowed millions of litres of raw sewage to enter into Winnipeg's rivers in recent years;

AND WHEREAS the City acknowledges that the Province has ordered the City to upgrade the North End Water Control Centre, along with other city wide upgrades to the water and waste systems;

AND WHEREAS the increase in water rates has been justified by City officials due to the necessity of the City to upgrade its North End sewage plant and to implement its entire Capital Program;

AND WHEREAS the City's water utility is proposing a substantial increase its water rates over the next three years;

AND WHEREAS the percentage rebate/dividend that is paid to the City of Winnipeg by the Water and Waste Utility of City was increased from 8 percent to 12 percent in 2015;

AND WHEREAS it is projected that \$32 million, a historic high amount, will be paid to the City of Winnipeg by the City's Water and Waste Utility and their customers;

THEREFORE BE IT RESOLVED THAT the City of Winnipeg request the Province of Manitoba to refer to the Public Utilities Board (PUB) and call public hearings on the following:

- A) The proposed Water and Sewer Rate Increases of 2016, 2017, and 2018;
- B) The approved 'dividend' from the Water and Waste Department to the Operating/Capital Budget of the City of Winnipeg;
- C) The Capital Budget Program of Water and Waste, both 2016 Capital Budget and the 5 Year Forecast 2017 to 2021;

Report – Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – April 14, 2016

DECISION MAKING HISTORY (continued):

- D) The environmental regulatory obligations on the City of Winnipeg in regard to its Water and Waste systems;
- E) The Business Plans and all Capital project strategies/plans of the Water and Waste Department;
- F) Options for Provincial and Federal Funding of the regulatory capital program requirements.

In amendment to the amendment,

Moved by Councillor Schreyer,
Seconded by Councillor Wyatt,

THAT the resolution of the Notice of Motion being considered as an amendment to Item No. 1 of the Report of the Standing Policy Committee on Water and Waste, Riverbank Management and the Environment be replaced by the following:

THEREFORE BE IT RESOLVED THAT the City of Winnipeg request the Province of Manitoba to refer to the Public Utilities Board (PUB) and call public hearings on the following:

- A) The proposed Water and Sewer Rate Increases of 2016, 2017, and 2018 and all associated budgets.
- ~~B) The approved 'dividend' from the Water and Waste Department to the Operating/Capital Budget of the City of Winnipeg;~~
- ~~C) The Capital Budget Program of Water and Waste, both 2016 Capital Budget and the 5 Year Forecast 2017 to 2021;~~
- ~~D) The environmental regulatory obligations on the City of Winnipeg in regard to its Water and Waste systems;~~
- ~~E) The Business Plans and all Capital project strategies/plans of the Water and Waste Department;~~
- ~~F) Options for Provincial and Federal Funding of the regulatory capital program requirements.~~

The amendment to the amendment moved by Councillor Schreyer and seconded by Councillor Wyatt was put.

Report – Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – April 14, 2016

DECISION MAKING HISTORY (continued):

Councillor Gerbasi called for the yeas and nays, as follows:

Yea: Councillors Allard, Dobson, Eadie, Schreyer and Wyatt 5

Nay: His Worship Mayor Bowman, Councillors Browaty, Gerbasi, Gillingham, Gilroy, Lukes, Mayes, Morantz, Orlikow, Pagtakhan, and Sharma. 11

and the amendment to the amendment moved by Councillor Schreyer and seconded by Councillor Wyatt was declared lost.

The amendment moved by Councillor Schreyer and seconded by Councillor Wyatt was put.

Councillor Wyatt called for the yeas and nays, as follows:

Yea: Councillors Schreyer and Wyatt 2

Nay: His Worship Mayor Bowman, Councillors Allard, Browaty, Dobson, Eadie, Gerbasi, Gillingham, Gilroy, Lukes, Mayes, Morantz, Orlikow, Pagtakhan, and Sharma. 14

and the amendment moved by Councillor Schreyer and seconded by Councillor Wyatt, tabled as an amendment to this item, was declared lost.

The motion for adoption of the item was put.

Councillor Eadie called for the yeas and nays, as follows:

Yea: His Worship Mayor Bowman, Councillors Browaty, Gerbasi, Gillingham, Gilroy, Lukes, Mayes, Morantz, Orlikow, Pagtakhan, and Sharma. 11

Nay: Councillors Allard, Dobson, Eadie, Schreyer and Wyatt 5

and the motion for adoption of the item was declared carried.

Report – Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – April 14, 2016

DECISION MAKING HISTORY (continued):

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

On April 20, 2016, the Executive Policy Committee concurred in the recommendation of the Winnipeg Public Service and submitted the matter to Council.

Further on April 20, 2016, Peter Miller, Volunteer at Green Action Centre, submitted a presentation titled “Responsible and Smart Waste Management and Sustainable Budgeting” with respect to the matter.

STANDING COMMITTEE RECOMMENDATION:

On April 14, 2016, 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.

On March 4, 2016, the Standing Policy Committee on Water and Waste, Riverbank Management and the Environment laid over the matter to its meeting on April 14, 2016.

Further on March 4, 2016, the Winnipeg Public Service submitted a presentation titled “Water and Waste Department 2016-2018 Water and Sewer Rates” dated March 4, 2016 with respect to the matter.

ADMINISTRATIVE REPORT

ISSUE: 2016 to 2018 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 Acting Manager, Finance and Administration	M. L. Geer, CPA, CA Acting Director, Water and Waste Department	M. Ruta	D. McNeil

RECOMMENDATIONS

- Council approve a three-year increase to the water rate, based on the amount of water used in cubic metres (m3), effective April 1, 2016, and effective January 1, 2017 and 2018 as follows:

Water	Approved Rate/m3 2015	Recommended Rate/m3 2016	Recommended Rate/m3 2017	Recommended Rate/m3 2018
Rate (0–272 m3/quarter)	\$1.45	\$1.63	\$1.78	\$1.82
Rate (over 272 m3/quarter)	\$1.38	\$1.63	\$1.78	\$1.82

- Council approve a three-year increase to the sewer rate, based on the amount of water used in cubic metres (m3), including the amount allocated for the Environmental Projects Reserve (EPR), effective April 1, 2016, and effective January 1, 2017 and 2018:

Sewer	Approved Rate/m3 2015	Recommended Rate/m3 2016	Recommended Rate/m3 2017	Recommended Rate/m3 2018
Rate (m3/quarter)	\$2.28	\$2.40	\$2.55	\$2.80
Allocated to EPR	\$0.28	\$0.31	\$0.31	\$0.40

Council Minutes – April 27, 2016

3. Council approve a three-year increase to the daily basic charge rate for all meter sizes effective April 1, 2016, and effective January 1, 2017 and 2018.

Meter Size (inches)	Approved Rate / day 2015	Recommended Rate / day 2016	Recommended Rate / day 2017	Recommended Rate / day 2018
5/8	\$0.35	\$0.41	\$0.49	\$0.55
3/4	\$0.36	\$0.43	\$0.51	\$0.57
1	\$0.40	\$0.48	\$0.56	\$0.62
1.5	\$0.48	\$0.54	\$0.63	\$0.69
2	\$0.64	\$0.72	\$0.82	\$0.90
3	\$1.86	\$2.01	\$2.21	\$2.39
4	\$2.31	\$2.49	\$2.72	\$2.94
6	\$3.36	\$3.61	\$3.92	\$4.24
8	\$4.56	\$4.88	\$5.29	\$5.71
10	\$5.76	\$6.16	\$6.67	\$7.19
private meter	\$0.30	\$0.36	\$0.44	\$0.50

4. Council approve a three-year increase per kilogram (kg) of overstrength compound Total Suspended Solids (TSS), Total Nitrogen (TN) and Total Phosphorus (TP) effective April 1, 2016, and January 1, 2017 and 2018.

Overstrength Compound	Approved Rate/kg 2015	Recommended Rate/kg 2016	Recommended Rate/kg 2017	Recommended Rate/kg 2018
TSS	\$1.03	\$1.12	\$1.18	\$1.25
TN	\$3.00	\$3.50	\$4.00	\$4.60
TP	\$8.00	\$10.00	\$12.00	\$15.00

5. Council approve a per property buy-in charge for service sharing agreements for the years 2016 to 2018 and retroactive for year 2015, based on water meter size in inches or equivalent maximum water demand (MWD) in litres per second (l/s). Retroactive approval is requested for 2015 as service sharing agreements in place for 2015 will be billed a buy-in charge in the first quarter of 2016.

Sewer Services Buy-In Charge 2015		Recommend ed Rate/property 2015	Recommend ed Rate/property 2016	Recommend ed Rate/property 2017	Recommend ed Rate/property 2018
Water Meter Size (inches)	MWD (litres/sec)				
5/8"	0.0-0.9	\$2,300	\$2,350	\$2,400	\$2,450
3/4"	0.91-1.3	\$3,400	\$3,500	\$3,550	\$3,600
1"	1.31-2.4	\$5,700	\$5,800	\$5,900	\$6,000
1 1/2"	2.41-3.8	\$11,400	\$11,700	\$11,900	\$12,100
2"	3.81-7.6	\$18,200	\$18,600	\$19,000	\$19,300
3"	> 7.6	\$34,100	\$34,800	\$35,500	\$36,200

REASON FOR THE REPORT

Changes to the water, sewer, daily basic and overstrength rates, and service sharing buy-in charges require Council approval.

EXECUTIVE SUMMARY

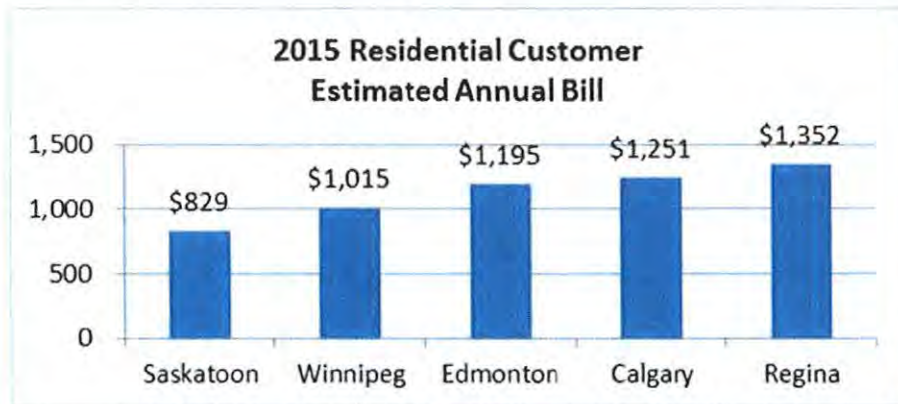
Water – Sewer – Daily Basic Rates: Recommended is a three-year increase for water, sewer and daily basic rates effective April 1, 2016, and January 1, 2017 and 2018 which applies to all customers.

For a residential customer (assumed family of four) with a quarterly consumption of 60 cubic metres, recommended water and sewer rates result in a 9.2%, 8.9% and 7.4% impact or estimated increase in the quarterly water bill of approximately \$23, \$25 and \$23, for 2016 to 2018 respectively.

