Agenda - Executive Policy Committee - November 17, 2004

Report - Standing Policy Committee on Public Works - November 9, 2004

Item No. 3 2005 Water and Sewer Rates
File WW-2.3

STANDING COMMITTEE RECOMMENDATION:

On November 9, 2004, the Standing Policy Committee on Public Works concurred in the administrative recommendation and submits the following to Council:

1. That effective January 1, 2005 the sewer rates, based on water used, be increased to $3.39 from $3.11 per 100 cubic feet, which includes 55 cents per 100 cubic feet for the Environmental Projects Reserve (55 cents in 2004).

2. That effective January 1, 2005 the Fixed Quarterly Charge be increased as follows:

Meter (inches)	2005 ($/quarter)	2004 ($/quarter)	Variance ($/quarter)
5/8	13.75	12.10	1.65
3/4	14.80	13.05	1.75
1	17.70	15.92	1.78
1 1/2	21.45	19.75	1.70
2	31.80	30.28	1.52
3	109.45	107.81	1.64
4	139.25	136.53	2.72
6	207.60	203.53	4.07
8	285.70	280.11	5.59
10	363.80	356.68	7.12

3. That the City Solicitor/Manager of Legal Services be instructed to prepare the necessary By-laws for submission to Council on November 24, 2004.

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

Agenda - Executive Policy Committee - November 17, 2004

Report - Standing Policy Committee on Public Works - November 9, 2004

DECISION MAKING HISTORY:

STANDING COMMITTEE RECOMMENDATION:

On November 9, 2004, the Standing Policy Committee on Public Works concurred in the administrative recommendation and submits the matter to the Executive Policy Committee and Council.

RE: **2005 WATER AND SEWER UTILITY RATES**

FOR SUBMISSION TO: Standing Policy Committee on Public Works

ORIGINAL REPORT SIGNED BY: Director of Water and Waste Department

REPORT DATE: October 25, 2004

RECOMMENDATIONS:

1. Effective January 1, 2005 the sewer rates, based on water used, be increased to $3.39 from $3.11 per 100 cubic feet, which includes 55 cents per 100 cubic feet for the Environmental Projects Reserve (55 cents in 2004).

2. Effective January 1, 2005 the Fixed Quarterly Charge be increased as follows:

Meter (inches)	**2005 ($/quarter)**	2004 ($/quarter)	Variance ($/quarter)
5/8	**13.75**	12.10	1.65
3/4	**14.80**	13.05	1.75
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1 1/2	**21.45**	19.75	1.70
2	**31.80**	30.28	1.52
3	**109.45**	107.81	1.64
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6	**207.60**	203.53	4.07
8	**285.70**	280.11	5.59
10	**363.80**	356.68	7.12

3. The City Solicitor be instructed to prepare the necessary By-Laws for submission to Council at the November 24, 2004 meeting.

REPORT SUMMARY

KEY ISSUES

The Department is recommending an increase in the sewer rate in 2005. A typical residential customer will see an annual increase to the utility bill of $29.61, from $540.64 in 2004 to $570.25 in 2005 (an impact of 5.5%). A capital and operating plan has been developed on the direction provided by Manitoba Conservation, using a revised work schedule. The schedule is subject to change depending on the final licenses to be issued by Manitoba Conservation. The rate model reflects the ten year projected cost of improvements to the wastewater treatment and collection systems.

$543 million in capital costs over the next ten years
- $352 million for Nutrient Removal
- $79 million for Combined Sewer Overflow
- $62 million for biosolids-alternative handling and disposal
- $26 million for Centrate Treatment
- $21 million for Disinfection
- $3 million for other CEC recommendations (licensing, public consultation/notification, environmental management system)

$307 million in associated operating costs over the next ten years
- $93 million in debt servicing for debt needed to finance new infrastructure
- $150 million in contributions to the Environmental Projects Reserve
- $64 million in operating and maintenance costs for the new infrastructure

This ten year plan envisions:
- a 10 year change in the combined water and sewer rate, from $6.14 in 2005 to $8.66 in 2014
- total borrowing of $97.2 million in water and $313 million in sewer
- ongoing infrastructure renewal totalling $49 million in water and $124 million in sewer to be funded from working capital

An increase in the Fixed Quarterly Charge (FQC) is recommended. The FQC has not changed since 1996. Increased costs associated with customer accounts, customer relations and meters will necessitate a rate change in order to recover the fixed cost of these services.

IMPLICATIONS OF THE RECOMMENDATIONS:
General implications

- ☐ **no**
- ☒ **for the organization overall and/or for other departments**
- ☒ **for the community and/or organizations external to the City**
- ☐ **involves a multi-year contract**

Comment:
In 2005, a typical residential customer will see an annual increase to the utility bill of $29.61, from $540.64 to $570.25.

Policy implications:

- ☒ **No**
- ☐ **Yes**

Comment:

Environmental Implications:

- ☐ **No**
- ☒ **Yes**

Comment:
Includes improvement in the City's wastewater system, including nutrient removal and combined sewer overflows.

Human Resource Implications:

- ☒ **No**
- ☐ **Yes**

Comment:

Financial implications:

- ☐ **within approved current and/or capital budget**
- ☒ **current and/or capital budget adjustment required**

Comment:
The sewer rate plan calls for an increase of 9% in the sewer rate for 2005. An increase to the Fixed Quarterly Charge is recommended in order to recover the fixed costs of this service.

REPORT - 2005 WATER AND SEWER UTILITY RATES

REASON FOR THE REPORT:

Changes to the Sewer rate and Fixed Quarterly Charge require Council approval in the form of a by-law.

HISTORY

See Appendix A for the history of Water and Sewer rates for the past ten years.

In August of 2003, the Clean Environment Commission (CEC) recommended that the City of Winnipeg implement a plan directed at improving the City's wastewater treatment and collection systems.

On September 26, 2003, Manitoba Conservation announced a wastewater treatment plan for the City of Winnipeg, implementing the recommendations of the CEC.

On November 19, 2003, Executive Policy Committee (EPC) directed the administration to work with the Province of Manitoba to propose a work schedule and financing plan.

On November 26, 2003, City Council approved an increase in the sewer rate for 2004.

On June 16, 2004 City Council concurred with the recommendation of the EPC.

1. *That the administrative report dated June 3, 2004, with respect to the work schedule and financing plan for the Sewer Utility, be received as information.*
2. *That the proper officers of the City be authorized to do all things necessary to implement the intent of the foregoing*.

On September 3, 2004, the Province of Manitoba issued a final Environment Act License No. 2669 for the WEWPCC.

On October 1, 2004, the City of Winnipeg issued an appeal to the Minister of Conservation to address specific aspects of the license.

DISCUSSION

The Water and Wastewater utilities face major challenges and opportunities over the next 10 years to meet expectations, both in terms of facilities, and in terms of new requirements for public accountability. To meet these challenges, ongoing rate increases are required. In addition, the Department will grow in terms of staff numbers, and capability to deliver and operate new systems.

