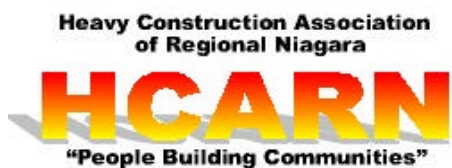


Report on:

**Infrastructure Renewal and Municipal
Accountability within the Region of Niagara**

Prepared for:



Prepared by:



March 15, 2004

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HISTORY

In February of 2000, the Heavy Construction Association of Regional Niagara (HCARN) commissioned a study to examine the state of infrastructure within Niagara Region. The report entitled "The Case for Increase Infrastructure Investment in the Region of Niagara" evaluated the status of road and sewer/water systems in the Region and the connection between increased investment and resulting economic and user benefits.

FINDINGS OF INITIAL STUDY

The study evaluated data and literature provided by a variety of Canadian associations, municipalities within the Niagara Region and industry. Regional infrastructure expenditures covering a time period of 5 years were analyzed, conclusions were drawn and the final report was presented on January 5, 2001.

The report highlighted the immediate need for investment in road infrastructure and in sewer and water main construction, and was the topic of conversation at several local council meetings. Some of the key finding included:

Road Infrastructure

- Protecting Investment – there is a contingent liability of \$147.5 million to reconstruct the 590 km of 12-15 year old roads identified by the respondents. This contingent liability will become an actual liability if these roads are not rehabilitated in the next 1-3 years. The cost to rehabilitate these roads is \$47.2 million. In other words rehabilitating the roads saves \$100.3 million. There are a further 2,166 km of regional roads that are older than 15 years. The cost to rebuild these roads is \$541 million.
- Attracting Investment – highway access is the #2 site selection factor (after labour cost). Without superior access Niagara will not be able to realize the full potential of the growing traffic transiting the peninsula.
- User Benefits – such as reduced travel time and operating costs, and increased safety have a net present value (NPV) in the range of \$634,000 per km.

Sewer & Water Infrastructure

- Protecting Investment – Based on National Research Council sewer/water maintenance and replacement guidelines (conservative estimates based on 3% and 2% of replacement value respectively) there has been a total budget shortfall of \$67.7 million in the respondents' sewer/water budgets covering the period 1997 – 2000.

-
- Attracting Investment – there is evidence of communities ceasing development due to the inability of the water system to expand. Further, easy, cost efficient provision of water services can be a contributor to investment decisions.
 - User Benefits – no quantification of user benefits was found; however, Canadians, and in particular Hamilton/Niagara residents, rank the provision of clean water as the number one program that should be exempt from spending cuts. Clean water ranks ahead of public health, education and social assistance.

Common Conclusions

- Jobs – a \$1 million infrastructure project generates in the order of 29.3 local person years of employment.
- Spending – a \$1 million infrastructure project generates a total benefit in the order of \$1,230,000 in Direct, Indirect and Induced local income.
- Productivity – research on productivity impact shows there is a positive and strong correlation between investment and productivity in the order of: a 1% increase in public capital stock produces a 0.10% to 0.40% increase in productivity.
- Costs – research on cost impact shows there is a positive and strong correlation between investment and reduction of manufacturing costs in the order of: a 1% increase in public capital stock produces a 0.11% to 0.22% decrease in manufacturing costs.
- Return on investment – research on US investment impact shows that returns on infrastructure investment have dropped in the past 40 years from 40+% to 10%. This is due to diminishing benefits since the substantial completion of the US interstate highway system.
- Returns in general are variable, based on the type of infrastructure investment, with investment in maintenance generating 35% returns and investment in new rural construction generating low (unspecified) returns.

STUDY RELEASE

The release of the “Case for Increased Infrastructure Investment in the Region of Niagara” generated a lot of interest from various levels of regional government, the media, and the public. The findings of the study were presented to Municipal Council at meetings in St. Catharines, Niagara Falls, Welland, Port Colborne, Lincoln and the Public Works Committee Meeting of Niagara Regional Council. Various newspapers including the Welland Tribune, St. Catharines Standard and Niagara Falls Review took interest and reported the findings of the study. The local radio station (CHSC) interviewed an HCARN representative who spoke about the findings of the study and their relationship to the continuing viability of the Niagara Region. A public awareness campaign followed to increase awareness of infrastructure issues and gather information on a regional basis regarding the importance of infrastructure to ratepayers. The report and results of the public awareness campaign prompted Public Works Directors from each municipality to include HCARN’s executive members bi-annually to discuss current and future infrastructure issues and initiatives. The main concern noted by both the public and council was a need for change regarding investment in infrastructure.

MUNICIPAL ACCOUNTABILITY

During the meeting held with Municipal Councils and the Regional Public Works Committee, it became evident that a commitment to infrastructure must be addressed in upcoming budgets. In order to gauge the level of commitment municipalities are giving to infrastructure issues, a strategy for measuring investment level was devised. A scorecard was developed as a measuring tool. The scorecard measured hard categories including actual v. budget expenditures, rolling averages, investment per capita, and asset replacement index as well as softer categories including co-operation received from each municipality, the budget process, responses to questions, and public awareness/education. The intention of the scorecard exercise is not to measure the quality of infrastructure, but rather is a measure of commitment fulfillment. A high score indicates that the municipality is further along the timeline of investment. A breakdown of measurement criteria is as follows:

Scorecard

Actual v. Budget

- Accountability measure to see if expenditures are close to or exceed what was planned or budgeted

Rolling Averages

- Measures to carry forward expenditures that have been budgeted in one year, but spent in another year due to a variety of variables
- Compares 3 year to 5 year averages

Per Capita

- Measures the increase in expenditures that the Municipality is spending per population (as per Regional website)

Asset Replacement Index

- Benchmark for annual replacement cost of water and wastewater. Compares municipal 3 year averages to see if they meet or exceed industry standards for 70 year lifecycle for water and wastewater replacement.

Infrastructure Expenditure Processes

- Co-operation – ease of obtaining financial data, meeting with municipalities, turnaround time.
- Budget Process – measured detail involved in budgets and whether budgets are linked to funding sources and lifecycle analysis.
- Detailed Explanation – measured response to questions
- Public Awareness & Education –measured whether or not the municipality was involved with campaigns, handouts, websites to inform taxpayers about various infrastructure projects and issues.