For 2016, the recommended increase for residential customers is approximately 25 cents per day. A litre of water would cost less than one-half of a penny.

Residential customer quarterly bill (60 m3 per quarter family of 4)				
	2015	2016	2017	2018
Water	\$87	\$98	\$107	\$109
Sewer	\$137	\$144	\$153	\$168
DBC	\$32	\$37	\$44	\$50
Total Quarterly Bill	\$256	\$279	\$304	\$327
Overall \$ Change		\$23	\$25	\$23
Overall % Change		9.2%	8.9%	7.4%

Comparison to Other Canadian Cities: Winnipeg’s water and sewer rates encompass funding for fire supply, land drainage and infrastructure while many other cities have separate rates on the utility bills for these services. Combining known components of water and sewer 2015 rates, Winnipeg’s remains competitive to other cities of similar size. (Appendix H)

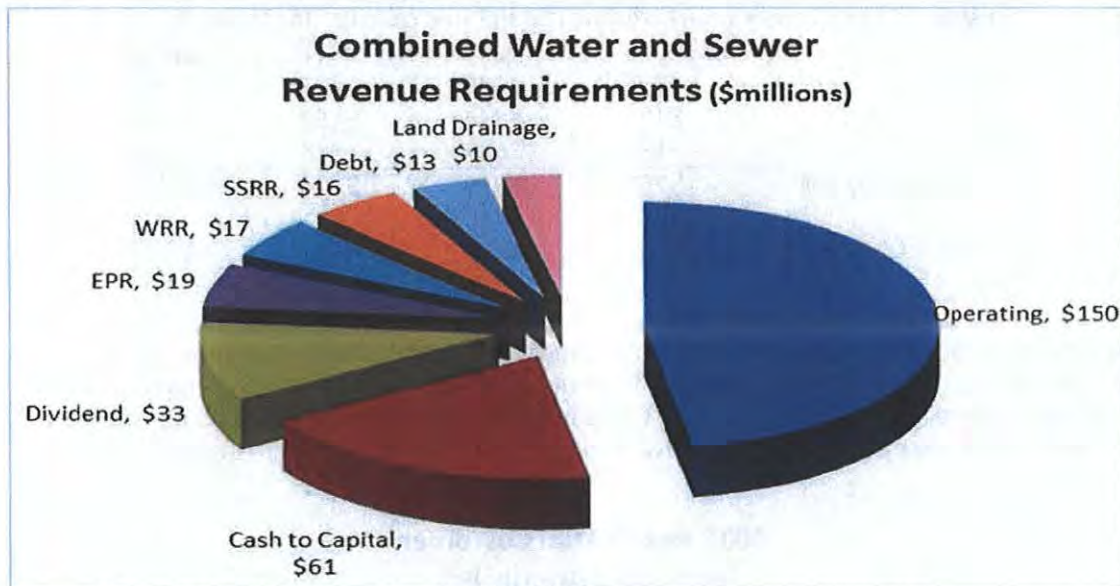


Overstrength Charges: The recommended increases in overstrength charges only apply to business/industrial customers who discharge effluent above established limits and must pay for the cost of additional treatment. Recommended is a three-year increase in total suspended

solids (TSS), total nitrogen (TN) and total phosphorus (TP) rates effective April 1, 2016, and effective January 1, 2017 and 2018. Costs associated with TSS, TN and TP are currently being subsidized by the volume sewer rate payer. The recommended increase in rates is required to move toward full cost of recovery for these services which is expected in the year 2020.

Service Sharing Buy-In Charge: Recommended is a buy-in charge for service sharing agreements for the years 2016 to 2018 and retroactive for year 2015. The buy-in charge will be in effect for service sharing agreements in place and to be billed for years 2015 to 2018. 2015 is the first year that requires billing of provisions to the municipalities with approved service sharing agreements.

Revenue Requirements: For 2016, total water and sewer revenue requirements are estimated at \$318.3 million and will fund cash to capital spending, transfers to reserves, transfer to land drainage, operating cost, debt servicing, and the dividend.



Note: Reflects 12 months of cost requirements.

Internal Practices Review: In 2015, the Department undertook a comprehensive evaluation of the cost of service (COS) rate model, assumptions and procedures to review best practices, and ensure model accuracy. Practices include contributions and balances in reserves, debt limits, financial stability targets, capital cash flow spending, and dividends. The 2016 rate model balances approved practices, COS principles and industry recommended practices where possible, which equate what customers pay for and the benefit they receive, to affordability, with the aim of minimizing customer impact in the years 2016 to 2018.

The rate increases recommended in the 2016 rate report are influenced by the following:

- The 10-year financial plan reflects spending for required capital investment in water and sewer infrastructure where approximately 84% is driven by direct or indirect licencing requirements.
- Dividend of 12% of gross water and sewer sales, an estimated \$416 million over the 10-year financial plan.
- Continued decrease in water consumption. A decrease in consumption correlates to an increase in rates in the short term.

In order to reduce the impact of rate increases, the Department has undertaken the following:

- Maintain a maximum sewer system renewal reserve (SSRR) balance of between \$3 million and \$5 million. Council adopted practice for SSRR maximum ending balances is equal to subsequent year's projected funding requirements, or approximately \$18 million to \$24 million.
- Maintain a maximum water main renewal reserve (WRR) balance of between \$1 million and \$4 million. Council adopted practice for WRR maximum ending balances is equal to subsequent year's projected funding requirements, or approximately \$16 million to \$26 million.
- Reduce working capital target from 11% to 8% of combined water and sewer sales, or between 40 to 60 days operations and maintenance. This may impact the utilities ability to absorb the cost of significant unplanned events, like the winter 2013 to 2014 frozen services event.
- Deferral in growth-oriented and select maintenance capital projects. These deferrals will not impact water quality, effluent quality, public health or the department's ability to meet regulatory requirements.

The Public Service will report back annually on the utility's current and projected financial status given approved rates. If there is a significant change to assumptions used in the 10-year financial plan, an adjustment to the utility rates may be recommended.

IMPLICATIONS OF THE RECOMMENDATIONS

The cost of Winnipeg's high quality water and sewer services remains affordable at less than one half of a cent per litre (2016 recommended rates). In the short term, rates will increase to support transfers and fixed maintenance costs, regulatory-driven capital investment, and dividends. Longer term rates are forecast to increase nearer to inflation.

The Department continues to move towards full cost recovery of the City's water, sewer, daily basic, and overstrength charges. Water and sewer rates reflect full cost and 2016 will be the first year for a uniform water rate. Daily basic charge will reach cost of service in 2019. Overstrength charges are expected to approach full cost in 2020.

HISTORY / DISCUSSION

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

A. WHAT IS THE PROCESS

The Department employs industry standard best practices to establish water and sewer rates. The rate making process utilizes cost of service (COS) principles which supports prevailing methods of funding services, and provides a defensible correlation between what customers pay for and the benefit they receive.

The Department is recommending a three-year rate approval, a process which is common practice in Canada, supports transparency and consistency for our customers, and provides financial stability for the utility. Bond rating agencies look more favourably upon utilities which have adopted multi-year plans as it demonstrates a commitment to the financial planning process.

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 licencing agreements. The water and sewer utility is self-supporting, and must plan to ensure uninterrupted customer service. Maintaining financial stability in order to provide essential services is the main driver of rate change. A discussion of rate drivers, practices and assumptions includes the following:

1. Consumption
2. Revenue Requirements
3. Debt Servicing
4. Capital Spending
5. Reserve Balances
6. Dividends
7. Financial Stability

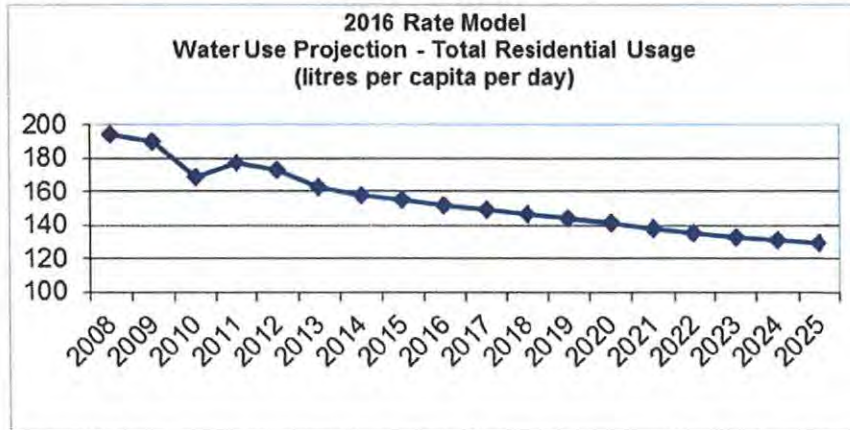
1. Consumption

Winnipeggers continue to embrace water conservation practices. Conservation can eliminate the need for costly expansion of existing infrastructure. Winnipeg's projected total residential trend usage reflects declining per capita consumption. This is consistent with cities surveyed across North America. (Appendix A)

Winnipeg's population growth is expected to rise steadily over the next 10 years (StatsCan 2015).

The reduction in overall consumption due to technology (water saving devices) and regulatory requirements is expected to surpass population growth for the majority of the 10-year financial

model. For rate making purposes, water consumption is estimated to continue to decline at an estimated 0.2% per year until approximately 2024. At that time it is expected that declines in water usage due to technology will reach a plateau, and population growth will begin to drive increasing consumption.

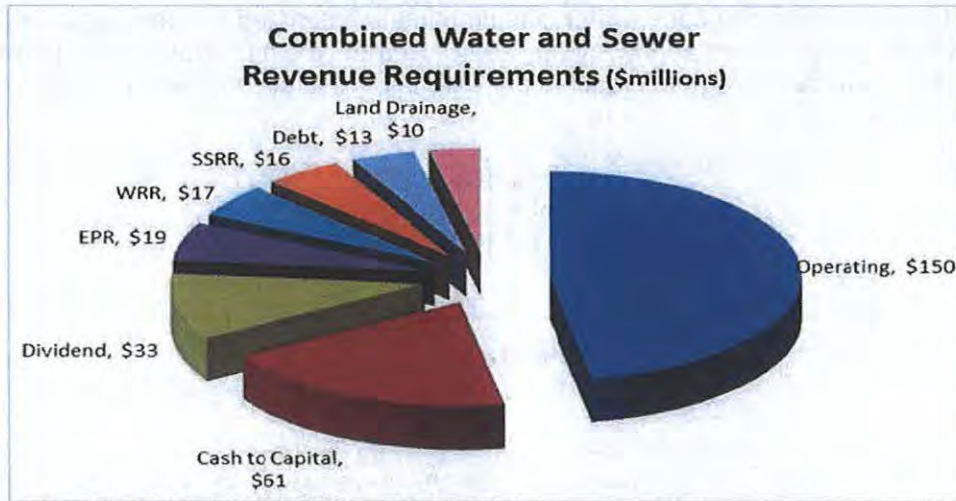


Forecasting a decline in consumption is consistent with research on water planning for the Winnipeg area as per AECOM Regional Water Supply Conceptual Planning Study Update, February 2011.