Over the next ten years the following new facilities are expected to be constructed and in operation.

New Facility	Year Complete	Capital Cost ($ millions)	Annual Operating Cost (excluding debt) ($ millions)
Water Treatment Plant	2007	$214.0	$12.0
WEWPCC - BNR	2006	$16.0	$1.6
WEWPCC - Disinfection	2006	$4.0	$0.1
SEWPCC - BNR	2012	$92.0	$2.6
NEWPCC - Centrate	2006	$26.0	$1.0
NEWPCC - Disinfection	2006	$17.0	$1.0
NEWPCC - BNR	2014	$244.0	$3.5
NEWPCC - Biosolids Facility	2010	$62.0	$3.4
CSO Control	To 2014	$79.0	$1.2

WEWPCC - West End Water Pollution Control Centre
SEWPCC - South End Water Pollution Control Centre
NEWPCC - North End Water Pollution Control Centre
BNR - Biological Nutrient Removal
CSO - Combined Sewer Overflow

Clearly, the Department's ability to deliver large capital projects will be challenged. The Department has already hired more engineering, accounting and administrative staff for these projects. The Department will rely on outside engineering consultants and construction contractors to build the facilities. Once constructed, operating staff will have to be hired and trained to operate the new facilities.

In addition, as a result of Walkerton and other incidents, regulators across the globe, including Manitoba are raising the requirements for utilities with respect to public accountability. They are requiring that utilities institute a quality management system to ensure responsible operation of facilities. For the Water and Waste Department, this will result in significant requirements and additional staff in the areas of public education and consultation, public reporting and transparency, environmental management systems, documented levels of service, documented

operating procedures, emergency response planning, and exercising and documentation of events. These initiatives for more accountability are supported by the industry to offer a higher degree of protection to the public in terms of drinking water safety and environmental protection. It is expected that these requirements will add hundreds of thousands of dollars in systems and operating costs for the Water and Waste Department.

Water Rate

For 2005 the water rates will remain at the 2004 levels.

- $2.75 per 100 cu. ft. from 0 - 9,600 cu. ft./quarter (Block 1)
- $2.27 per 100 cu. ft. from 9,601 - 96,000 cu. ft./quarter (Block 2)
- $1.79 per 100 cu. ft. over 96,001 cu. ft./quarter (Block 3)

This includes 39.4 cents per 100 cubic feet for the Water Treatment Reserve in 2005 (47.25 cents in 2004).

The water rate has not changed since 2001 and is not expected to change for 2006 and 2007. Consumption is projected to remain even throughout the ten year horizon. The water rate is forecast to increase beginning 2008, due to the effects of inflation and little change to estimated consumption.

Sewer Rate

In 2005, the Department is proposing that the sewer rate increase from $3.11 to $3.39 per 100 cubic feet. The sewer rate is expected to further increase each year, up to 2014, to provide, in part, the necessary funds to implement and operate the expanded wastewater facilities and programs resulting from sewage treatment plant licencing requirements.

The sewer utility rate projections include significant changes to both the operating and capital programs. Increases to the sewer rate are necessary due to several variables:

- Environmental Act Licenses. As per the correspondence on September 26, 2003 from the Minister of Conservation, the Province of Manitoba directed the City of Winnipeg to implement improvements to the wastewater treatment and collection systems. These improvements will become official in the issuance of Environment Act Licenses for each of the three sewage treatment plants. The license for the WEWPCC was recently issued, and the license for the SEWPCC and NEWPCC will be issued before the end of 2004. The rate model reflects the first ten years of the program and is based upon the expected license requirements.

  $543 million in capital costs over the next ten years
  - $352 million for Nutrient Removal
  - $79 million for Combined Sewer Overflow
  - $62 million for biosolids-alternative handling and disposal
  - $26 million for Centrate Treatment

- $21 million for Disinfection
- $3 million for other CEC recommendations (licensing, public consultation/notification, environmental management system)
- $307 million in associated operating costs over the next ten years
- $93 million in debt servicing for debt needed to finance new infrastructure
- $150 million in contributions to the Environmental Projects Reserve
- $64 million in operating and maintenance costs for the new infrastructure

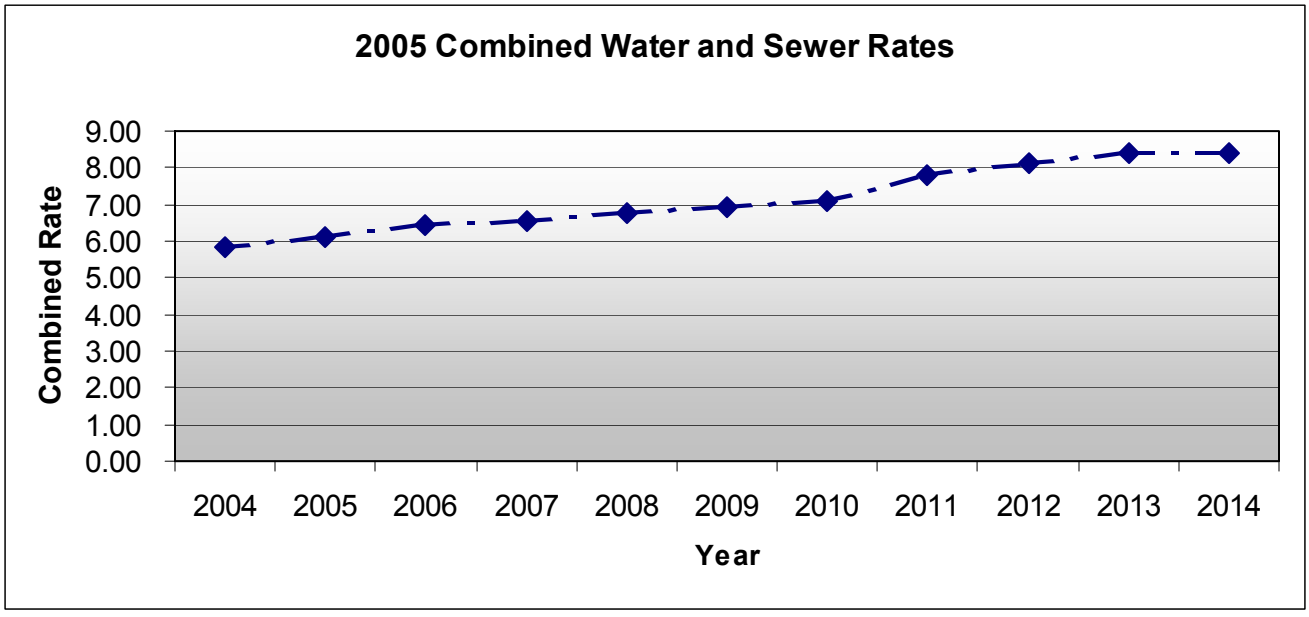
A separate report on the wastewater capital program stemming from the CEC hearings is being submitted concurrently with this report.