Findings

Infrastructure General Observations

- In 1998, spending fell to \$64,096,265 but has been steadily increasing each year to \$101,902,086 in 2002
- The 3 year average of Infrastructure spending has increased to \$83,580,304 from the 5 year average of \$76,365,083
- Region has contributed 65.5% (\$24,436,931) towards Roads over the past 5 years. This is compared to expenditures from 8 municipalities in the Niagara Region that provided financial information.
- Region contributed 62.96% (\$13,848,927) towards Wastewater over the past 5 years. This is compared to expenditures from 8 municipalities in the Niagara Region that provided financial information.
- Region contributed 28.86% (\$4,903,373) towards Water over the past 5 years. This is compared to expenditures from 8 municipalities in the Niagara Region that provided financial information.
- Region contributed 100% towards Solid Waste, a total expenditure of \$22,213,626 over the past 5 years, or an average of \$4,442,725/year.

Infrastructure Budget Comparisons

- Increase of approximately 50% between 2001 to 2002 budgets
- Increase of approximately 20% between 2002 to 2003 budgets
- Region makes up 57% of the 2001 budget
- Region makes up 48% of the 2002 budget
- Region makes up 62% of the 2003 budget

Per Capita Infrastructure Spending Comparison

- In 2001, an average of \$47.23 was spent by 8 Municipalities and the Region per capita on Roads infrastructure
- In 2002, an average of \$48.03 was spent by 7 Municipalities and the Region per capita on Roads infrastructure (a 2% increase)
- In 2001, an average of \$31.02 was spent by 8 Municipalities and the Region per capita on Wastewater infrastructure
- In 2002, an average of \$40.78 was spent by 7 Municipalities and the Region per capita on Wastewater infrastructure (a 31.5% increase)
- In 2001, an average of \$31.30 was spent by 8 Municipalities and the Region per capita on Water infrastructure
- In 2002, an average of \$45.69 was spent by 7 Municipalities and the Region per capita on Water infrastructure (a 46% increase)

Infrastructure Asset Replacement Index

- The total of the 3 year averages for the 7 Municipalities and the Region exceeds the annual capital replacement cost benchmark by 61%.

Final Score

Total Score (out of possible 100 marks)	
Port Colborne	76
Niagara-on-the-Lake	76
Region	66
St. Catharines	65
Thorold	64
Niagara Falls	58
Fort Erie	58
Welland	54

CONCLUSIONS

The findings to date confirm that the municipalities studied are following through with their commitment to increase investment in infrastructure. The budgeted expenditures for 2003 are planned to reach \$133 million versus the \$64 million expended in 1998, the year before the “Case for Increased Infrastructure Investment” took place. Over the past 5 years, an approximate total of \$382 million has been spent on infrastructure between the 8 municipalities.

Further investigation, analysis and study is required to determine whether or not a 70 year asset replacement scenario for water and wastewater is viable in comparison to a more conservative 50 year scenario.

The Region of Niagara is to be applauded for committing and setting aside specific funds for specific future projects, even though many times projects are delayed due to environmental assessment work or building up funds. The rapidly declining state of infrastructure is an issue that many municipal bodies are facing and other municipalities are encouraged to learn from this example of strategic asset management and follow suit.

The current asset replacement index used is best suited for water and wastewater systems. A better method of evaluating road infrastructure asset replacement needs to be developed in conjunction with the municipalities. A measurement system should be developed which takes into consideration the type of road and its resulting lifecycle cost.

SUMMARY SCORECARD

<i>Actual Expenditure v. Budget</i>	<i>Rolling Average 3 year to 5 year</i>	<i>Per Capita last 2 years</i>	<i>*Asset Replacement Index</i>	<i>Infrastructure Expenditure Process</i>	<i>Total Score</i>
Port Colborne (20/30)	St. Catharines (30/30)	Welland (12/12)	Region (8/8)	Region (18/20)	Port Colborne (76/100)
Thorold (20/30)	Port Colborne (30/30)	Fort Erie (12/12)	Niagara Falls (8/8)	Fort Erie (18/20)	Niagara-on-the-Lake (76/100)
Niagara-on-the-Lake (20/30)	Niagara-on-the-Lake (30/30)	St. Catharines (8/12)	Port Colborne (8/8)	Welland (17/20)	Region (66/100)
Region (15/30)	Region (25/30)	Niagara Falls (8/12)	Fort Erie (8/8)	Port Colborne (14/20)	St. Catharines (65/100)
St. Catharines (15/30)	Thorold (25/30)	Niagara-on-the-Lake (8/12)	Niagara-on-the-Lake (8/8)	St. Catharines (12/20)	Thorold (64/100)
Niagara Falls (10/30)	Niagara Falls (20/30)	Port Colborne (4/12)	Thorold (4/8)	Niagara Falls (12/20)	Niagara Falls (58/100)
Fort Erie (10/30)	Welland (20/30)	Thorold (4/12)	St. Catharines (0/8)	Thorold (11/20)	Fort Erie (58/100)
Welland (5/30)	Fort Erie (10/30)	Region (0/12)	Welland (0/8)	Niagara -on-the-Lake (10/20)	Welland (54/100)

*Figures taken from the "Water and Wastewater Master Servicing Plan Update" (2003)

The Regional Municipality of Niagara							
Increased Infrastructure Investment in the Niagara Region	Infrastructure Expenditures:			Individual Score	Total Possible Score		
	<i>Actual Expenditure v. Budget</i>			2001	2002		
	Roads	**	107.83%	26.77%	10		
	Waste Water	**	-6.15%	-36.46%	5		
	Water	**	-51.62%	-73.55%	0		
				Total	15	30	
	<i>Rolling Average 3 year to 5 year (1998-2002)</i>						
	<i>Current Increase</i>						
	Roads		16.94%		10		
	Waste Water						
Water							
<i>Current Decrease but where Expenditure Position was Positive</i>							
Roads							
Waste Water		-1.54%		10			
Water		-5.10%		5			
			Total	25	30		
<i>Per Capita last 2 years</i>			Pop: 410,574	2001	2002		
Roads				\$81.88	\$76.72	0	
Waste Water				\$29.35	\$22.95	0	
Water				\$14.08	\$12.08	0	
				Total	0	12	
<i>Asset Replacement Index</i>							
<i>Water and Waste Water</i>							
*Estimated Infrastructure Capital Replacement Cost				\$367,000,000			
*Annual Expected Capital Replacement Cost				\$5,190,000			
(based on 70 year life span or 1.4% Annual Replacement)							
3 year Rolling Average				\$18,289,282			
				Total	8	8	
Infrastructure Expenditure Processes:							
<i>Co-operation</i>					5		
<i>Budget Process</i>					5		
<i>Detailed Explanation</i>					5		
<i>Public Awareness & Education</i>					3		
				Total	18	20	
				Total Score	66	100	