In addition, *Advances in Water Research*, a Water Research Foundation Publication on Sustainability, indicates that household indoor water use has decreased by 22% since 1999. The majority of the decrease is attributable to toilets and clothes washers. (Appendix B)

2. Revenue Requirements

For 2016, total water and sewer revenue requirements are estimated at \$318.3 million and will fund cash to capital spending, transfers to reserves, transfer to land drainage, operating cost, debt servicing, and the dividend.



Note: Reflects 12 months of cost requirements.

3. Debt Servicing

The Department adheres to the City Council approved Debt Strategy as approved October 28, 2015. The strategy includes measures of affordability for the self-supporting utilities and the City of Winnipeg overall. 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%. The department's 10-year financial plan for debt ranges between 6% and 14% of revenue, and is within the water and sewer utility targets established by Council.

The Department utilizes debt funding for capital projects. Through the capital budget process, a comprehensive funding plan is prepared which seeks to maximize the use of limited resources while minimizing the impact to ratepayers. Balancing debt and equity funding manages the impact on short term rate increases, supports intergenerational equity and is viewed favourably by the credit rating agencies.

4. Capital Spending

Capital improvement programs are funded through a combination of debt, reserves, cash to capital and other levels of government. Federal and provincial funding totaling \$267 million is available for wastewater treatment expansion and upgrade related projects. There is currently no federal funding for the North End Sewage Treatment Plant Nutrient Removal Upgrade project. There are no federal or provincial funding agreements for the Biosolids or Combined Sewer Overflow (CSO) projects to date.

Capital spending directly impacts the timing of rate increases and the ability for the utility to maintain financial stability targets. In order to adhere to City Council's debt strategy and mitigate required rate increases, the Department is recommending a deferral and decrease in certain capital projects. These proposed revisions are for projects targeted at growth or deemed to not have extreme consequences of deferring maintenance. These recommended changes will hold the projected borrowing at \$605 million and will reduce the 2016 to 2019 cash

flow requirements for cash to capital funded projects by \$42.1 million through deferral of projects. (Appendix C)

The capital budget reflects increases required to meet planned water, sewer and land drainage projects. Changes to provincially mandated projects may affect funding requirements and rates.

5. Reserve Balances

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 Program. Capital projects consist of biological nutrient removal and upgrades at the North End and South End Sewage Treatment Plants, Biosolids Management and CSO control.

Basement flood relief, formerly funded by Sewer System Rehabilitation Reserve programming, is now being treated as a component of CSO mitigation. As of 2016 all CSO related works, including \$10.3 million in basement flood relief, will be funded through the EPR.

The capital program integrates a sustainable funding strategy that utilizes a combination of debt, equity and funding from the provincial and federal governments. The use of multiple funding sources supports intergenerational equity by helping to reduce short-term increases to the sewer rate, and taking advantage of favourable interest rates for borrowing. Timing of capital project implementation or changes to licencing requirements may impact reserve contributions. Contributions are forecast to increase and still comply with the City debt strategy as approved by Council on October 28, 2015.

**Sewer Utility Environmental Projects
Capital Spending and Financing Schedule \$000s**

Year	Annual Capital Expenditure	Project Financing				
		Volume Rate ¹	Fed/Prov	Debt	Retained Earnings	Total
To 2014	151,015	195,673	34,507	-	28,012	258,192
2015	61,574	18,312	6,600	-	34,068	58,980
2016	94,816	19,004	15,000	-	52,793	86,797
2017	153,596	18,870	19,000	32,752	20,581	91,203
2018	214,789	23,561	22,031	124,278	44,919	214,789
2019	163,455	32,152	26,400	104,904	-	163,456
2020	191,719	33,330	26,800	123,589	8,000	191,719
2021	192,260	33,298	25,630	126,332	7,000	192,260
2022	160,799	32,219	35,726	92,854	-	160,799
2023	63,568	28,885	34,400	283	-	63,568
2024	44,712	23,725	20,906	-	-	44,631
2025	23,076	23,076	-	-	-	23,076
2026	30,000	20,000	-	-	-	20,000
2027	30,000	20,000	-	-	-	20,000
2028	30,000	20,000	-	-	-	20,000
2029	30,000	26,000	-	-	-	26,000
2030	30,000	30,000	-	-	-	30,000
2031	30,000	30,000	-	-	-	30,000
2032	30,000	30,000	-	-	-	30,000
2033	30,000	30,000	-	-	-	30,000
2034	30,000	30,000	-	-	-	30,000
Total 10-year 2016-2025	1,302,790	268,119	225,893	604,992	133,293	1,232,297
Total to 2025	1,515,379	482,104	267,000	604,992	195,373	1,549,469
Total to 2034	1,785,379	718,104	267,000	604,992	195,373	1,785,469

¹ Includes Interest

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

- Federal/Provincial: Total funding is expected at \$267 million, \$50 million in federal/provincial funding as secured under a Canada Strategic Infrastructure Fund Agreement, \$206 million from the Province as announced in the 2007 Throne Speech, and \$11 million from the Federal Green Infrastructure Fund. Federal/provincial funding for the current 10-year financial plan is estimated at \$226 million.
- Any additional funding from other levels of government as was recommended in the 2003 Clean Environment Commission report would mitigate rate increases.
- The 10-year financial plan does not include an additional \$100M in provincial funding announced in the 2015 Throne Speech as there is currently insufficient information regarding the details of the proposal.
- Sewer rate includes a per cubic meter of consumption allocation (\$0.31/m³ for 2016 to 2017 and \$0.40/m³ for 2019) that is dedicated to funding the EPR projects. Funding for the 10-year financial plan is estimated at \$268 million.
- Debt funding is estimated at \$605M and falls within the City's overall debt strategy.

Contributions to the EPR will approximate the portion of subsequent year's pay-as-you-go funding requirements. Council approved practices edict 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 plant upgrades are complete, rate contributions will match planned capital spending to meet anticipated ongoing program needs (CSO mitigation). Approved practices state that the maximum ending balance in the EPR in any fiscal year can be approximately equal to the subsequent year's projected funding requirements. This will support the pay-as-you-go philosophy whereas ongoing infrastructure renewal capital projects are financed using cash to capital to the extent possible.

In order to minimize the impact of rate increases, the current 10-year financial plan anticipates a near zero ending balance in the EPR beginning 2017. The Department will monitor reserve balances and adjust future contributions according to established reserve practices and project requirements.

b. Sewer System Rehabilitation Reserve (SSRR):

As of 2016 the SSRR supports the sewer renewal program as set forth in the Department's Asset Management Program. SSRR will no longer fund basement flood relief. Basement flood relief is a component of CSO mitigation which is funded by the EPR. As of 2016 all CSO related works will be funded through the EPR.

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 maintain a maximum SSRR balance of between \$3 million and \$5 million. The Department will monitor reserve balances and adjust contributions according to anticipated program requirements, and not exceed maximum limits. The Department acknowledges that there is risk in maintaining reserve balances that may not sustain emergency situations.

c. Watermain Renewal Reserve (WRR)

The WRR supports the renewal of watermains as set forth in the Department's Asset Management Program.

The 10-year financial plan incorporates funding from water rates. Timing of capital project implementation may impact reserve contributions. Annual contributions to the WRR 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 WRR 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 maintain a maximum WRR balance of between \$1 million and \$4 million. The Department will monitor reserve balances and adjust contributions according to anticipated program requirements, and not exceed maximum limits. The Department acknowledges that there is risk in maintaining reserve balances that may not sustain emergency situations.

6. Dividends

Based on the recommended three-year rate increases, the Water and Waste Department is expected to pay the following dividends:

	Budget	Proposed		
	\$000s	\$000s		
	2015	2016 ¹	2017	2018
Water	\$12,435	\$13,326	\$14,948	\$15,494
Sewer	\$18,296	\$18,848	\$20,652	\$22,728
Total	\$30,731	\$32,174	\$35,600	\$38,222

¹ Includes impact of 3 months delay in approving 2016 water and sewer rates.

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 amended and the annual dividend payment to the City increase from 8% to 12% of budgeted gross water and sewer sales. The 10-year financial plan assumes no change to the 12% rate.

Utility dividend policies, where identified, are typical within cities surveyed in Canada. Benchmarking data indicates an increasing trend to cap or limit dividends in order to minimize the impact of rate increases. (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. Historically, the Department planned for a target of 11% of the combined water and sewer sales (approximately 60 to 120 days cash on hand) which is considered within normal for industry and rated as good by bond rating agencies (Standard & Poor's). In order to minimize the impact of rate increases, the Department is recommending adoption of a combined working capital target of 8% or between 30 to 60 days cash and investments on hand. Bond rating agencies rate this level of liquidity as adequate.

For the years 2016 to 2018, the working capital target will reach 7% and increase to 8% over the 10-year model. Should the utility experience unplanned emergency events, there is a risk that further rate increases might be requested.

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

- 8. Water Rate
- 9. Sewer Rate
- 10. Daily Basic Charge
- 11. Overstrength Rate
- 12. Customer Impact
- 13. Service Sharing Buy-In Charge

8. Water Rate

Year 2016 is the first year of a uniform water rate for all customers. The water rates are increasing primarily due to inflation and dividends.

Recommended is a three-year increase to the water rate, based on the amount of water used in cubic metres (m3), effective April 1, 2016, and effective January 1, 2017 and 2018.

	Approved Rate/m3 2015	Recommended Rate/m3 2016	Recommended Rate/m3 2017	Recommended Rate/m3 2018
Rate (0-272 m3/quarter)	\$1.45	\$1.63	\$1.78	\$1.82
Rate (over 272 m3/quarter)	\$1.38	\$1.63	\$1.78	\$1.82

Uniform water rates are more suitable from both a water conservation and cost of service standpoint, and are reflective of industry standard (Appendix A). The move to a uniform water rate is supported given the historical change in customers' consumption patterns. The trend across North America, including Winnipeg, is that water usage patterns are fairly consistent across customer types and there is no longer a basis to charge different rates based upon variations in peak demands.

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; cash to capital for planned capital projects funded by retained earnings; other transfers to support recreational water use; and the dividend.

A 10-year cost requirement summary can be found in Appendix E.

9. Sewer Rate

The sewer rate is increasing primarily due to the \$1.3 billion in sewage treatment improvements of which \$1.1 billion are associated either directly or indirectly with provincially mandated licencing requirements, and dividends.

Recommended is a three-year increase to the sewer rate, based on the amount of water used in cubic metres (m3) effective April 1, 2016, and effective January 1, 2017 and 2018. The sewer rate includes an allocation to fund a transfer to the Environmental Projects Reserve (EPR).