- Federal – Provincial Funding. On March 19, 2004, there was an announcement that $48 million in funding under a federal-provincial infrastructure program would be provided to the City of Winnipeg for wastewater system improvements. The Department is anticipating that the agreement will be finalized in 2005, and has included these funds in the sewer utility rate model. This funding is distributed over 5 years (2006 to 2010), decreasing the amount of reserve contribution provided from the utility rates, and reducing the impact of future years' rate increases.

- Property tax reassessment. The City reassessment of the wastewater treatment facilities has resulted in increases in property taxes paid by the sewer utility over the past several years. These increases have been incorporated into the sewer rates.

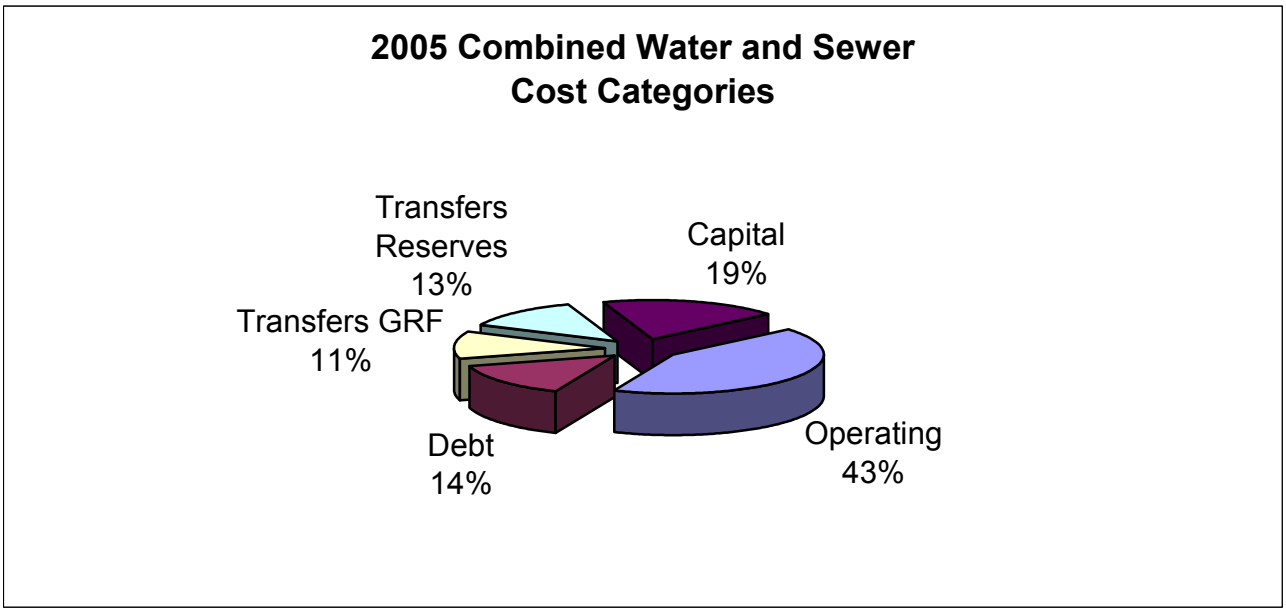
Combined Water and Sewer Rates

The 2005 water and sewer rate model generates a continued combined rate increase over the next ten years.



The combined water and sewer rate is proposed to increase in 2005, from $5.86 to $6.14 per 100 cubic feet. Individually, the water rates are to remain unchanged while the sewer rate is to increase from $3.11 to $3.39 per 100 cubic feet. The total financial impact on a typical residential customer is an annual increase to the utility bill of $29.61, from $540.64 to $570.25.

For 2005, the following represents the major cost categories contributing to the water and sewer rates. Total costs are forecast at $190 million, including $36 million for cash funded capital projects.



Fixed Quarterly Charge (FQC):

The FQC recovers the cost of meter reading, customer billing, accounts administration, and customer service centre support. Costs associated with the meter installation and maintenance are also recovered from the quarterly charge. A review of the cost allocation to the FQC was completed. Increased costs associated with customer accounts and meters will necessitate a rate change in order to recover the fixed cost of these services.

Reserves:

The Department has established reserves to fund and plan for large and complex capital projects. Notable revisions to reserve contributions include:

- Water Treatment Plant Reserve (Appendix B): This reserve will fund a portion of the cost of a Water Treatment program. Total cost of the water treatment plant is estimated at $214 million. Staged implementation has allowed the reserve to earn interest and, as a result, estimated debt requirements have declined. Debt financing is projected to decrease by up to

$4.8 million, from $102 million to $97.2 million. An updated cost estimate for the plant is expected in 2005.

- Environmental Projects Reserve (Appendix C): The Environmental Projects Reserve will support the wastewater treatment improvement program as directed by Manitoba Conservation. Federal/Provincial funding of $48 million over five years has been incorporated into the financing plan. In addition, under this rate plan, the Department will require borrowing authority for up to $313 million over the next 10 years in order to fully fund the improvements.

Transfers to the General Revenue Fund

In 2005, the water and sewer utilities' transfers to the General Revenue Fund are estimated at $21.5 million ($21.4 million for 2004) or 13.5% of volume sales. In the late 1980s, the transfers to the General Revenue Fund were calculated as 10% of the utilities' base sales. In the 1990s, the subsidization of the tax-supported program expanded to include funding for the Fire Hydrant and Land Drainage programs. In 2002 the utilities were asked to contribute an additional $3.9 million. Beginning 2004, in recognition of the property tax reassessment, the sewer utility's transfer was reduced by $1 million. The ten-year rate plan estimates an average annual transfer to the General Revenue Fund of $10.4 million from the sewer utility and $11.6 million from the water utility.

The Chief Financial Officer has requested a policy review to assess what would be a fair return to the City on its investment in the utilities. A policy needs to be developed to understand how transfers to the General Revenue Fund will be affected by property reassessments. The review will also address the issue of balancing the City's goal of having competitive utility rates versus competitive property taxes as the level of transfers influences both.

A policy requires the Department to undertake a full inventory and valuation of its capital assets to fairly state the utilities' financial position, which can then be used as a base to measure the City's return on its investment. As a first step, the Department is currently completing an assessment for insurance purposes of the water pollution control centers. A policy is expected to be developed in 2005.

Transfers to Capital Program

The utilities have adopted a pay-as-you-go policy for the ongoing infrastructure renewal program. In 2005, the water utility will cash finance an estimated capital program of $8.1 million. The cash financed sewer capital program in 2005 is estimated at $28.3 million.

Financial Projection Risks

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

1. Consumption. Consumption is forecast to remain constant over the next ten years, with only marginal increases anticipated. Consumption projections are based on the assumptions found in the Water Planning Model and incorporate the effects of historical patterns. If actual consumption is less than plan, this could cause a rate increase (conversely, actual consumption greater than plan could effect a rate decrease). See Appendix F for six year history.

2. Frontage levy. No reduction to the level of frontage levy funding (approximately $7.0 million per annum) for the water main and wastewater sewer renewal programs. Any reduction in frontage levy would require an increase in rates to maintain utility infrastructure.