*Figures taken from the "Water and Wastewater Master Servicing Plan Update" (2003)

**2001 and 2002 Commitment Figures were subtracted from the respective years budgets.

THE REGIONAL MUNICIPALITY OF NIAGARA

Division	5 Year Average	3 Year Average	1997 Actual	1998 Actual	1999 Actual	2000 Actual	*2001 Budgeted	2001 Actual	*2002 Budgeted	2002 Actual	2003 Budgeted
Roads	\$24,436,931	\$28,575,644	\$19,429,078	\$20,346,588	\$16,111,134	\$20,611,301	\$16,174,354	\$33,615,846	\$24,848,943	\$31,499,785	\$32,517,000
Wastewater	\$13,848,927	\$13,636,115	\$18,159,421	\$10,699,880	\$17,636,411	\$19,433,733	\$12,841,540	\$12,051,567	\$14,830,253	\$9,423,044	\$26,770,000
Water Works	\$4,903,373	\$4,653,167	\$11,229,235	\$5,606,668	\$4,950,693	\$3,219,805	\$11,947,695	\$5,779,807	\$18,754,841	\$4,959,890	\$23,200,000
Solid Waste	\$4,442,725	\$4,073,849	\$2,552,906	\$4,789,747	\$5,202,331	\$2,525,677		\$3,381,181		\$6,314,690	

* 2001 and 2002 Commitment Figures were subtracted from the respective budget years budget.

		City of Niagara Falls				
				Individual Score	Total Possible Score	
Increased Infrastructure Investment in the Niagara Region	Infrastructure Expenditures:					
	<i>Actual Expenditure v. Budget</i>		2001	2002		
	Roads		-27.22%	-13.62%	0	
	Waste Water		-37.02%	67.58%	5	
	Water		-41.07%	672.07%	5	
				Total	10	30
	<i>Rolling Average 3 year to 5 year (1998-2002)</i>					
	Current Increase					
	Roads					
	Waste Water	57.86%			10	
	Water	1.62%			10	
	Current Decrease but where Expenditure Position was Positive					
	Roads	-15.55%			0	
	Waste Water					
	Water					
				Total	20	30
	<i>Per Capita last 2 years</i>	Pop: 78,815		2001	2002	
	Roads			\$34.34	\$13.82	0
	Waste Water			\$27.46	\$62.38	4
	Water			\$22.52	\$34.29	4
				Total	8	12
	<i>Asset Replacement Index</i>					
	<i>Water and Waste Water</i>					
	*Estimated Infrastructure Capital Replacement Cost				\$315,000,000	
	*Annual Expected Capital Replacement Cost (based on 70 year life span or 1.4% Annual Replacement)				\$4,500,000	
3 year Rolling Average				\$5,297,352		
			Total	8	8	
Infrastructure Expenditure Processes:						
Co-operation				5		
Budget Process				2		
Detailed Explanation				2		
Public Awareness & Education				3		
			Total	12	20	
			Total Score	58	100	

*Figures taken from the "Water and Wastewater Master Service Plan Update" (2003)

CITY OF NIAGARA FALLS

Division	5 Year Average	3 Year Average	1997 Actual	1998 Actual	1999 Actual	2000 Actual	2001 Budgeted	2001 Actual	2002 Budgeted	2002 Actual	2003 Budgeted
Roads	\$1,833,169	\$1,548,084	\$2,772,472	\$2,632,402	\$1,889,188	\$848,642	\$3,718,500	\$2,706,192	\$1,261,250	\$1,089,419	\$5,565,000
Wastewater	\$1,670,608	\$2,637,158	\$329,947	\$216,321	\$225,244	\$830,928	\$3,435,975	\$2,164,118	\$2,933,750	\$4,916,429	\$7,658,700
Water Works	\$2,617,738	\$2,660,194	\$741,920	\$1,414,526	\$3,693,585	\$3,503,582	\$3,011,500	\$1,774,747	\$350,000	\$2,702,252	\$1,652,500

		City of St. Catharines			Individual Score	Total Possible Score	
Increased Infrastructure Investment in the Niagara Region	Infrastructure Expenditures:						
	<i>Actual Expenditure v. Budget</i>			2001	2002		
		Roads		-19.53%	16.80%	5	
		Waste Water		8.18%	-42.41%	5	
		Water		-13.24%	9.26%	5	
				Total		15	30
	<i>Rolling Average 3 year to 5 year (1998-2002)</i>						
		Current Increase					
		Roads		5.17%		10	
		Waste Water		27.66%		10	
		Water		20.07%		10	
		Current Decrease but where Expenditure Position was Positive					
		Roads					
		Waste Water					
		Water					
				Total		30	30
		<i>Per Capita last 2 years</i>	Pop: 129,170	2001	2002		
		Roads		\$33.60	\$49.73	4	
		Waste Water		\$23.20	\$14.63	0	
		Water		\$28.88	\$36.37	4	
			Total		8	12	
	<i>Asset Replacement Index</i>						
	<i>Water and Waste Water</i>						
	*Estimated Infrastructure Capital Replacement Cost			\$521,000,000			
	*Annual Expected Capital Replacement Cost (based on 70 year life span or 1.4% Annual Replacement)			\$7,300,000			
	3 year Rolling Average			\$6,244,240			
			Total		0	8	
Infrastructure Expenditure Processes:							
	Co-operation				0		
	Budget Process				5		
	Detailed Explanation				5		
	Public Awareness & Education				2		
			Total		12	20	
			Total Score		65	100	

*Figures taken from the "Water and Wasterwater Master Servicing Plan Update" (2003)

CITY OF ST. CATHARINES

Division	5 Year Average	3 Year Average	1997 Actual	1998 Actual	1999 Actual	2000 Actual	2001 Budgeted	2001 Actual	2002 Budgeted	2002 Actual	2003 Budgeted
Roads	\$5,099,332	\$5,362,990	\$4,588,193	\$5,320,301	\$4,087,387	\$5,325,098	\$5,393,000	\$4,339,744	\$5,500,000	\$6,424,128	\$5,500,000
Wastewater	\$1,734,632	\$2,214,499	\$2,621,757	\$1,406,315	\$623,347	\$1,756,787	\$2,770,000	\$2,996,484	\$3,282,000	\$1,890,227	\$2,888,000
Water Works	\$3,356,295	\$4,029,741	\$1,899,724	\$2,393,681	\$2,298,573	\$3,660,382	\$4,300,000	\$3,730,592	\$4,300,000	\$4,698,249	\$4,300,000