	Approved Rate/m3 2015	Recommended Rate/m3 2016	Recommended Rate/m3 2017	Recommended Rate/m3 2018
Rate (m3/quarter)	\$2.28	\$2.40	\$2.55	\$2.80
Allocated to EPR	\$0.28	\$0.31	\$0.31	\$0.40

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; cash to capital for planned capital projects funded by retained earnings; transfer to support land drainage and flood control; and the dividend.

A 10-year rate requirement summary can be found in Appendix F.

10. Daily Basic Service Charge (DBC)

Recommended is a three-year increase in the daily basic service charge (DBC) rate for all meter sizes effective April 1, 2016, and effective January 1, 2017 and 2018. Billed on a daily rate, this charge is based on meter size and covers the fixed cost of water meters (including maintenance and reading), Water Bill Inquiry (WBI) customer contact centre, and billing and production costs.

The DBC is increasing as part of a multi-year strategy to phase in full cost recovery of this service by the year 2019. For a residential customer with a 5/8 inch meter, the increase would be \$0.06, \$0.08, and \$0.06 per day or an estimated annual cost of \$151, \$179 and \$199 for years 2016 to 2018 respectively.

11. Overstrength Sewage Rates

Recommended is an increase to the Total Suspended Solids (TSS), Total Nitrogen (TN) and Total Phosphorus (TP) effective April 1, 2016, and effective January 1, 2017 and 2018.

Compound (per kilogram)	Approved 2015	Recommended 2016	Recommended 2017	Recommended 2018
Total Suspended Solids (TSS)	\$1.03	\$1.12	\$1.18	\$1.25
Total Nitrogen (TN)	\$3.00	\$3.50	\$4.00	\$4.60
Total Phosphorus (TP)	\$8.00	\$10.00	\$12.00	\$15.00

The provincially issued Environment Act Licences for the sewage treatment plants stipulate effluent limits for BOD, TSS, nitrogen and phosphorus.

Costs associated with TSS, TN and TP are currently being subsidized by the volume sewer rate. The recommended increase in rates is required to move toward full cost of recovery for these services such that those customers who discharge overstrength effluent are paying for the additional costs to treat. Increases are being phased in over a multi-year period and approach cost of service in the year 2020.

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Overstrength Industry 10250 cubic meters ¹	Approved 2015	Recommended 2016	Recommended 2017	Recommended 2018
Quarterly TSS surcharge (627 mg/L)	\$2,924	\$3,180	\$3,350	\$3,549
Dollar increase per quarter		\$256	\$170	\$199
Quarterly TN surcharge (108 mg/L)	\$1,476	\$1,722	\$1,968	\$2,263
Dollar increase per quarter		\$246	\$246	\$295
Quarterly TP surcharge (24.6 mg/L)	\$1,197	\$1,497	\$1,796	\$2,245
Dollar increase per quarter		\$299	\$299	\$449

¹ Large Volume Sewer Discount program provides for a 30% cost reduction for qualifying customers.

12. Customer Impact

For a residential customer (assume family of four) using 240 cubic meters of water per year, recommended rate increases would result in an estimated 9.2%, 8.9%, and 7.4% impact for years 2016 to 2018 respectively. (Appendix G).

Quarterly Bill					
	m3 per quarter	2015	2016	Change \$	%
Residential	60	\$256	\$279	\$23	9.2%
Small Business	400	\$1,541	\$1,677	\$136	8.9%
Large Business	4,425	\$16,382	\$18,016	\$1,634	10.0%
Overstrength Business	125,000	\$351,941	\$393,339	\$41,398	11.8%
Quarterly Bill					
	m3 per quarter	2016	2017	Change \$	%
Residential	60	\$279	\$304	\$25	8.9%
Small Business	400	\$1,677	\$1,806	\$129	7.7%
Large Business	4,425	\$18,016	\$19,361	\$1,345	7.5%
Overstrength Business	125,000	\$393,339	\$424,346	\$31,007	7.9%
Quarterly Bill					
	m3 per quarter	2017	2018	Change \$	%
Residential	60	\$304	\$327	\$23	7.4%
Small Business	400	\$1,806	\$1,930	\$123	6.8%
Large Business	4,425	\$19,361	\$20,661	\$1,300	6.7%
Overstrength Business	125,000	\$424,346	\$449,383	\$25,037	5.9%

Decreases in consumption will affect the amount of the water bill. For example, for 2016, if a residential customer is able to utilize water saving devices to reduce consumption to 50 cubic meters per quarter, the estimated quarterly bill would be \$239, a savings of \$40 from a bill of \$279 estimated using 60 cubic meters per quarter.

For 2016, the recommended increase for residential customers is approximately 25 cents per day. A litre of water would cost less than one-half of a penny.

13. 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. Agreements have provisions relating to sewer charges which include: (1) volume rate user fee which is 100% of the sewer rate as adopted by Council and; (2) one-time utility buy-in charge.

Recommended is a buy-in charge for service sharing agreements for the years 2016 to 2018 and retroactive for year 2015. The buy-in charge will be based on a per water meter size in inches or per equivalent maximum water demand (MWD) in litres per second (l/s), and will be in effect for service sharing agreements in place and to be billed for years 2015 to 2018. 2015 is the first year that requires billing of provisions to the municipalities with approved service sharing agreements. Municipalities with services sharing agreements established in 2015 will be billed the buy-in charge in the first quarter of 2016.

Sewer Services Buy-In Charge		Recommended Rate/property 2015	Recommended Rate/property 2016	Recommended Rate/property 2017	Recommended Rate/property 2018
Water Meter Size (inches)	MWD (litres/sec)				
5/8"	0.0-0.9	\$2,300	\$2,350	\$2,400	\$2,450
3/4"	0.91-1.3	\$3,400	\$3,500	\$3,550	\$3,600
1"	1.31-2.4	\$5,700	\$5,800	\$5,900	\$6,000
1 1/2"	2.41-3.8	\$11,400	\$11,700	\$11,900	\$12,100
2"	3.81-7.6	\$18,200	\$18,600	\$19,000	\$19,300
3"	> 7.6	\$34,100	\$34,800	\$35,500	\$36,200

D. WHAT MAY INFLUENCE FUTURE RATES

14. Financial Projection Uncertainties

15. Land Drainage Rate Planning

14. Financial Projection Uncertainties

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

- Consumption: Trends across North America, including Winnipeg, indicate a continued gradual decline of litres per capita per day (LCD) over the next 10 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 plan, this could cause a rate increase; conversely, actual consumption greater than plan could effect a rate decrease or mitigate future increases.
- 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. Risk to the 10-year financial plan is further influenced by:

- North End Sewage Treatment Plant (NEWPCC) Nutrient Removal/Upgrade: NEWPCC is in the early stages of project definition and thus a Class 5 budget estimate. Given the size of the NEWPCC project, a budget variance of +\$100 million is well within the Class 5 estimate tolerance.
 - Biosolids: The final treatment option(s) for the biosolids that are recommended in the Biosolids Master Plan require regulatory approval. They cannot be implemented until the Regulator approves the Biosolids Master Plan and issues appropriate environmental licences. The estimates for this work are based on a Class 5 cost estimate with an expected accuracy range of between -50% and +100%, and will be refined after the Regulator has issued a biosolids licence.
 - Combined Sewer Overflow (CSO): The City is directed by a Provincial Environment Act Licence to review alternatives and recommend a plan to reduce combined sewer discharges to our rivers. It is expected the Province will further clarify the Licence criteria over the next two years and direct the City to implement an action plan in 2018. The preliminary costs for such a program are estimated in the billions with construction activities that could span many years. Depending upon the target completion date and the selected control limits for the works, additional budget may be required to address the CSO Master Plan.
- Economic Development: The City's economic climate can have significant impact on 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.
 - 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 could cause an increase in rates through the operating and capital costs associated with compliance.
 - 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.

15. Land Drainage Rate Planning

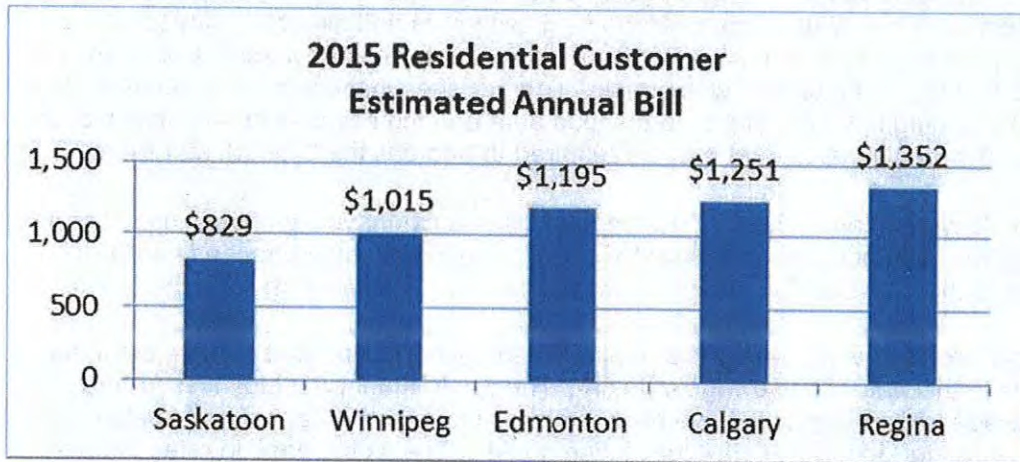
For 2016, the sewer rate will fund \$20.5 million for land drainage and flood control, operating and capital costs, \$10.2 million for land drainage operating costs through a direct transfer from the sewer utility, and \$10.3 million for basement flood relief through transfers to the EPR reserve. Land drainage fees based on the amount of water consumed is not reflective of the cost of those services nor of the benefit a customer receives. Funding land drainage costs using the sewer rate is not consistent with industry practices or cost of service principles. 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 with Council.

E. COMPETITIVENESS

Winnipeg’s combined water and sewer rate remains competitive to other cities of similar size as surveyed using known 2015 rates.

Increases are being driven by more stringent regulatory standards, capital expansion and declining consumption trends. Winnipeg’s water and sewer rates encompass funding for all services including fire supply, land drainage and infrastructure. Many other cities have separate rates on the utility bills for these services. For 2015, combining known fees and charges applied in other cities that are included in Winnipeg water and sewer rates, Winnipeg ranks second out of five cities for affordability for a residential and commercial customer and fourth out of five for a large industrial customer. (Appendix H)



The trend of increasing rates is evident in all cities. From 2014 to 2015, the impact of rate increases in other Canadian Cities ranged from 4.4% to 9.6% for residential customers.