3. Working capital position. The utilities target to maintain a minimum combined working capital position of 11% of the combined water and sewer sales on an annual basis. The purpose of the working capital reserve is to provide medium-term stability and the ability to absorb losses in any given year when consumption falls short of anticipated levels and/or unforeseen emergency funds are required. The working capital reserve is comprised of current assets (cash and accounts receivable) net of current liabilities (current accounts payable), cash or near cash items that can readily absorb unexpected fluctuations.

4. Rate structure. The 2005 rate model does not contemplate any major changes to the existing rate structure. Council has requested that the Department report on a cost-of-service rate model along with the effects of winter cost averaging for summer consumption. The Department will report back once the implementation of a new billing system is complete.

5. Capital Investment. Capital investment is based upon the Department's best estimate of improvements that are required. Many items can influence the capital program expenditure, including changes in market price, the introduction of new technology and availability of consultant and contractor resources.

6. Economic development. The City's economic climate can have significant impact on the utilities' 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 the utilities' large volume users. Currently the top fifty customers account for approximately 10% of the combined water and sewer sales revenue.

7. New legislation. Environmental and public health concerns are driving more stringent standards in the water and wastewater industry. The Environment Act License for the WEWPCC has just been released and contained very stringent requirements beyond what the Department was expecting. The Province has yet to issue licenses for the other two water pollution control centres and, if limits are very stringent, the capital and operating costs could increase. The further introduction of new legislation could cause increased rates through the operating and capital costs associated with compliance.

8. Capacity. A number of labour intensive projects are planned for the Department and for the

city as a whole. The consulting, construction and engineering community may reach a capacity such that the amount of work required could surpass the ability of the community to meet the timelines.

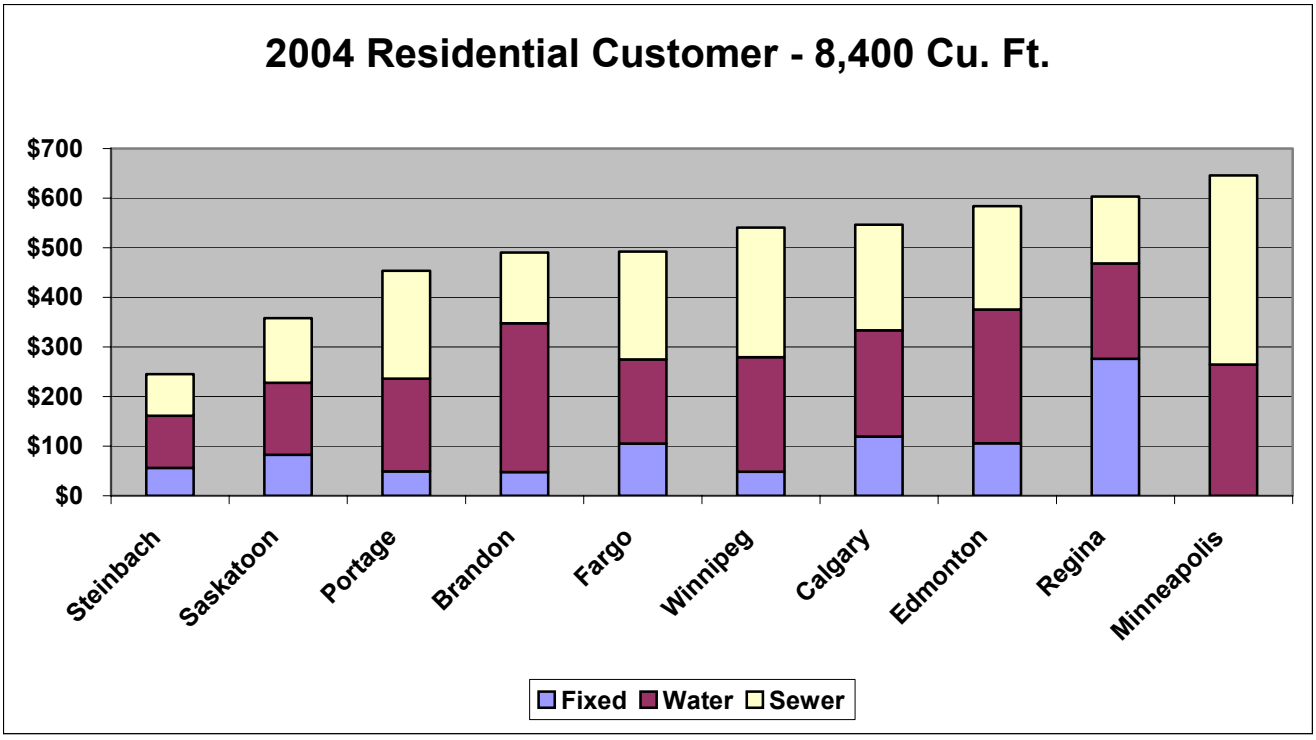
The Water and Sewer Utilities adhere to a set of operating principles that can be found in Appendix G. Appendix H illustrates the impact of the rate strategy on various sample customers.