City of Port Colborne								
Increased Infrastructure Investment in the Niagara Region	Infrastructure Expenditures:					Individual Score	Total Possible Score	
	<i>Actual Expenditure v. Budget</i>		2001	2002				
	Roads		-29.57%	2.88%	5			
	Waste Water		21.10%	46.26%	10			
	Water		-13.86%	2.14%	5			
						Total	20	30
	<i>Rolling Average 3 year to 5 year (1998-2002)</i>							
	Current Increase							
	Roads		35.74%		10			
	Waste Water		47.97%		10			
Water		8.29%		10				
Current Decrease but where Expenditure Position was Positive								
Roads								
Waste Water								
Water								
					Total	30	30	
<i>Per Capita last 2 years</i>		Pop: 18,450	2001	2002				
Roads			\$26.95	\$47.43	4			
Waste Water			\$75.48	\$32.11	0			
Water			\$29.18	\$24.91	0			
					Total	4	12	
<i>Asset Replacement Index</i>								
<i>Water and Waste Water</i>								
*Estimated Infrastructure Capital Replacement Cost				\$73,000,000				
*Annual Expected Capital Replacement Cost				\$1,020,000				
(based on 70 year life span or 1.4% Annual Replacement)								
3 year Rolling Average				\$2,261,602				
					Total	8	8	
Infrastructure Expenditure Processes:								
Co-operation					3			
Budget Process					4			
Detailed Explanation					4			
Public Awareness & Education					3			
					Total	14	20	
					Total Score	76	100	

*Figures taken from the "Water and Wastewater Master Servicing Plan Update" (2003)

CITY OF PORT COLBORNE

Division	5 Year Average	3 Year Average	1997 Actual	1998 Actual	1999 Actual	2000 Actual	2001 Budgeted	2001 Actual	2002 Budgeted	2002 Actual	2003 Budgeted
Roads	\$365,842	\$496,586	\$249,351	\$201,884	\$137,570	\$117,511	\$706,000	\$497,244	\$850,500	\$875,002	\$510,000
Wastewater	\$1,133,402	\$1,677,051	\$913,955	\$444,716	\$191,142	\$3,046,197	\$1,150,000	\$1,392,599	\$405,000	\$592,357	\$652,000
Water Works	\$539,809	\$584,551	\$700,105	\$806,474	\$138,916	\$755,612	\$625,000	\$538,393	\$450,000	\$459,648	\$450,000

		City of Thorold		Individual Score	Total Possible Score	
Increased Infrastructure Investment in the Niagara Region	Infrastructure Expenditures:					
	<i>Actual Expenditure v. Budget</i>					
			2001	2002		
	Roads		60.81%	-18.93%	5	
	Waste Water		4.90%	-20.28%	5	
	Water		-8.80%	65.19%	10	
					Total	20
						30
	<i>Rolling Average 3 year to 5 year (1998-2002)</i>					
	<i>Current Increase</i>					
	Roads	21.12%			10	
	Waste Water	21.99%			10	
	Water					
	<i>Current Decrease but where Expenditure Position was Positive</i>					
	Roads					
	Waste Water					
	Water	-6.87%			5	
					Total	25
						30
	<i>Per Capita last 2 years</i>					
		Pop: 18,048	2001	2002		
	Roads		\$32.97	\$7.41	0	
	Waste Water		\$24.73	\$21.05	0	
	Water		\$16.42	\$35.63	4	
					Total	4
					12	
<i>Asset Replacement Index</i>						
<i>Water and Waste Water</i>						
			\$61,000,000			
			\$860,000			
<small>(based on 70 year life span or 1.4% Annual Replacement)</small>						
			\$813,682			
				Total	4	
					8	
Infrastructure Expenditure Processes:						
Co-operation				1		
Budget Process				4		
Detailed Explanation				4		
Public Awareness & Education				2		
				Total	11	
					20	
Total Score				64	100	

*Figures taken from the "Water and Wastewater Master Servicing Plan Update" (2003)

CITY OF THOROLD

Division	5 Year Average	3 Year Average	1997 Actual	1998 Actual	1999 Actual	2000 Actual	2001 Budgeted	2001 Actual	2002 Budgeted	2002 Actual	2003 Budgeted
Roads	\$365,953	\$443,255	\$332,000	\$0	\$500,000	\$601,000	\$370,000	\$595,000	\$165,000	\$133,765	\$670,000
Wastewater	\$331,296	\$404,160	\$3,500,000	\$55,000	\$389,000	\$386,194	\$425,420	\$446,286	\$476,667	\$380,000	\$531,000
Water Works	\$439,713	\$409,522	\$230,000	\$670,000	\$300,000	\$289,155	\$325,000	\$296,410	\$389,245	\$643,000	\$393,000

		City of Welland		Individual Score	Total Possible Score	
Increased Infrastructure Investment in the Niagara Region	Infrastructure Expenditures:					
	<i>Actual Expenditure v. Budget</i>		2001	2002		
		Roads	-29.00%	122.85%	5	
		Waste Water	-37.41%	-17.24%	0	
		Water	-30.61%	-20.78%	0	
			Total		5	30
	<i>Rolling Average 3 year to 5 year (1998-2002)</i>					
	<i>Current Increase</i>					
		Roads				
		Waste Water				
		Water	8.13%		10	
	<i>Current Decrease but where Expenditure Position was Positive</i>					
		Roads	-22.69%		0	
		Waste Water	-3.12%		10	
		Water				
			Total		20	30
	<i>Per Capita last 2 years</i>					
		Pop:	48,402			
		Roads	2001	2002		
			\$18.70	\$31.77	4	
		Waste Water	\$18.43	\$30.86	4	
		Water	\$20.50	\$24.06	4	
			Total		12	12
	<i>Asset Replacement Index</i>					
	<i>Water and Waste Water</i>					
	*Estimated Infrastructure Capital Replacement Cost		\$210,000,000			
	*Annual Expected Capital Replacement Cost		\$2,900,000			
	(based on 70 year life span or 1.4% Annual Replacement)					
	3 year Rolling Average		\$2,283,244			
		Total		0	8	
Infrastructure Expenditure Processes:						
	Co-operation			5		
	Budget Process			5		
	Detailed Explanation			5		
	Public Awareness & Education			2		
		Total		17	20	
		Total Score		54	100	