Customer Impact

From year 2014 to year 2015

	Winnipeg	Edmonton	Regina	Saskatoon	Calgary
Residential	4.3%	4.4%	8.0%	9.3%	9.6%
Commercial	3.5%	7.7%	6.7%	4.9%	15.4%
Large Industrial	3.9%	1.4%	7.9%	9.4%	25.6%

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
Website updated with new rates	March 2016
Message imprinted on each water/sewer bill	March-June 2016

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

Strategy	Timeline
Notice to municipalities impacted by rates	March-June 2016

SUBMITTED BY

Water and Waste Department
Finance and Administration Division
Prepared by: Lucy Szkwarek, CPA, CGA
Date: January 28, 2016
File No. 010-07-20-01-00
 010-07-20-02-00

Appendices

The following appendices are attached as additional information:

APPENDIX A	Benchmarking
APPENDIX B	Consumption
APPENDIX C	Capital Projects Program Deferrals
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 Impact Total Bill
APPENDIX H	Competitiveness to Other Canadian Cities

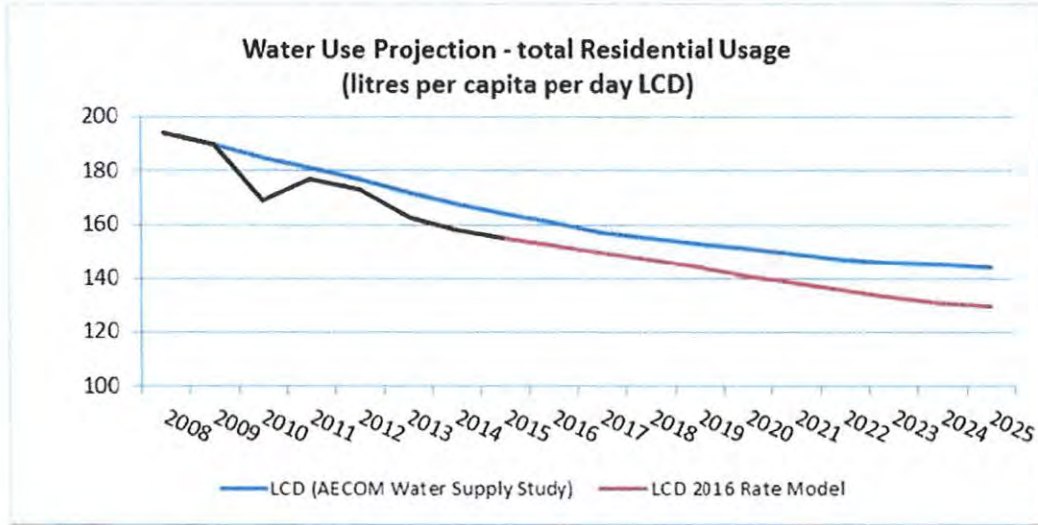
**APPENDIX A
BENCHMARKING**

As at Sept 2015	Winnipeg	Calgary	Edmonton	Regina	Saskatoon
Dividends	Yes 12% budgeted revenue	Yes Dividend capped at \$28.75 for water and \$13.75M for wastewater.	Yes 10.875% as a return on equity.	Yes Franchise Fee 7.5% previous year's budgeted revenue	No currently reviewing return on investment payment
Dividend trends	Increased from 8% to 12% in 2015	Amount is capped and remains unchanged from 2004.	Dividends issued to the extent that each utility's capital structure is maintained at a 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
Capital reserves	Yes	No	Yes	Yes	Yes
Separate land drainage fee	No	Yes	Yes	Yes	Yes
Rates based on COS	Yes	Yes	Yes	Yes	Yes
Frequency of rate approval	3 year	4 year	Annual	2 year	3 year
Property tax payments	Yes Municipal and school tax	Yes Franchise fee 10% of revenue in lieu of Property Tax	Yes Net of 8% franchise fee paid by EPCOR	No Part of dividend	Yes 9% grants in lieu of taxes

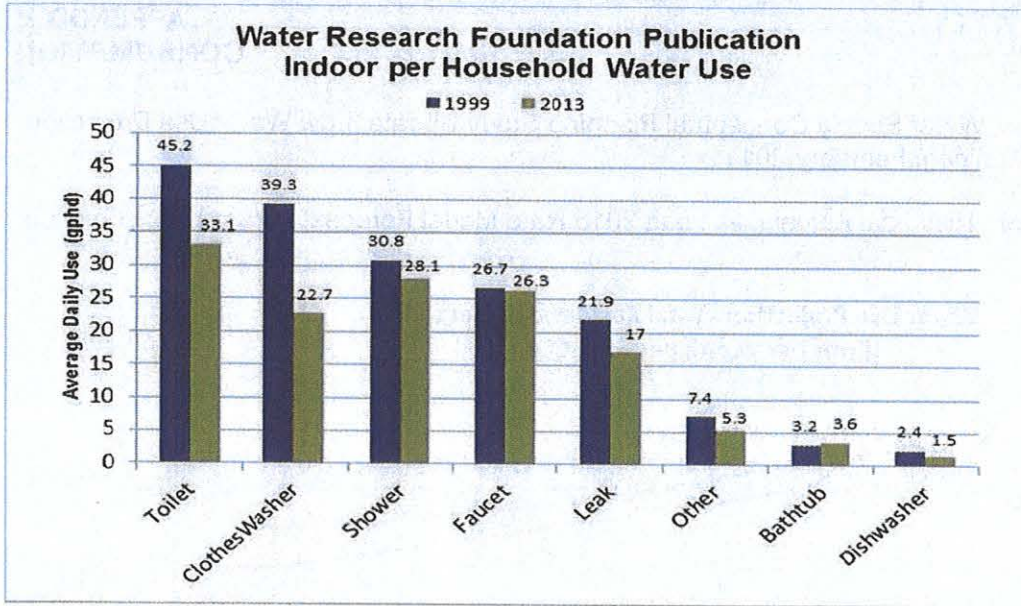
**APPENDIX B
CONSUMPTION**

AECOM Regional Water Supply Conceptual Planning Study Update, Low Water Use Projection for the City of Winnipeg, February 2011

2016 Rate Model - Historical Actual (—) and 2016 Rate Model Forecasted (—) Consumption



Advances in Water Research
Water Research Foundation Publication
Indoor per Household Water Use (gallons per household)
July-September 2015, Vol 25, No 3
Reproduced



Note: Data from WRF project #4309, Residential End Uses of Water Study Update

**APPENDIX C
CAPITAL PROJECT- PROGRAM DEFERRALS**

Water Utility - Deferral/Cancellation of Projects to Save \$5.1M in Cash Flow from 2016 to 2019	
Project or Program Name	Service impact
Transcona Water Main Reliability Study	Delay in improvement in water system redundancy.
Building Renovations - 1199 Pacific Ave	Continued delays in communication between divisions and ongoing operational costs. Added operational and capital costs due to escalation.
Shoal Lake Aqueduct Asset Preservation	Increases timeframe for program delivery; increased risk and non-optimal lifecycle asset management associated with deferring projects.
Tache Booster Pumping Station	Potential inability to balance water demand at the McPhillips Reservoir during an unforeseen emergency operating scenario. Added costs due to escalation and non-optimal project coordination.
Saskatchewan Avenue Water Main	Potential delays in growth/development of OurWinnipeg Precinct 'R'.
Shoal Lake Aqueduct Intake Facility Rehabilitation	Increases timeframe for program delivery; increased risk and non-optimal lifecycle asset management associated with deferring projects.
Sewer Utility - Deferral of Projects to Save \$37M in Cash Flow from 2016 tot 2019	
Project or Program Name	Service impact and/or political pressure
Fernbank Interceptor	Potential delays in development/growth.
Biosolids - Alternative Disposal Delivery and Management System: Land Application	Reduces options for Biosolids management
Combined Sewer Overflow and Basement Flood Management Strategy: Projects	Increases timeframe for CSO mitigation/solution.
Kenaston Boulevard Interceptor	Potential delays in development/growth.
Southwest Interceptor River Crossing	Potential delays in development/growth.

APPENDIX D

WATER AND SEWER UTILITY PRINCIPLES OF OPERATION

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

1. **Cost of Service Rates:** Customers pay water and sewer rates, which represent the operating and capital costs of providing the utility services.
2. **Debt Servicing:** The Utilities' revenues are sufficient to service the Utilities' long-term debt.
3. **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 60 days combined water and sewer Operating and Maintenance (O&M).
4. **Ten Year Financial Plan:** Rates in the Water and Sewer Utilities are planned over a ten-year time frame to mitigate the effects of year over year fluctuations and to coincide with the longer term infrastructure development and renewal planning.
5. **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 by the Utilities are based on an asset management strategy developed by the Utilities and approved through the capital and operating budget processes.
6. **Transfers to the General Revenue Fund:** The Water and Sewer Utilities transfer funds and/or support operations of the General Revenue Fund in the form of support to the Land Drainage program which funds 100% of the costs of this program, and recreational water for City owned splash pads, pools and arenas.
7. **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 our 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 approach for short and long term funding support.
8. **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 2016-2025 (\$000s)										
Waterworks System	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Revenue										
Sales Revenue	113,878	124,571	129,115	132,062	133,808	136,446	139,451	141,461	143,624	146,016
Non Rate Revenue	4,337	4,320	4,534	4,582	4,823	5,075	5,331	5,598	5,876	6,161
Total Revenue	118,215	128,890	133,650	136,644	138,631	141,520	144,782	147,059	149,500	152,177
Expenditures and Appropriations to Capital										
Operating	97,595	99,342	101,664	104,978	107,837	110,744	113,200	115,705	116,963	119,801
Utility Dividend	13,665	14,948	15,494	15,847	16,057	16,373	16,734	16,975	17,235	17,522
Appropriations to Capital	7,346	8,266	8,421	17,291	10,031	12,024	13,832	12,257	12,697	13,205
Total Expenditures and Appropriations to Capital	118,606	122,557	125,579	138,116	133,925	139,142	143,766	144,938	146,894	150,528
Surplus(Deficit)	(391)	6,334	8,071	(1,472)	4,706	2,378	1,016	2,121	2,606	1,649
Opening Working Capital	(10,231)	(10,622)	(4,288)	3,783	2,311	7,017	9,396	10,412	12,533	15,139
Ending Working Capital	(10,622)	(4,288)	3,783	2,311	7,017	9,396	10,412	12,533	15,139	16,788
Water Rate (\$dollars)	1.63	1.78	1.82	1.84	1.86	1.90	1.94	1.96	1.98	2.00
% Change	12.4%	9.2%	2.2%	1.1%	1.1%	2.2%	2.1%	1.0%	1.0%	1.0%
Long-Term Debt Summary										
New debt	-	-	-	-	-	-	-	-	-	-
Debt outstanding closing balance	132,063	127,601	122,941	118,074	112,990	107,681	102,135	96,343	90,293	84,046

Note: Reflects 12 months of cost requirements.