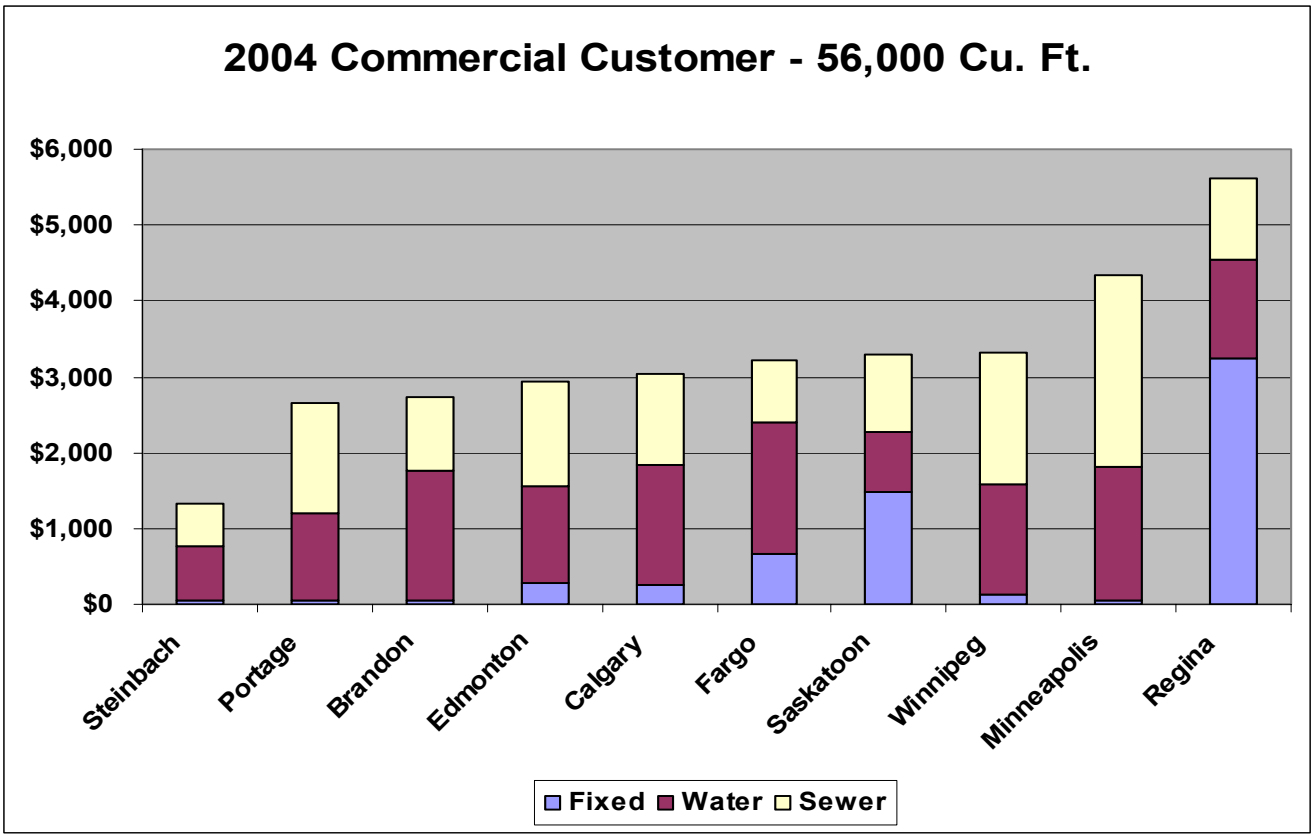
Competitiveness

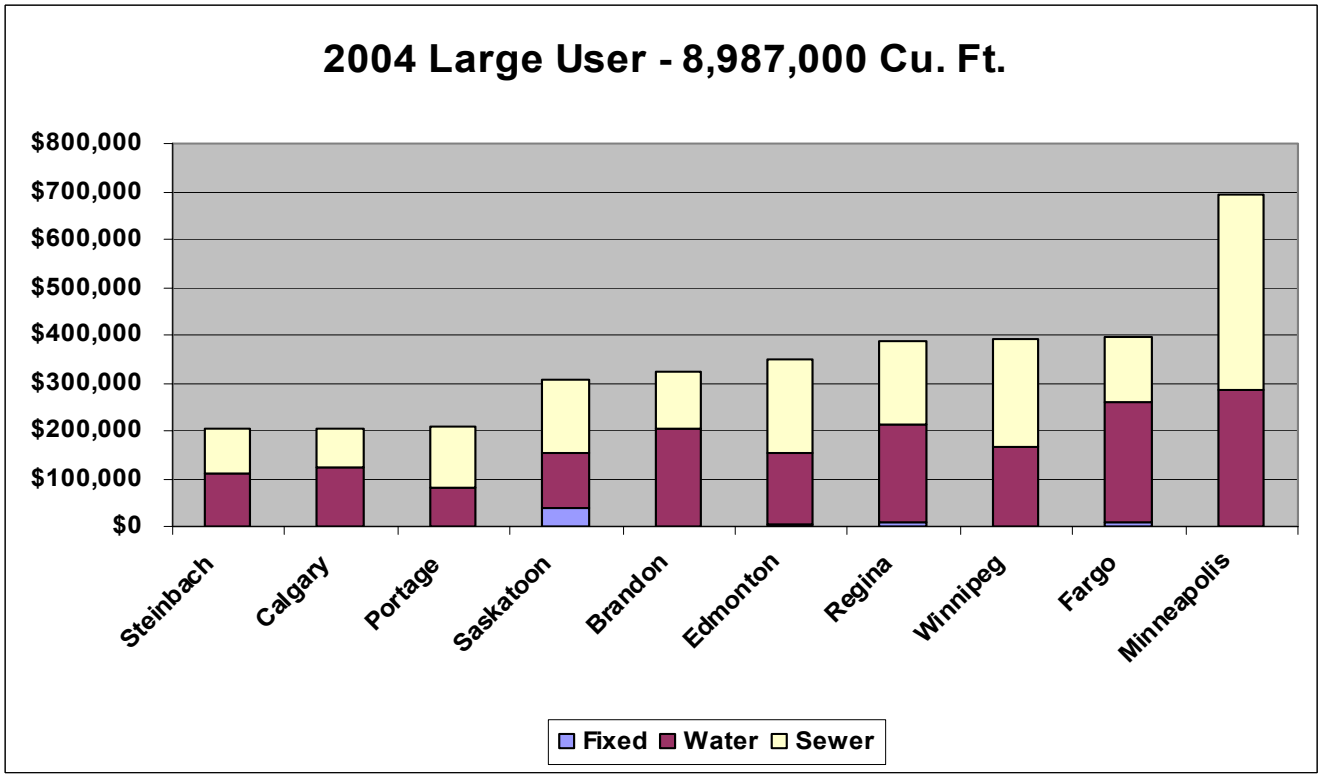
Winnipeg's combined water and sewer rates remain competitive to other cities of similar size. The following table illustrates costs for residential customers (Block 1 rates, consumption of 8,400 cubic feet):

Residential Customers

	Saskatoon	PLaP	Brandon	Fargo	Winnipeg	Calgary	Regina	Edmonton	Minneapolis
Fixed	82.80	49.04	47.80	104.85	48.40	119.04	105.96	276.00	0.00
Water	145.14	186.79	299.71	169.67	231.00	214.43	269.83	192.67	264.67
Sewer	129.99	217.66	142.72	217.65	261.24	213.06	207.87	134.58	381.44
2004	$357.93	$453.49	$490.22	$492.17	$540.64	$546.53	$583.66	$603.25	$646.12
2003	$332.28	$439.17	$455.40	$481.84	$508.52	$519.48	$569.09	$575.90	$610.53
% increase	7.2%	3.2%	7.1%	2.1%	5.9%	4.9%	2.5%	4.5%	5.5%


2004 Residential Customer - 8,400 Cu. Ft.
$700
$600
$500
$400
$300
$200
$100
$0
Steinbach
Saskatoon
Portage
Brandon
Fargo
Winnipeg
Calgary
Edmonton
Regina
Minneapolis
Fixed
Water
Sewer


2004 Commercial Customer - 56,000 Cu. Ft.
$6,000
$5,000
$4,000
$3,000
$2,000
$1,000
$0
Steinbach
Portage
Brandon
Edmonton
Calgary
Fargo
Saskatoon
Winnipeg
Minneapolis
Regina
Fixed
Water
Sewer


2004 Large User - 8,987,000 Cu. Ft.
$800,000
$700,000
$600,000
$500,000
$400,000
$300,000
$200,000
$100,000
$0
Steinbach
Calgary
Portage
Saskatoon
Brandon
Edmonton
Regina
Winnipeg
Fargo
Minneapolis
Fixed
Water
Sewer

FINANCIAL IMPACT

The 2005 rates and financial plans for water and sewer and utilities are contained in Appendices D and E. These plans are reflected in the utilities' Current and Capital Estimates and as such, a financial impact statement has not been prepared.