*Figures taken from the "Water and Wastewater Master Servicing Plan Update" (2003)

CITY OF WELLAND

Division	5 Year Average	3 Year Average	1997 Actual	1998 Actual	1999 Actual	2000 Actual	2001 Budgeted	2001 Actual	2002 Budgeted	2002 Actual	2003 Budgeted
Roads	\$1,649,726	\$1,275,456	\$1,048,190	\$1,803,988	\$2,618,272	\$1,383,475	\$1,275,000	\$905,221	\$690,000	\$1,537,672	\$925,000
Wastewater	\$1,210,814	\$1,173,046	\$1,435,486	\$1,800,102	\$734,828	\$1,133,367	\$1,425,000	\$891,938	\$1,805,000	\$1,493,834	\$1,675,000
Water Works	\$1,026,681	\$1,110,197	\$1,350,947	\$777,815	\$1,024,996	\$1,173,795	\$1,430,000	\$992,328	\$1,470,000	\$1,164,469	\$1,100,000

Town of Niagara-on-the-Lake						
Increased Infrastructure Investment in the Niagara Region	Infrastructure Expenditures:				Individual Score	Total Possible Score
	<i>Actual Expenditure v. Budget</i>		2001	2002		
	Roads		18.12%	-27.66%	5	
	Waste Water		-57.74%	17.50%	5	
	Water		11.18%	40.47%	10	
					Total	30
	<i>Rolling Average 3 year to 5 year (1998-2002)</i>					
	Current Increase					
	Roads	14.21%			10	
	Waste Water	38.65%			10	
Water	34.09%			10		
Current Decrease but Expenditure Position was Positive						
Roads						
Waste Water						
Water						
				Total	30	
<i>Per Capita last 2 years</i>		Pop: 13,839	2001	2002		
Roads			\$102.76	\$68.43	0	
Waste Water			\$56.88	\$120.86	4	
Water			\$107.57	\$133.27	4	
				Total	8	
<i>Asset Replacement Index</i>						
<i>Water and Waste Water</i>						
*Estimated Infrastructure Capital Replacement Cost				\$93,000,000		
*Annual Expected Capital Replacement Cost (based on 70 year life span or 1.4% Annual Replacement)				\$1,300,000		
3 year Rolling Average				\$3,021,050		
				Total	8	
Infrastructure Expenditure Processes:						
Co-operation				1		
Budget Process				4		
Detailed Explanation				3		
Public Awareness & Education				2		
				Total	10	
				Total Score	76	
					100	

*Figures taken from the "Water and Wastewater Master Servicing Plan Update" (2003)

TOWN OF NIAGARA-ON-THE-LAKE

Division	5 Year Average	3 Year Average	1997 Actual	1998 Actual	1999 Actual	2000 Actual	2001 Budgeted	2001 Actual	2002 Budgeted	2002 Actual	2003 Budgeted
Roads	\$1,472,834	\$1,682,181	\$896,578	\$1,343,136	\$974,492	\$2,677,439	\$1,204,000	\$1,422,127	\$1,309,000	\$946,976	\$1,598,000
Wastewater	\$833,411	\$1,155,501	\$783,450	\$536,212	\$164,339	\$1,006,771	\$1,862,500	\$787,164	\$1,423,500	\$1,672,568	\$1,607,500
Water Works	\$1,391,238	\$1,865,549	\$1,216,956	\$555,337	\$804,205	\$2,263,622	\$1,339,000	\$1,488,644	\$1,313,000	\$1,844,381	\$1,182,000

Town of Fort Erie							
Increased Infrastructure Investment for the Niagara Region	Infrastructure Expenditures:			Individual Score	Total Possible Score		
	<i>Actual Expenditure v. Budget</i>			2001	2002		
		Roads		-29.82%	10.71%	5	
		Waste Water		-27.53%	-10.17%	0	
		Water		-54.58%	3.20%	5	
				Total		10	30
	<i>Rolling Average 3 year to 5 year (1998-2002)</i>						
		Current Increase					
		Roads	33.56%			10	
		Waste Water					
	Water						
	Current Decrease but where Expenditure Position was Positive						
	Roads						
	Waste Water	-19.10%			0		
	Water	-16.69%			0		
			Total		10	30	
	<i>Per Capita last 2 years</i>	Pop: 28,143	2001	2002			
	Roads		\$66.69	\$74.62	4		
	Waste Water		\$20.34	\$27.93	4		
	Water		\$34.39	\$82.50	4		
			Total		12	12	
	<i>Asset Replacement Index</i>						
	<i>Water and Waste Water</i>						
	*Estimated Infrastructure Capital Replacement Cost			\$166,000,000			
	*Annual Expected Capital Replacement Cost (based on 70 year life span or 1.4% Annual Replacement)			\$2,400,000			
	3 year Rolling Average			\$2,764,317			
			Total		8	8	
Infrastructure Expenditure Processes:							
	Co-operation				5		
	Budget Process				4		
	Detailed Explanation				5		
	Public Awareness & Education				4		
			Total		18	20	
			Total Score		58	100	

*Figures taken from the "Water and Wastewater Servicing Plan Update" (2003)

TOWN OF FORT ERIE

Division	5 Year Average	3 Year Average	1997 Actual	1998 Actual	1999 Actual	2000 Actual	2001 Budgeted	2001 Actual	2002 Budgeted	2002 Actual	2003 Budgeted
Roads	\$1,454,217	\$1,942,308	\$553,036	\$532,603	\$911,559	\$1,850,066	\$2,674,000	\$1,876,731	\$1,897,000	\$2,100,128	\$3,917,500
Wastewater	\$889,214	\$719,399	\$5,042,661	\$545,385	\$1,742,489	\$799,714	\$790,000	\$572,500	\$875,000	\$785,984	\$1,657,000
Water Works	\$2,454,732	\$2,044,917	\$1,057,331	\$2,656,665	\$3,482,245	\$2,844,907	\$2,131,000	\$967,921	\$2,250,000	\$2,321,924	\$2,981,000