APPENDIX F

SEWAGE DISPOSAL SYSTEM FUND

SEWAGE DISPOSAL SYSTEM FUND										
Financial Projection 2016-2025 (\$000s)										
Sewage Disposal System	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Revenue										
Sales Revenue	159,132	172,101	189,400	205,426	212,281	218,974	231,076	242,957	245,898	247,777
Non Rate Revenue	9,366	9,324	9,377	8,978	9,255	9,622	10,081	10,608	11,136	11,664
Total Revenue	168,498	181,425	198,776	214,404	221,536	228,596	241,158	253,566	257,034	259,441
Expenditures and Appropriations to Capital										
Operating	127,171	136,281	148,125	156,444	170,648	186,580	199,028	201,792	199,462	201,157
Utility Dividend	19,096	20,652	22,728	24,651	25,474	26,277	27,729	29,155	29,508	29,733
Appropriations to Capital	53,396	30,000	34,000	29,438	25,582	17,205	15,000	24,000	28,000	30,000
Total Expenditures and Appropriations to Capital	199,663	186,933	204,853	210,533	221,703	230,062	241,757	254,947	256,970	260,890
Surplus(Deficit)	(31,165)	(5,507)	(6,077)	3,871	(168)	(1,466)	(599)	(1,382)	64	(1,449)
Opening Working Capital	61,027	29,862	24,355	18,278	22,149	21,982	20,516	19,917	18,535	18,599
Ending Working Capital	29,862	24,355	18,278	22,149	21,982	20,516	19,917	18,535	18,599	17,150
Sewer Rate \$dollars	\$2.40	\$2.55	\$2.80	\$3.00	\$3.02	\$3.12	\$3.32	\$3.50	\$3.50	\$3.50
\$ Change	5.3%	6.3%	9.8%	7.1%	0.7%	3.3%	6.4%	5.4%	0.0%	0.0%
Long-Term Debt Summary										
New debt Environmental Projects	-	32,752	124,278	104,904	123,589	126,332	92,854	283	-	-
Debt outstanding closing balance		32,752	156,506	258,898	378,296	498,460	583,124	573,732	564,052	554,372

Note: Reflects 12 months of cost requirements.

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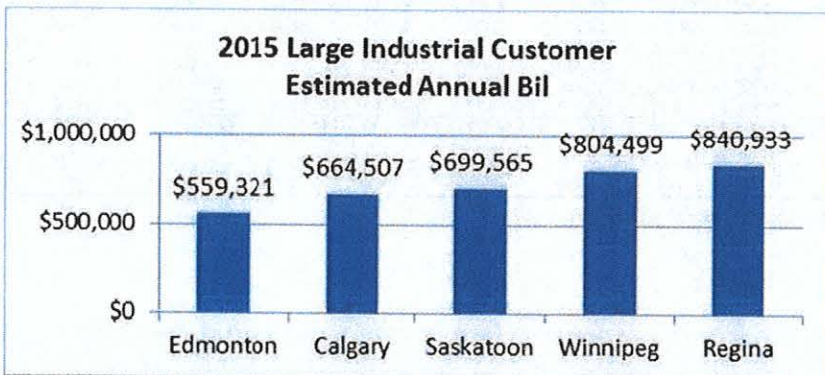
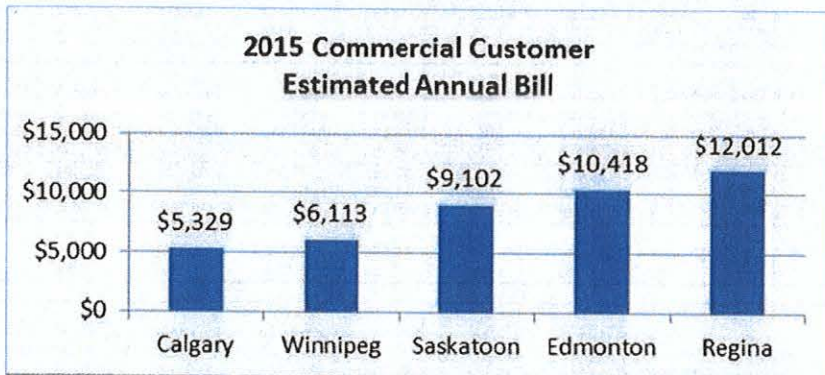
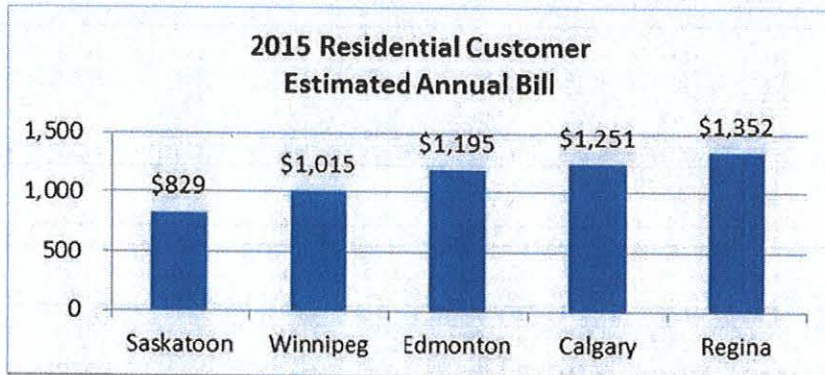
**APPENDIX G
CUSTOMER IMPACT TOTAL BILL**

	Current	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	
Residential 5/8" meter												
240 m3/yr	Water	\$348	\$391	\$427	\$437	\$442	\$446	\$456	\$466	\$470	\$475	\$480
	Sewer	\$547	\$576	\$612	\$672	\$720	\$725	\$749	\$797	\$840	\$840	\$840
Total volume charge		\$895	\$967	\$1,039	\$1,109	\$1,162	\$1,171	\$1,205	\$1,262	\$1,310	\$1,315	\$1,320
Daily Basic Service Charge		\$128	\$151	\$179	\$199	\$222	\$243	\$246	\$251	\$256	\$262	\$267
Land Drainage Rate		\$0	\$0	\$0	\$0	\$21	\$43	\$64	\$66	\$67	\$68	\$70
Total Annual Bill		\$1,023	\$1,118	\$1,218	\$1,308	\$1,405	\$1,456	\$1,516	\$1,579	\$1,634	\$1,645	\$1,656
Overall \$ Change			\$94	\$100	\$90	\$97	\$51	\$59	\$64	\$54	\$11	\$11
Overall % Change			9.2%	8.9%	7.4%	7.4%	3.6%	4.1%	4.2%	3.4%	0.7%	0.7%
Commercial 2" meter												
1,600 m3/yr	Water	\$2,284	\$2,608	\$2,848	\$2,912	\$2,944	\$2,976	\$3,040	\$3,104	\$3,136	\$3,168	\$3,200
	Sewer	\$3,648	\$3,840	\$4,080	\$4,480	\$4,800	\$4,832	\$4,992	\$5,312	\$5,600	\$5,600	\$5,600
Total volume charge		\$5,932	\$6,448	\$6,928	\$7,392	\$7,744	\$7,808	\$8,032	\$8,416	\$8,736	\$8,768	\$8,800
Daily Basic Service Charge		\$231	\$261	\$297	\$327	\$360	\$381	\$386	\$394	\$402	\$410	\$418
Land Drainage Rate		\$0	\$0	\$0	\$0	\$214	\$214	\$216	\$220	\$224	\$229	\$234
Total Annual Bill		\$6,163	\$6,709	\$7,225	\$7,719	\$8,317	\$8,403	\$8,634	\$9,030	\$9,362	\$9,407	\$9,452
			\$546	\$516	\$493	\$599	\$85	\$231	\$396	\$332	\$44	\$45
			8.9%	7.7%	6.8%	7.8%	1.0%	2.8%	4.6%	3.7%	0.5%	0.5%
Large Restaurant 3" meter												
17,700 m3/yr	Water	\$24,502	\$28,851	\$31,506	\$32,214	\$32,568	\$32,922	\$33,630	\$34,338	\$34,692	\$35,046	\$35,400
	Sewer	\$40,356	\$42,480	\$45,135	\$49,580	\$53,100	\$53,454	\$55,224	\$58,764	\$61,950	\$61,950	\$61,950
Total volume charge		\$64,858	\$71,331	\$76,641	\$81,774	\$85,668	\$86,376	\$88,854	\$93,102	\$96,642	\$96,996	\$97,350
Daily Basic Service Charge		\$669	\$731	\$803	\$870	\$944	\$971	\$982	\$1,002	\$1,022	\$1,043	\$1,064
Land Drainage Rate		\$0	\$0	\$0	\$0	\$330	\$330	\$333	\$340	\$347	\$353	\$361
Total Annual Bill		\$65,527	\$72,062	\$77,444	\$82,644	\$86,942	\$87,677	\$90,169	\$94,444	\$98,011	\$98,392	\$98,774
			\$6,536	\$5,382	\$5,200	\$4,298	\$735	\$2,492	\$4,274	\$3,567	\$381	\$382
			10.0%	7.5%	6.7%	5.2%	0.8%	2.8%	4.7%	3.8%	0.4%	0.4%
Food Processing 8" meter												
254,500 m3/yr	Water	\$351,286	\$414,835	\$453,010	\$463,190	\$468,280	\$473,370	\$483,550	\$493,730	\$498,820	\$503,910	\$509,000
	Sewer	\$580,260	\$610,800	\$648,975	\$712,600	\$763,500	\$768,590	\$794,040	\$844,940	\$890,750	\$890,750	\$890,750
	LVSD *	-\$129,078	-\$138,240	-\$149,693	-\$168,780	-\$184,050	-\$185,577	-\$193,212	-\$208,482	-\$222,225	-\$222,225	-\$222,225
Total volume charge		\$802,468	\$887,395	\$952,293	\$1,007,010	\$1,047,730	\$1,056,383	\$1,084,378	\$1,130,188	\$1,167,345	\$1,172,435	\$1,177,525
Daily Basic Service Charge		\$1,641	\$1,777	\$1,927	\$2,079	\$2,243	\$2,283	\$2,307	\$2,354	\$2,401	\$2,449	\$2,498
Land Drainage Rate		\$0	\$0	\$0	\$0	\$1,283	\$1,282	\$1,294	\$1,320	\$1,347	\$1,374	\$1,401
Total Annual Bill		\$804,110	\$889,172	\$954,219	\$1,009,089	\$1,051,256	\$1,059,948	\$1,087,980	\$1,133,862	\$1,171,093	\$1,176,258	\$1,181,424
			\$85,062	\$65,048	\$54,869	\$42,168	\$8,692	\$28,032	\$45,882	\$37,231	\$5,165	\$5,166
			10.6%	7.3%	5.8%	4.2%	0.8%	2.6%	4.2%	3.3%	0.4%	0.4%
Industrial 10" meter - Overstrength Customer												
500,000	Water	\$690,076	\$815,000	\$890,000	\$910,000	\$920,000	\$930,000	\$950,000	\$970,000	\$980,000	\$990,000	\$1,000,000
	Sewer	\$912,000	\$960,000	\$1,020,000	\$1,120,000	\$1,200,000	\$1,208,000	\$1,248,000	\$1,328,000	\$1,400,000	\$1,400,000	\$1,400,000
	LVSD *	-\$242,407	-\$259,763	-\$280,697	-\$314,965	-\$343,402	-\$350,188	-\$363,324	-\$390,208	-\$414,936	-\$416,134	-\$416,134
Subtotal before overstrength		\$1,359,670	\$1,515,237	\$1,629,303	\$1,715,035	\$1,776,598	\$1,787,812	\$1,834,676	\$1,907,792	\$1,965,064	\$1,973,866	\$1,983,866
2,589	TSS (kg)	\$2,667	\$2,900	\$3,055	\$3,236	\$3,495	\$3,702	\$3,987	\$4,326	\$4,694	\$4,834	\$4,834
2,031	BOD (kg)	\$2,275	\$2,275	\$2,275	\$2,275	\$2,478	\$2,681	\$2,823	\$3,063	\$3,323	\$3,423	\$3,423
2,589	TKN (kg)	\$7,768	\$9,063	\$10,358	\$11,911	\$13,750	\$14,216	\$14,579	\$15,818	\$17,162	\$17,677	\$17,677
4,164	TP (kg)	\$33,312	\$41,640	\$49,968	\$62,460	\$74,952	\$88,693	\$91,691	\$99,485	\$107,941	\$111,180	\$111,180
Daily Basic Service Charge		\$2,073.72	\$2,241.56	\$2,426.48	\$2,615.56	\$2,820.24	\$2,866.20	\$2,896.00	\$2,954.24	\$3,014.00	\$3,073.84	\$3,135.20
Land Drainage		\$0.00	\$0.00	\$0.00	\$0.00	\$1,283.27	\$1,281.58	\$1,294.41	\$1,320.30	\$1,346.70	\$1,373.64	\$1,401.11
Total Annual Bill		\$1,407,765	\$1,573,356	\$1,697,385	\$1,797,533	\$1,875,376	\$1,901,252	\$1,951,946	\$2,034,759	\$2,102,545	\$2,115,427	\$2,125,516
			\$165,591	\$124,030	\$100,148	\$77,843	\$25,877	\$50,694	\$82,812	\$67,786	\$12,882	\$10,089
			11.8%	7.9%	5.9%	4.3%	1.4%	2.7%	4.2%	3.3%	0.6%	0.5%