_____

Moira L. Geer, C.A.
Manager of Finance and Administration

5036

APPENDICES

The following appendices are attached as additional information:

APPENDIX A	Water and Sewer Rates - Ten Year History
APPENDIX B	Water Treatment Plant Reserve projections
APPENDIX C	Environmental Projects Reserve projections
APPENDIX D	Waterworks System Fund - Ten year financial projection of revenue, expenditures and working capital based on the recommendations contained in this report
APPENDIX E	Sewage Disposal System Fund - Ten year financial projection of revenue, expenditures and working capital based on the recommendations contained in this report
APPENDIX F	Water Consumption Six year Historical Summary 1998 - 2003
APPENDIX G	Water and Sewer Utility - Principles of Operation
APPENDIX H	Impact of the Water and Sewer recommendations on sample customers January 1st, 2005

IN PREPARING THIS REPORT THERE WAS CONSULTATION WITH AND CONCURRENCE BY: N/A

THIS REPORT SUBMITTED BY:

Water and Waste Department
Finance and Administration Division
Prepared by: Moira Geer, Lucy Szkwarek
Date: October 18, 2004
File No: 010-07-20-01-00 and 010-07-20-02-00

LBS/lbs
Attach.

APPENDIX A

History of Water, Sewer and Solid Waste Utility Rates
1995 - 2004

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Water Rates (per 100 cu ft)										
Block 1 (< 9,600 cu ft)	$1.70	$1.89	$2.10	$2.32	$2.54	$2.70	$2.75	$2.75	$2.75	$2.75
Block 2 (9,600 - 96,000 cu ft)	$1.37	$1.54	$1.72	$1.91	$2.10	$2.22	$2.27	$2.27	$2.27	$2.27
Block 3 (> 96,000 cu ft)	$1.03	$1.18	$1.33	$1.50	$1.65	$1.74	$1.79	$1.79	$1.79	$1.79
Sewer Rates (per 100 cu ft)										
Volume Rate	$2.29	$2.56	$2.83	$2.83	$2.80	$2.78	$2.73	$2.73	$2.73	$3.11
Total Water and Sewer Rate (Block 1)	$3.99	$4.45	$4.93	$5.15	$5.34	$5.48	$5.48	$5.48	$5.48	$5.86

APPENDIX B

Water Treatment Plant Financing Schedule $000s
(actual to year ending December 31, 2003)

Year	Capital	Contribution to Reserve				Balance End of Year	
	Expenditure	Volume Rate	Interest	Total Volume	Debt	Debt	Reserve
to 1998	1,750	6,710	381	7,091	0	0	5,341
1998	324	9,030	610	9,640	0	0	14,657
1999	261	10,832	1,192	12,024	0	0	26,420
2000	36	11,138	1,971	13,109	0	0	39,493
2001	316	11,242	2,608	13,850	0	0	53,027
2002	316	9,651	3,071	12,722	0	0	65,433
2003	1,141	10,114	3,542	13,656	0	0	77,948
2004	14,935	11,720	1,495	13,215	0	0	76,228
2005	38,100	10,416	961	11,377	0	0	49,504
2006	72,050	10,167	0	10,167	15,000	15,000	2,621
2007	56,000	0	0	0	54,500	69,500	1,121
2008	28,771	0	0	0	27,650	97,150	0
Total	**214,000**	**101,019**	**15,831**	**116,850**	**97,150**		

APPENDIX C

Sewer Utility

Environmental Projects and Financing Schedule $000s

Year	Annual Capital Expenditure	Financing					Balance end of year	
		Volume Rate	Interest	Total Volume	Fed/Prov	Debt	Debt	Reserve
to 2003	13,043	47,784	4,434	52,218				39,175
2004	21,816	13,899	784	14,682	0	0	0	32,041
2005	61,839	13,941	641	14,582	0	17,000	17,000	1,784
2006	15,573	8,875	36	8,911	9,600	0	17,000	4,721
2007	16,771	8,006	94	8,101	9,600	0	17,000	5,651
2008	37,866	8,006	113	8,119	9,600	16,000	33,000	1,505
2009	38,848	10,731	30	10,761	9,600	18,000	51,000	1,017
2010	63,664	12,573	20	12,594	9,600	43,000	94,000	2,547
2011	76,192	20,979	51	21,030	0	54,000	148,000	1,385
2012	63,016	22,425	28	22,453	0	41,000	189,000	1,822
2013	83,961	22,425	36	22,462	0	61,000	250,000	1,323
2014	85,515	22,425	26	22,452	0	63,000	313,000	1,260
2015	10,907	22,400	25	22,425				12,778
2016	11,513	12,000	256	12,256				13,520
2017	9,764	12,000	270	12,270				16,027
2018	20,292	12,000	321	12,321				8,055
2019	21,109	22,430	161	22,591				9,537
2020	21,391	22,430	191	22,621				10,767
2021	21,534	22,430	215	22,645				11,879
2022	22,401	22,430	238	22,668				12,145
2023	22,701	22,430	243	22,673				12,117
2024	22,852	22,430	242	22,672				11,937
2025	23,772	22,430	239	22,669				10,834
2026	24,090	22,430	217	22,647				9,391
2027	24,250	22,430	188	22,618				7,759
2028	25,227	22,430	155	22,585				5,117
2029	25,565	25,000	102	25,102				4,654
2030	25,735	25,000	93	25,093				4,012
Total to 2014	578,104	212,070	6,293	218,364	48,000	313,000		1,260
Total to 2030	911,207	544,770	9,449	554,219	48,000	313,000		4,012

APPENDIX D

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WATERWORKS SYSTEM FUND
Financial Projection 2005 to 2014