COMPARISON OF MUNICIPALITIES - ACTUALS

1997 Actual											
Division	Region	Niagara Falls	Port Colborne	St. Catharines	Thorold	Welland	Fort Erie	Grimsby	NOTL	Total	
Roads	\$19,429,078	\$2,772,472	\$249,351	\$4,694,167	\$332,000	\$1,048,190	\$553,036	\$666,832	\$896,578	\$30,641,704	
Wastewater	\$18,159,421	\$329,947	\$913,955	\$2,814,231	\$3,500,000	\$1,435,486	\$5,042,661	\$27,363	\$783,450	\$33,006,514	
Water Works	\$11,229,235	\$741,920	\$700,105	\$1,515,329	\$230,000	\$1,350,947	\$1,057,331	\$25,956	\$1,216,956	\$18,067,779	
Totals	\$48,817,734	\$3,844,339	\$1,863,411	\$9,023,727	\$4,062,000	\$3,834,623	\$6,653,028	\$720,151	\$2,896,984	\$81,715,997	

1998 Actual											
Division	Region	Niagara Falls	Port Colborne	St. Catharines	Thorold	Welland	Fort Erie	Grimsby	NOTL	Total	
Roads	\$20,346,588	\$2,632,402	\$201,884	\$5,320,301	\$0	\$1,803,988	\$532,603	\$868,086	\$1,343,136	\$33,048,988	
Wastewater	\$10,699,880	\$216,321	\$444,716	\$1,406,315	\$55,000	\$1,800,102	\$545,385	\$18,730	\$536,212	\$15,722,661	
Water Works	\$5,606,668	\$1,414,526	\$806,474	\$2,393,681	\$670,000	\$777,815	\$2,656,665	\$443,450	\$555,337	\$15,324,616	
Totals	\$36,653,136	\$4,263,249	\$1,453,074	\$9,120,297	\$725,000	\$4,381,905	\$3,734,653	\$1,330,266	\$2,434,685	\$64,096,265	

1999 Actual											
Division	Region	Niagara Falls	Port Colborne	St. Catharines	Thorold	Welland	Fort Erie	Grimsby	NOTL	Total	
Roads	\$16,111,134	\$1,889,188	\$137,570	\$4,087,387	\$500,000	\$2,618,272	\$911,559	\$616,354	\$974,492	\$27,845,956	
Wastewater	\$17,636,411	\$225,244	\$191,142	\$623,347	\$389,000	\$734,828	\$1,742,489	\$246,197	\$164,339	\$21,952,997	
Water Works	\$4,950,693	\$3,693,585	\$138,916	\$2,298,573	\$300,000	\$1,024,996	\$3,482,245	\$496,074	\$804,205	\$17,189,287	
Totals	\$38,698,238	\$5,808,017	\$467,628	\$7,009,307	\$1,189,000	\$4,378,096	\$6,136,293	\$1,358,625	\$1,943,036	\$66,988,240	

*Partial financial data was provided for the Town of Grimsby

2000 Actual											
Division	Region	Niagara Falls	Port Colborne	St. Catharines	Thorold	Welland	Fort Erie	Grimsby	NOTL	Total	
Roads	\$20,611,301	\$848,642	\$117,511	\$5,325,098	\$601,000	\$1,383,475	\$1,850,066	\$829,584	\$2,677,439	\$34,244,116	
Wastewater	\$19,433,733	\$830,928	\$3,046,197	\$1,756,787	\$386,194	\$1,133,367	\$799,714	\$1,367,765	\$1,006,771	\$29,761,456	
Water Works	\$3,219,805	\$3,503,582	\$755,612	\$3,660,382	\$289,155	\$1,173,795	\$2,844,907	\$344,294	\$2,263,622	\$18,055,154	
Totals	\$43,264,839	\$5,183,152	\$3,919,321	\$10,742,267	\$1,276,349	\$3,690,637	\$5,494,687	\$2,541,643	\$5,947,832	\$82,060,727	

2001 Actual											
Division	Region	Niagara Falls	Port Colborne	St. Catharines	Thorold	Welland	Fort Erie	Grimsby	NOTL	Total	
Roads	\$33,615,846	\$2,706,192	\$497,244	\$4,339,744	\$595,000	\$905,221	\$1,876,731	\$829,584	\$1,422,127	\$46,787,689	
Wastewater	\$12,051,567	\$2,164,118	\$1,392,599	\$2,996,484	\$446,286	\$891,938	\$572,500	\$93,743	\$787,164	\$21,396,399	
Water Works	\$5,779,807	\$1,774,747	\$538,393	\$3,730,592	\$296,410	\$992,328	\$967,921	\$372,124	\$1,488,644	\$15,940,966	
Totals	\$51,447,220	\$6,645,057	\$2,428,236	\$11,066,820	\$1,337,696	\$2,789,487	\$3,417,152	\$1,295,451	\$3,697,935	\$84,125,054	

2002 Actual											
Division	Region	Niagara Falls	Port Colborne	St. Catharines	Thorold	Welland	Fort Erie	*Grimsby	NOTL	Total	
Roads	\$31,499,785	\$1,089,419	\$875,002	\$6,424,128	\$133,765	\$1,537,672	\$2,100,128	\$0	\$946,976	\$44,606,875	
Wastewater	\$26,770,000	\$4,916,429	\$592,357	\$1,890,227	\$380,000	\$1,493,834	\$785,984	\$0	\$1,672,568	\$38,501,399	
Water Works	\$4,959,890	\$2,702,252	\$459,648	\$4,698,249	\$643,000	\$1,164,469	\$2,321,924	\$0	\$1,844,381	\$18,793,813	
Totals	\$63,229,675	\$8,708,100	\$1,927,006	\$13,012,604	\$1,156,765	\$4,195,975	\$5,208,036	\$0	\$4,463,925	\$101,902,086	

*Partial financial data was provided for the Town of Grimsby

5 Year Average											
Division		Region	Niagara Falls	Port Colborne	St. Catharines	Thorold	Welland	Fort Erie	Grimsby	NOTL	Total
Roads		\$24,436,931	\$1,833,169	\$365,842	\$5,099,332	\$365,953	\$1,649,726	\$1,454,217	\$628,722	\$1,472,834	\$37,306,725
Wastewater		\$13,848,927	\$1,670,608	\$1,133,402	\$1,734,632	\$331,296	\$1,210,814	\$889,214	\$345,287	\$833,411	\$21,997,591
Water Works		\$4,903,373	\$2,617,738	\$539,809	\$3,356,295	\$439,713	\$1,026,681	\$2,454,732	\$331,188	\$1,391,238	\$17,060,767
Totals		\$43,189,230	\$6,121,515	\$2,039,053	\$10,190,259	\$1,136,962	\$3,887,220	\$4,798,164	\$1,305,197	\$3,697,483	\$76,365,083