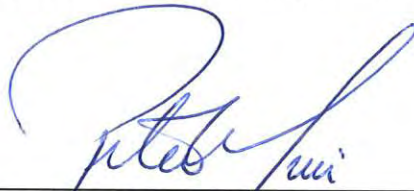
* Large Volume Sewer Discount (LVSD) applies according to conditions in section 89 of Sewer By-Law 92/2010

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 2015 rates and select consumption -- residential (240 m3), commercial (1,600 m3) and large (254,500 m3) customers.



This is Exhibit "N" referred to in the
Affidavit of Alan A. Borger sworn
before me this 18th day of April, 2019.

A handwritten signature in blue ink, appearing to read "Peter J. ...", written over a horizontal line.

A Notary Public in and for
the Province of Manitoba.

Agenda – Council – February 28, 2019

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

Item No. 4 2019 Water and Sewer Rates

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

On February 19, 2018, the Executive Policy Committee concurred in the recommendation of the Winnipeg Public Service, as amended, and submitted the following to Council:

1. That the 2019 Water rate be maintained at the 2018 level established by Council on April 27, 2016.
2. That the 2019 Sewer rate be maintained at the 2018 level established by Council on April 27, 2016.
3. That the Daily Basic Charge rates be maintained at the 2018 levels established by Council on April 27, 2016.
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 (m3), 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 (m3) for Hauled Wastewater, effective April 1, 2019, from \$8.90 in 2018 to \$9.35 in 2019.

Agenda – Council – February 28, 2019

Report – Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – February 14, 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 the 2019 rates recommended in this report continue to be in effect until revised rates are approved by Council for future years.
13. That the Proper Officers of the City of Winnipeg be authorized to do all things necessary to implement the intent of the forgoing.

Agenda – Council – February 28, 2019

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

DECISION MAKING HISTORY:

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

On February 19, 2019, the Executive Policy Committee concurred in the recommendation of the Winnipeg Public Service, with the following amendments:

- Delete Recommendation 1, 2 and 3 and replace with the following:
 - “1. That the 2019 Water rate be maintained at the 2018 level established by Council on April 27, 2016.
 2. That the 2019 Sewer rate be maintained at the 2018 level established by Council on April 27, 2016.
 3. That the Daily Basic Charge rates be maintained at the 2018 levels established by Council on April 27, 2016.”
- Delete Recommendation 12 in its entirety and renumber the remaining recommendations accordingly,

and submitted the matter to Council.

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
L. Szkwarek, CPA, CGA Manager Finance and Administration	M. L. Geer, CPA, CA, Director, Water and Waste Department	M. Ruta	D. McNeil

EXECUTIVE SUMMARY

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

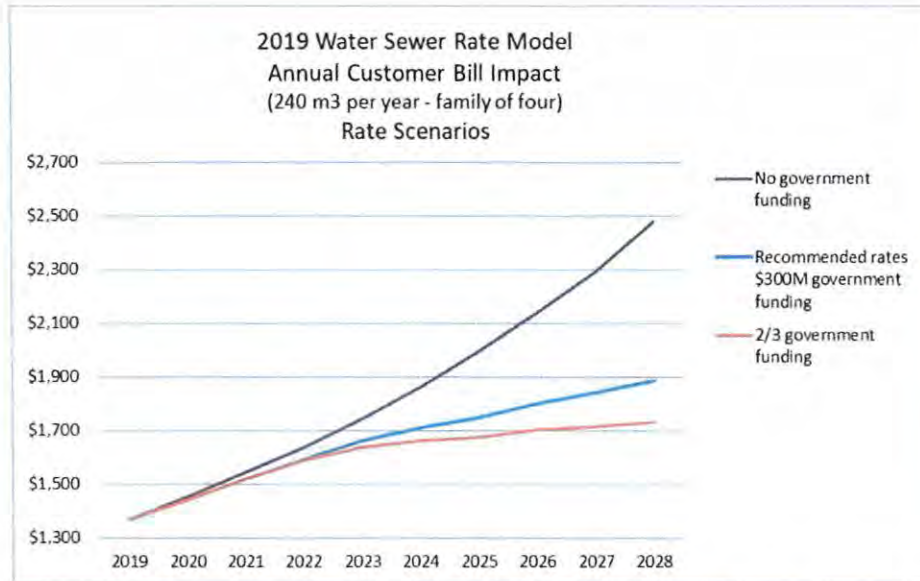
The main driver for the rate increases is the capital investment required by Environment Act Licences for the sewage treatment plants and combined sewer overflow (CSO) mitigation. In addition to the past and ongoing investment of \$422 million in the upgrades to the West End Sewage and the South End 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 m³ 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 (m³), 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 (m³), 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 (m³), 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 (m³) 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?

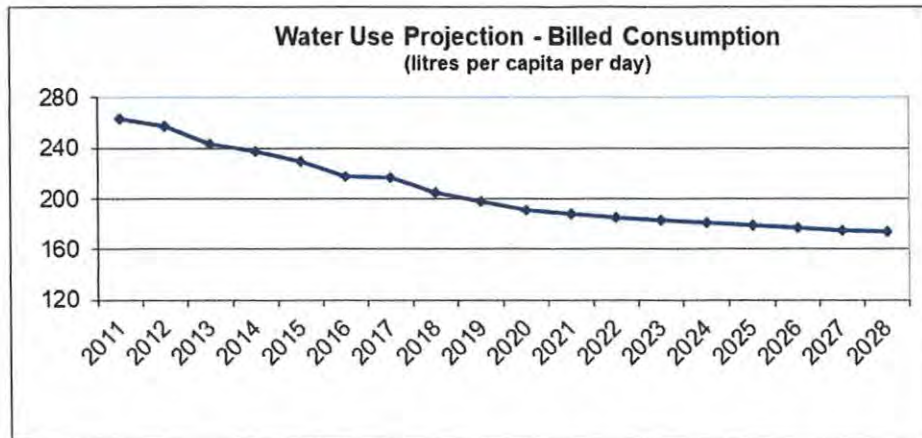
The Department is committed to protecting public health, property and the environment by delivering high quality drinking water, and collecting and treating sewage in accordance with provincial licences. The water and sewer utilities are self-supporting, and must plan to ensure uninterrupted customer 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

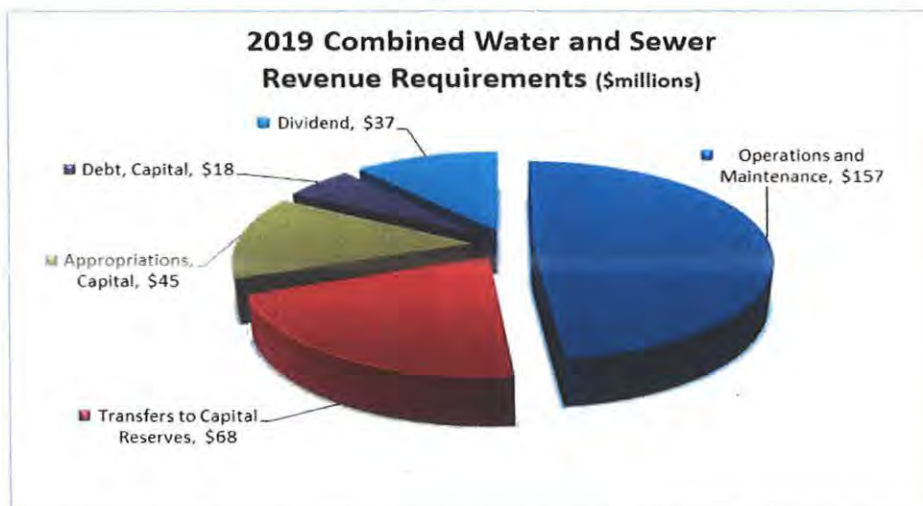
Residents continue to embrace water conservation practices. Conservation can eliminate the need for costly expansion of existing infrastructure due to increased water demand. Winnipeg's projected total residential trend usage reflects declining per capita consumption. This is consistent with cities surveyed 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 Expenditure ¹	Project Financing				Total
		Volume Rate ²	Fed/Prov	Debt	Earnings	
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 m³ for 2019 (\$0.40 per m³ 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 (m³), 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 (m³), effective April 1, 2019, from \$2.80 in 2018 to 2.92 in 2019. Sewer rate includes consumption allocation of \$0.40 per m³ for 2019 (\$0.40 per m³ 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 Public 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 (m³).