Waterworks System	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Revenue										
Sales Revenue	61,606	62,218	69,873	73,536	76,151	78,403	80,519	82,673	83,059	83,059
Non Rate Revenue	4,781	4,880	5,018	5,204	5,477	5,735	6,074	6,429	6,578	6,304
Water Treatment Reserve	10,416	10,167	0	0	0	0	0	0	0	0
Total Revenue	**76,803**	**77,264**	**74,891**	**78,740**	**81,627**	**84,139**	**86,593**	**89,101**	**89,637**	**89,363**
Expenditures										
Operating	39,308	40,596	46,333	53,260	54,325	55,411	56,520	57,650	58,803	59,979
Debt Service	8,980	9,386	9,833	14,501	16,522	16,552	16,850	17,163	16,853	15,347
Transfer to Water Treatment Reserve	10,416	10,167	0	0	0	0	0	0	0	0
Transfer to General Revenue Fund	11,354	11,354	11,354	11,444	11,534	11,625	11,718	11,811	11,905	12,000
Total Expenditures	**70,057**	**71,503**	**67,520**	**79,205**	**82,381**	**83,588**	**85,087**	**86,624**	**87,561**	**87,326**
Surplus(Deficit) for the year	6,746	5,761	7,371	(465)	(754)	551	1,506	2,478	2,075	2,037
Opening Working Capital	21,545	20,236	19,988	23,419	17,761	12,714	9,510	7,215	5,893	4,168
Appropriated to Capital	(8,077)	(5,958)	(6,360)	(5,193)	(4,300)	(3,800)	(3,800)	(3,800)	(3,800)	(3,800)
Other Changes in Working Capital	22	(51)	2,420	(0)	7	45	0	0	0	151
Ending Working Capital	20,236	19,988	23,419	17,761	12,714	9,510	7,215	5,893	4,168	2,556
Working Capital as a % of Sales	**33%**	**32%**	**34%**	**24%**	**17%**	**12%**	**9%**	**7%**	**5%**	**3%**
Overall Water Rate Block 1	**2.75**	**2.75**	**2.75**	**2.86**	**2.98**	**3.07**	**3.16**	**3.26**	**3.26**	**3.26**
Overall rate increase Block 1	**0.00%**	**0.00%**	**0.00%**	**4.00%**	**4.20%**	**3.02%**	**2.93%**	**3.16%**	**0.00%**	**0.00%**
Long-Term Debt Summary										
New debt, Water Treatment Plant		**15,000**	**54,500**	**27,650**						
Debt outstanding, closing year end balance	**31,594**	**42,117**	**93,726**	**115,770**	**108,594**	**101,221**	**93,523**	**85,486**	**77,316**	**69,586**

APPENDIX E

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SEWAGE DISPOSAL SYSTEM FUND
Financial Projections 2005 TO 2014

Sewage Disposal System	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Revenue										
Sales Revenue	72,951	86,190	90,677	92,895	92,508	92,744	97,021	103,054	109,880	116,942
Non Rate Revenue	4,835	4,500	4,791	5,113	5,449	5,328	5,774	6,322	5,200	3,945
Environmental Projects Reserve	13,941	8,875	8,006	8,006	10,731	12,573	20,979	22,425	22,425	22,425
Total Revenue	**91,727**	**99,565**	**103,475**	**106,014**	**108,687**	**110,645**	**123,774**	**131,801**	**137,506**	**143,312**
Expenditures										
Operating	41,312	43,741	45,867	46,874	47,917	52,888	56,648	60,492	67,588	71,723
Debt Service	18,424	16,795	16,696	17,596	22,474	25,764	28,617	31,377	31,702	32,148
Transfer to Environmental Projects Reserve	13,941	8,875	8,006	8,006	10,731	12,573	20,979	22,425	22,425	22,425
Transfer to General Revenue Fund	10,155	10,071	10,113	10,207	10,302	10,398	10,495	10,593	10,692	10,792
Total Expenditures	**83,832**	**79,482**	**80,682**	**82,683**	**91,423**	**101,624**	**116,739**	**124,887**	**132,407**	**137,089**
Surplus(Deficit) for the year	7,895	20,083	22,792	23,330	17,264	9,022	7,035	6,914	5,099	6,223
Opening Working Capital	11,763	(8,438)	(5,878)	5,926	18,698	24,947	26,205	21,399	17,013	12,709
Appropriated to Capital	(28,344)	(17,844)	(10,900)	(8,073)	(9,150)	(10,000)	(10,000)	(10,000)	(10,000)	(10,000)
Other Changes in Working Capital	248	321	(89)	(2,485)	(1,864)	2,236	(1,841)	(1,300)	597	(544)
Ending Working Capital	(8,438)	(5,878)	5,926	18,698	24,947	26,205	21,399	17,013	12,709	8,388
Working Capital as a % of Sales	**-12%**	**-7%**	**7%**	**20%**	**27%**	**28%**	**22%**	**17%**	**12%**	**7%**
Overall Sewer Rate	**3.39**	**3.70**	**3.79**	**3.87**	**3.96**	**4.04**	**4.61**	**4.86**	**5.13**	**5.40**
Overall rate increase/(decrease)	**9.00%**	**9.14%**	**2.43%**	**2.11%**	**2.33%**	**2.02%**	**14.11%**	**5.42%**	**5.56%**	**5.26%**
Long-Term Debt Summary										
New debt, Environmental Projects	**17,000**	**0**	**0**	**16,000**	**18,000**	**43,000**	**54,000**	**41,000**	**61,000**	**63,000**
Debt outstanding, closing year end balance	**67,177**	**60,974**	**54,849**	**64,364**	**74,771**	**109,748**	**153,229**	**180,345**	**226,563**	**274,264**

WATER CONSUMPTION HISTORICAL SUMMARY - 000s GALLONS
Consumption for volume sales (excludes standpipe)

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	1998	1999	2000	2001	2002	2003
B-1 Sales	**97/98**	**98/99**	**99/00**	**00/01**	**01/02**	**02/03**
October	883,311	946,381	906,724	824,164	965,309	933,722
November	745,030	724,133	710,007	689,014	738,590	724,901
December	769,443	788,713	758,809	747,260	821,073	817,935
January	810,783	821,931	831,380	801,656	876,961	837,821
February	632,012	686,466	680,216	654,591	620,700	630,317
March	767,492	763,391	758,647	747,005	768,535	759,140
April	796,016	818,561	790,161	826,841	803,207	830,781
May	657,822	666,027	686,032	673,964	665,609	677,894
June	805,235	799,673	902,067	767,123	790,454	858,112
July	924,992	927,065	981,311	849,050	960,142	943,887
August	804,412	784,359	743,338	741,022	761,990	777,798
September	848,878	829,197	772,084	859,102	856,568	869,904
Total	**9,445,426**	**9,555,897**	**9,520,776**	**9,180,792**	**9,629,138**	**9,662,212**
B-2 Sales	**97/98**	**98/99**	**99/00**	**00/01**	**01/02**	**02/03**
October	346,233	377,210	377,891	326,255	443,628	388,686
November	350,893	364,077	373,842	345,176	365,758	318,955
December	240,144	244,511	270,708	257,387	254,680	280,674
January	303,164	318,717	310,487	309,390	342,561	360,932
February	339,151	337,426	342,212	320,493	293,732	315,362
March	273,847	250,387	265,185	245,104	276,281	230,457
April	282,267	267,168	280,253	320,751	308,196	316,622
May	311,398	343,653	323,220	344,120	337,517	306,117
June	237,316	246,325	250,325	242,352	224,977	258,537
July	330,580	327,753	333,668	329,190	365,064	313,258
August	379,012	362,658	379,563	350,348	345,719	396,572
September	293,024	247,023	305,175	277,549	300,375	322,785
Total	**3,687,029**	**3,686,908**	**3,812,529**	**3,668,115**	**3,858,488**	**3,808,957**
B-3 Sales	**97/98**	**98/99**	**99/00**	**00/01**	**01/02**	**02/03**
October	416,556	442,681	352,163	279,214	382,924	297,954
November	231,587	301,648	274,705	301,776	289,609	218,225
December	194,249	117,817	173,978	186,582	180,823	167,851
January	295,327	348,742	267,287	221,279	193,635	295,438
February	228,912	312,489	213,172	191,856	199,970	207,787
March	203,134	104,530	185,755	185,126	138,922	100,921
April	306,863	306,294	234,648	227,242	235,043	242,005
May	222,997	194,127	236,943	223,285	249,468	201,851
June	139,964	238,274	138,755	112,734	115,750	131,279
July	334,517	209,178	302,471	282,364	341,669	436,628
August	342,652	252,974	266,899	254,438	279,939	205,735
September	178,499	278,374	192,008	169,016	179,995	225,071
Total	**3,095,257**	**3,107,128**	**2,838,784**	**2,634,912**	**2,787,747**	**2,730,745**
TOTAL B1-B3	**16,227,712**	**16,349,933**	**16,172,089**	**15,483,819**	**16,275,373**	**16,201,914**

APPENDIX G

WATER AND SEWER UTILITY
PRINCIPALS OF OPERATION

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

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

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

4. Working Capital Reserves - Water and Sewer Utilities. 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 11% of the combined Water and Sewer sales.