3 Year Average											
Division		Region	Niagara Falls	Port Colborne	St. Catharines	Thorold	Welland	Fort Erie	Grimsby	NOTL	Total
Roads		\$28,575,644	\$1,548,084	\$496,586	\$5,362,990	\$443,255	\$1,275,456	\$1,942,308	\$553,056	\$1,682,181	\$41,879,560
Wastewater		\$13,636,115	\$2,637,158	\$1,677,051	\$2,214,499	\$404,160	\$1,173,046	\$719,399	\$487,169	\$1,155,501	\$24,104,099
Water Works		\$4,653,167	\$2,660,194	\$584,551	\$4,029,741	\$409,522	\$1,110,197	\$2,044,917	\$238,806	\$1,865,549	\$17,596,644
Totals		\$46,864,926	\$6,845,436	\$2,758,188	\$11,607,230	\$1,256,937	\$3,558,700	\$4,706,625	\$1,279,031	\$4,703,231	\$83,580,304

*Partial financial data was provided for the Town of Grimsby

COMPARISON OF ACTUAL EXPENDITURES BY YEAR

ROADS													
Year	Region	% of Total	Municipalities							Total of Municipalities	% of Municipalities	Grand Total	
			Niagara Falls	Port Colborne	St. Catharines	Thorold	Welland	Fort Erie	*Grimsby				NOTL
1998	20,346,588	61.56%	2,632,402	201,884	5,320,301	0	1,803,988	532,603	868,086	1,343,136	12,702,400	38.44%	33,048,988
1999	16,111,134	57.86%	1,889,188	137,570	4,087,387	500,000	2,618,272	911,559	616,354	974,492	11,734,822	42.14%	27,845,956
2000	20,611,301	60.19%	848,642	117,511	5,325,098	601,000	1,383,475	1,850,066	829,584	2,677,439	13,632,815	39.81%	34,244,116
2001	33,615,846	71.85%	2,706,192	497,244	4,339,744	595,000	905,221	1,876,731	829,584	1,422,127	13,171,843	28.15%	46,787,689
2002	31,499,785	70.62%	1,089,419	875,002	6,424,128	133,765	1,537,672	2,100,128	0	946,976	13,107,090	29.38%	44,606,875
Total Expenditures	122,184,654	65.50%	9,165,843	1,829,211	25,496,658	1,829,765	8,248,628	7,271,087	3,143,608	7,364,170	64,348,970	34.50%	186,533,624
5yr. Expenditure Average	24,436,931	65.50%	1,833,169	365,842	5,099,332	365,953	1,649,726	1,454,217	628,722	1,472,834	12,869,794	34.50%	37,306,725

WASTEWATER													
Year	Region	% of Total	Municipalities							Total of Municipalities	% of Municipalities	Grand Total	
			Niagara Falls	Port Colborne	St. Catharines	Thorold	Welland	Fort Erie	*Grimsby				NOTL
1998	10,699,880	68.05%	216,321	444,716	1,406,315	55,000	1,800,102	545,385	18,730	536,212	5,022,781	31.95%	15,722,661
1999	17,636,411	80.34%	225,244	191,142	623,347	389,000	734,828	1,742,489	246,197	164,339	4,316,586	19.66%	21,952,997
2000	19,433,733	65.30%	830,928	3,046,197	1,756,787	386,194	1,133,367	799,714	1,367,765	1,006,771	10,327,723	34.70%	29,761,456
2001	12,051,567	56.33%	2,164,118	1,392,599	2,996,484	446,286	891,938	572,500	93,743	787,164	9,344,832	43.67%	21,396,399
2002	9,423,044	44.54%	4,916,429	592,357	1,890,227	380,000	1,493,834	785,984	0	1,672,568	11,731,399	55.46%	21,154,443
Total Expenditures	69,244,635	62.96%	8,353,040	5,667,011	8,673,160	1,656,480	6,054,069	4,446,072	1,726,435	4,167,054	40,743,321	37.04%	109,987,956
5yr. Expenditure Average	13,848,927	62.96%	1,670,608	1,133,402	1,734,632	331,296	1,210,814	889,214	345,287	833,411	8,148,664	37.04%	21,997,591

WATER													
Year	Region	% of Total	Municipalities							Total of Municipalities	% of Municipalities	Grand Total	
			Niagara Falls	Port Colborne	St. Catharines	Thorold	Welland	Fort Erie	*Grimsby				NOTL
1998	5,606,668	36.59%	1,414,526	806,474	2,393,681	670,000	777,815	2,656,665	443,450	555,337	9,717,948	63.41%	15,324,616
1999	4,950,693	29.07%	3,693,585	138,916	2,298,573	138,916	1,024,996	3,482,245	496,074	804,205	12,077,510	70.93%	17,028,203
2000	3,219,805	17.83%	3,503,582	755,512	3,660,382	289,155	1,173,795	2,844,907	344,294	2,263,622	14,835,349	82.17%	18,055,154
2001	5,779,807	36.26%	1,774,747	538,393	3,730,592	296,410	992,328	967,921	372,124	1,488,644	10,161,159	63.74%	15,940,966
2002	4,959,890	26.65%	2,702,252	459,648	4,698,249	459,648	1,164,469	2,321,924	0	1,844,381	13,650,570	73.35%	18,610,460
Total Expenditures	24,516,863	28.86%	13,088,692	2,699,043	16,781,477	1,854,129	5,133,403	12,273,662	1,655,942	6,956,189	60,442,537	71.14%	84,959,400
5yr. Expenditure Average	4,903,373	28.86%	2,617,738	539,809	3,356,295	370,826	1,026,681	2,454,732	331,188	1,391,238	12,088,507	71.14%	16,991,880

SOLID WASTE			
Year	Region	% of Total	Grand Total
1998	4,789,747	100.00%	4,789,747
1999	5,202,331	100.00%	5,202,331
2000	2,525,677	100.00%	2,525,677
2001	3,381,181	100.00%	3,381,181
2002	6,314,690	100.00%	6,314,690
Total Expenditures	22,213,626	100.00%	22,213,626
5yr. Expenditure Average	4,442,725	100.00%	4,442,725