6. Customer Impact

A residential customer, family of four, with an estimated consumption of 60 m³ 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:

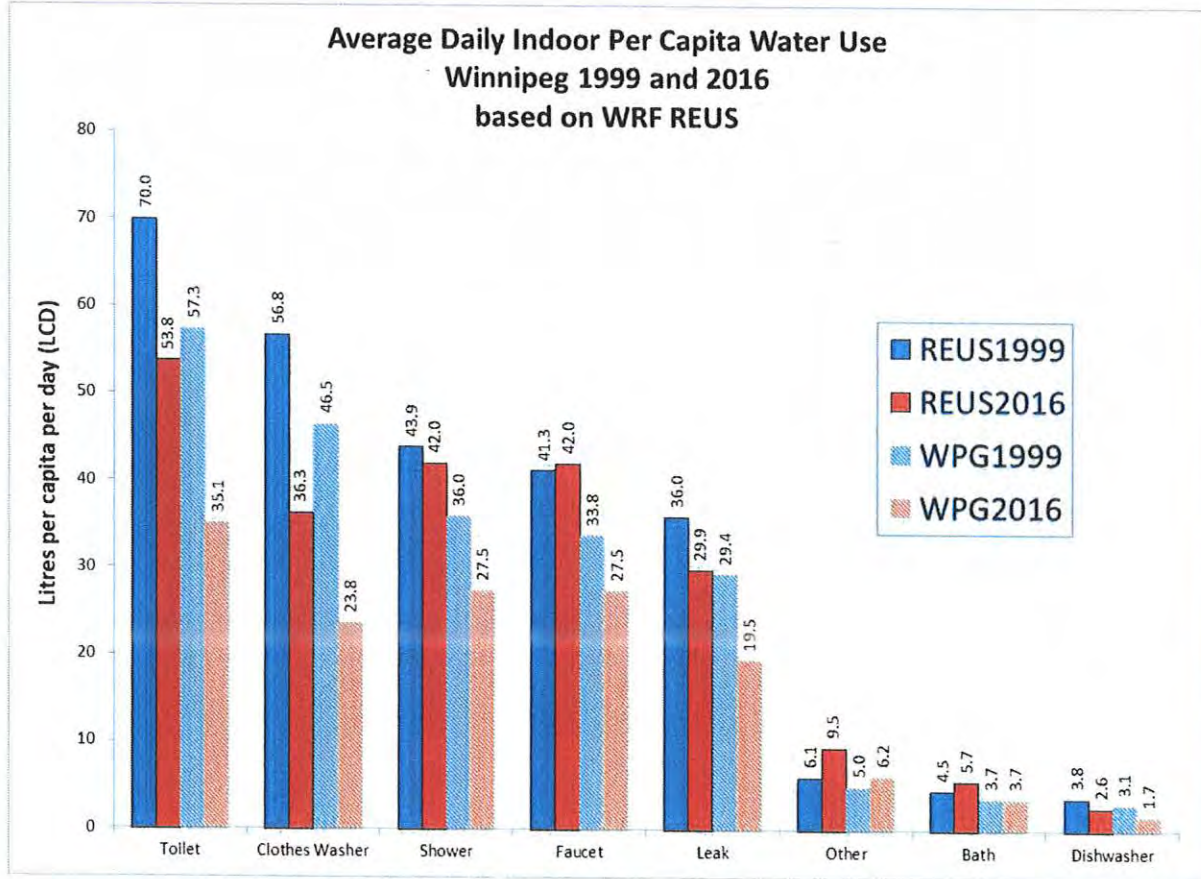
APPENDIX A	Benchmarking
APPENDIX B	Consumption
APPENDIX C	Capital Spending
APPENDIX D	Water and Sewer Utility Principles of Operation
APPENDIX E	Water Works System Fund Financial Projections
APPENDIX F	Sewage Disposal System Fund Financial Projections
APPENDIX G	Customer Bill Impact
APPENDIX H	Competitiveness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

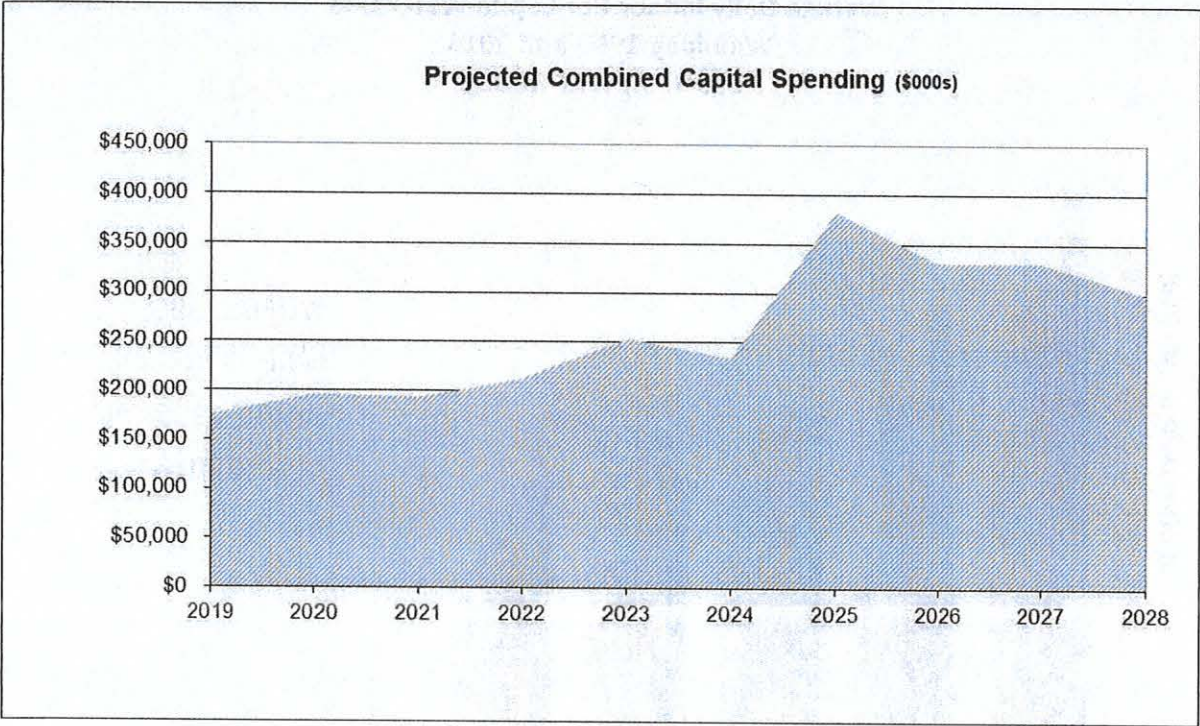
**APPENDIX B
CONSUMPTION**

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%

		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
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%

		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
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%

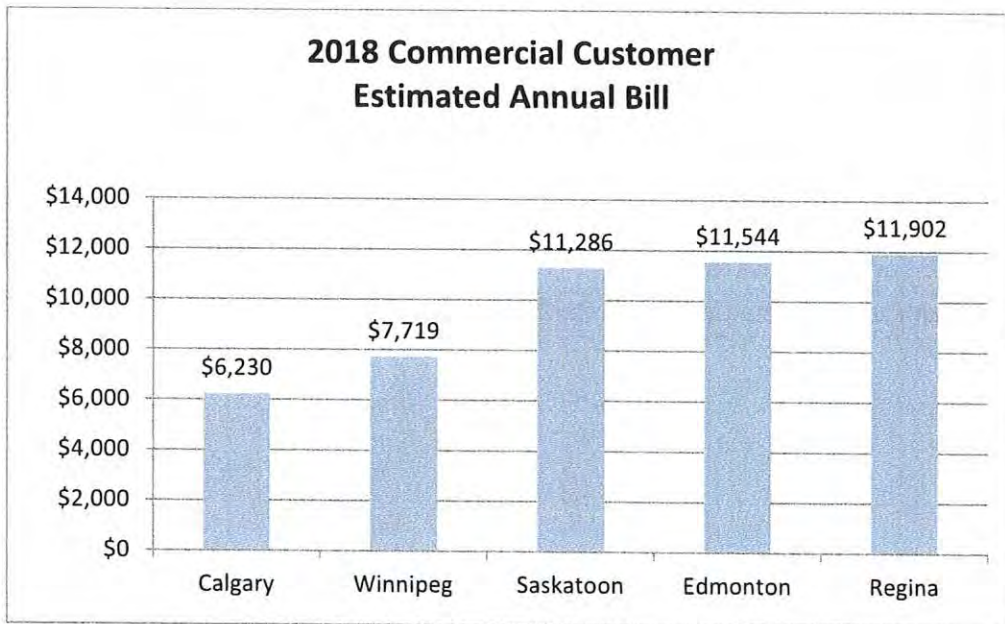
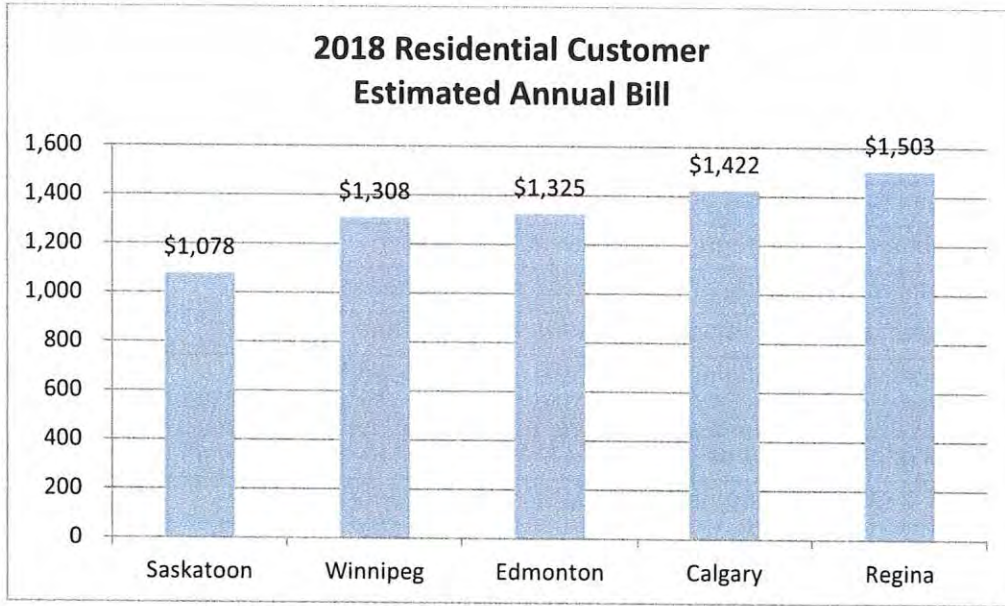
		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Food Processing 8" meter												
254,500 m3/yr	Water	\$463,190	\$481,005	\$501,365	\$521,725	\$536,995	\$542,085	\$547,175	\$552,265	\$557,355	\$562,445	\$567,535
	Sewer	\$712,600	\$743,140	\$788,950	\$834,760	\$895,840	\$934,015	\$969,645	\$1,002,730	\$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
Overall \$ Change			\$39,610	\$52,680	\$52,854	\$58,047	\$32,530	\$30,285	\$28,272	\$38,961	\$31,835	\$33,616
Overall % Change			3.9%	5.0%	4.8%	5.0%	2.7%	2.4%	2.2%	3.0%	2.4%	2.4%

		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Industrial 10" meter - Overstrength Customer												
500,000	Water	\$910,000	\$945,000	\$985,000	\$1,025,000	\$1,055,000	\$1,085,000	\$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 m³), and commercial (1,600 m³).



**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