5. Ten Year Financial Plan - Water and Sewer Utilities. 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.

6. Transfers to the General Revenue Fund. The Water and Sewer Utilities transfer funds to the General Revenue Fund in the form of:
   - a percentage of sales revenue, net of capital reserves, as a return to the City on ownership of the Utilities
   - additional general provisions to meet the City's financial targets
   - support to the Fire Hydrant and Land Drainage programs - these transfers fund 100% of the costs of these programs, with the exception of the debt servicing costs in the Land Drainage program

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.

APPENDIX H

CUSTOMER IMPACT ANALYSIS
Annual Basis

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	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Residential 5/8" meter											
8,400 cu.ft. Water	2.75	2.75	2.75	2.75	2.86	2.98	3.07	3.16	3.26	3.26	3.26
Sewer	3.11	3.39	3.70	3.79	3.87	3.96	4.04	4.61	4.86	5.13	5.40
Total Volume Rate	**5.86**	**6.14**	**6.45**	**6.54**	**6.73**	**6.94**	**7.11**	**7.77**	**8.12**	**8.39**	**8.66**
FQC	**12.10**	**13.75**	**13.75**	**13.75**	**13.75**	**13.75**	**13.75**	**13.75**	**13.75**	**13.75**	**13.75**
	$540.64	$570.25	$596.65	$604.18	$620.19	$638.16	$652.40	$708.00	$736.80	$759.97	$782.34
Overall $ Change	32.58	29.61	26.41	7.52	16.01	17.97	14.24	55.60	28.80	23.16	22.38
Overall % Change	6.41%	5.48%	4.63%	1.26%	2.65%	2.90%	2.23%	8.52%	4.07%	3.14%	2.94%
Small Restaurant 1" meter											
56,000 cu.ft. Water	2.27	2.27	2.27	2.27	2.38	2.48	2.57	2.66	2.75	2.75	2.75
Sewer	3.11	3.39	3.70	3.79	3.87	3.96	4.04	4.61	4.86	5.13	5.40
Total Volume Rate	**5.38**	**5.66**	**5.97**	**6.06**	**6.25**	**6.44**	**6.61**	**7.27**	**7.61**	**7.88**	**8.15**
FQC	**15.92**	**17.70**	**17.70**	**17.70**	**17.70**	**17.70**	**17.70**	**17.70**	**17.70**	**17.70**	**17.70**
	$3,124.06	$3,286.40	$3,456.42	$3,508.22	$3,616.70	$3,724.66	$3,819.48	$4,191.56	$4,382.33	$4,534.43	$4,683.62
Automatic Car Wash 2" meter											
326,400 cu.ft. Water	1.79	1.79	1.79	1.79	1.90	2.01	2.10	2.18	2.27	2.27	2.27
Sewer	3.11	3.39	3.70	3.79	3.87	3.96	4.04	4.61	4.86	5.13	5.40
Total Volume Rate	**4.90**	**5.18**	**5.49**	**5.58**	**5.77**	**5.97**	**6.14**	**6.79**	**7.13**	**7.40**	**7.67**
FQC	**30.28**	**31.80**	**31.80**	**31.80**	**31.80**	**31.80**	**31.80**	**31.80**	**31.80**	**31.80**	**31.80**
	$16,637.76	$17,552.97	$18,538.05	$18,855.51	$19,478.30	$20,120.49	$20,672.70	$22,797.15	$23,907.06	$24,791.27	$25,660.83
Large Restaurant 3" meter											
626,000 cu.ft. Water	1.79	1.79	1.79	1.79	1.90	2.01	2.10	2.18	2.27	2.27	2.27
Sewer	3.11	3.39	3.70	3.79	3.87	3.96	4.04	4.61	4.86	5.13	5.40
Total Volume Rate	**4.90**	**5.18**	**5.49**	**5.58**	**5.77**	**5.97**	**6.14**	**6.79**	**7.13**	**7.40**	**7.67**
FQC	**107.81**	**109.45**	**109.45**	**109.45**	**109.45**	**109.45**	**109.45**	**109.45**	**109.45**	**109.45**	**109.45**
	$31,616.73	$33,367.72	$35,255.88	$35,870.33	$37,090.35	$38,329.21	$39,388.14	$43,445.42	$45,573.56	$47,268.95	$48,936.66
Hotel 3" meter											
1,182,800 cu.ft. Water	1.79	1.79	1.79	1.79	1.90	2.01	2.10	2.18	2.27	2.27	2.27
Sewer	3.11	3.39	3.70	3.79	3.87	3.96	4.04	4.61	4.86	5.13	5.40
Total Volume Rate	**4.90**	**5.18**	**5.49**	**5.58**	**5.77**	**5.97**	**6.14**	**6.79**	**7.13**	**7.40**	**7.67**
FQC	**107.81**	**109.45**	**109.45**	**109.45**	**109.45**	**109.45**	**109.45**	**109.45**	**109.45**	**109.45**	**109.45**
	$58,902.67	$62,206.05	$65,772.58	$66,938.96	$69,244.74	$71,592.51	$73,593.16	$81,242.56	$85,263.06	$88,466.01	$91,617.08
Foundry 4" meter											
8,987,600 cu.ft. Water	1.79	1.79	1.79	1.79	1.90	2.01	2.10	2.18	2.27	2.27	2.27
Sewer	3.11	3.39	3.70	3.79	3.87	3.96	4.04	4.61	4.86	5.13	5.40
Total Volume Rate	**4.90**	**5.18**	**5.49**	**5.58**	**5.77**	**5.97**	**6.14**	**6.79**	**7.13**	**7.40**	**7.67**
FQC	**136.53**	**139.25**	**139.25**	**139.25**	**139.25**	**139.25**	**139.25**	**139.25**	**139.25**	**139.25**	**139.25**
	$441,491.00	$466,559.09	$493,651.53	$502,554.73	$520,079.80	$537,971.40	$553,172.30	$611,173.44	$641,719.63	$666,054.33	$689,997.96