*Partial financial data was provided for the Town of Grimsby

COMPARISON OF MUNICIPALITIES - BUDGETS

2001 Budgeted											
Division	Region	Niagara Falls	Port Colborne	St. Catharines	Thorold	Welland	Fort Erie	*Grimsby	NOTL	Total	
Roads	\$16,174,354	\$3,718,500	\$706,000	\$5,393,000	\$370,000	\$1,275,000	\$2,674,000	\$0	\$1,204,000	\$31,514,854	
Wastewater	\$12,841,540	\$3,435,975	\$1,150,000	\$2,770,000	\$425,420	\$1,425,000	\$790,000	\$0	\$1,862,500	\$24,700,435	
Water Works	\$11,947,695	\$3,011,500	\$625,000	\$4,300,000	\$325,000	\$1,430,000	\$2,131,000	\$0	\$1,339,000	\$25,109,195	
Total	\$29,015,894	\$7,154,475	\$1,856,000	\$8,163,000	\$795,420	\$2,700,000	\$3,464,000	\$0	\$3,066,500	\$56,215,289	

2002 Budgeted											
Division	Region	Niagara Falls	Port Colborne	St. Catharines	Thorold	Welland	Fort Erie	Grimsby	NOTL	Total	
Roads	\$24,848,943	\$1,261,250	\$850,500	\$5,500,000	\$165,000	\$690,000	\$1,897,000	\$1,614,500	\$1,309,000	\$38,136,193	
Wastewater	\$14,830,253	\$2,933,750	\$405,000	\$3,282,000	\$476,667	\$1,805,000	\$875,000	\$143,000	\$1,423,500	\$26,174,170	
Water Works	\$18,754,841	\$350,000	\$450,000	\$4,300,000	\$389,245	\$1,470,000	\$2,250,000	\$992,000	\$1,313,000	\$30,269,086	
Total	\$58,434,037	\$4,545,000	\$1,705,500	\$13,082,000	\$1,030,912	\$3,965,000	\$5,022,000	\$2,749,500	\$4,045,500	\$94,579,449	

2003 Budgeted											
Division	Region	Niagara Falls	Port Colborne	St. Catharines	Thorold	Welland	Fort Erie	Grimsby	NOTL	Total	
Roads	\$32,517,000	\$5,565,000	\$510,000	\$5,500,000	\$670,000	\$925,000	\$3,917,500	\$2,127,000	\$1,598,000	\$53,329,500	
Wastewater	\$26,770,000	\$7,658,700	\$652,000	\$2,888,000	\$531,000	\$1,675,000	\$1,657,000	\$419,000	\$1,607,500	\$43,858,200	
Water Works	\$23,200,000	\$1,652,500	\$450,000	\$4,300,000	\$393,000	\$1,100,000	\$2,981,000	\$1,189,000	\$1,182,000	\$36,447,500	
Total	\$82,487,000	\$14,876,200	\$1,612,000	\$12,688,000	\$1,594,000	\$3,700,000	\$8,555,500	\$3,735,000	\$4,387,500	\$133,635,200	

*Partial financial data was provided for the Town of Grimsby

Per Capita Spending Comparison

2001											
	Region	Niagara Falls	Port Colborne	St. Catharines	Thorold	Welland	Fort Erie	*Grimsby	NOTL	Total	Average
Roads	\$81.88	\$34.34	\$26.95	\$21.87	\$32.97	\$18.70	\$66.69	\$38.95	\$102.76	\$425.10	\$47.23
Wasterwater	\$29.35	\$27.46	\$75.48	\$22.08	\$24.73	\$18.43	\$20.34	\$4.40	\$56.88	\$279.15	\$31.02
Water	\$14.08	\$22.52	\$29.18	\$19.54	\$16.42	\$20.50	\$34.39	\$17.47	\$107.57	\$281.68	\$31.30
Total	\$125.31	\$84.31	\$131.61	\$63.49	\$74.12	\$57.63	\$121.42	\$60.83	\$267.21	\$985.93	\$109.55
Average	\$41.77	\$28.10	\$43.87	\$21.16	\$24.71	\$19.21	\$40.47	\$20.28	\$89.07	\$328.64	
2002											
	Region	Niagara Falls	Port Colborne	St. Catharines	Thorold	Welland	Fort Erie	NOTL	Total	Average	
Roads	\$76.72	\$13.82	\$47.43	\$64.04	\$7.41	\$31.77	\$74.62	\$68.43	\$384.24	\$48.03	
Wasterwater	\$22.95	\$62.38	\$32.11	\$8.14	\$21.05	\$30.86	\$27.93	\$120.86	\$326.28	\$40.78	
Water	\$12.08	\$34.29	\$24.91	\$18.79	\$35.63	\$24.06	\$82.50	\$133.27	\$365.53	\$45.69	
Total	\$111.75	\$110.49	\$104.44	\$90.96	\$64.09	\$86.69	\$185.06	\$322.56	\$1,076.05	\$134.51	
Average	\$37.25	\$36.83	\$34.81	\$30.32	\$21.36	\$28.90	\$61.69	\$107.52	\$358.68		

*Partial financial data was provided for the Town of Grimsby

Asset Replacement Index - 70 year Life Cycle			
Municipality	*Capital Replacement Cost	*Annual Capital Replacement Cost	3yr. Rolling Average
Region	\$367,000,000	\$5,190,000	\$18,289,282
St. Catharines	\$521,000,000	\$7,300,000	\$6,244,240
Niagara Falls	\$315,000,000	\$4,500,000	\$5,297,352
Port Colborne	\$73,000,000	\$1,020,000	\$2,261,602
Welland	\$210,000,000	\$2,900,000	\$2,283,244
Thorold	\$61,000,000	\$860,000	\$813,682
Fort Erie	\$166,000,000	\$2,400,000	\$2,764,317
Niagara-on-the-Lake	\$93,000,000	\$1,300,000	\$3,021,050
Total	\$1,806,000,000	\$25,470,000	\$40,974,768

Asset Replacement Index - 50 year Life Cycle			
Municipality	*Capital Replacement Cost	**Annual Capital Replacement Cost	3yr. Rolling Average
Region	\$367,000,000	\$7,340,000	\$18,289,282
St. Catharines	\$521,000,000	\$10,420,000	\$6,244,240
Niagara Falls	\$315,000,000	\$6,300,000	\$5,297,352
Port Colborne	\$73,000,000	\$1,460,000	\$2,261,602
Welland	\$210,000,000	\$4,200,000	\$2,283,244
Thorold	\$61,000,000	\$1,220,000	\$813,682
Fort Erie	\$166,000,000	\$3,320,000	\$2,764,317
Niagara-on-the-Lake	\$93,000,000	\$1,860,000	\$3,021,050
Total	\$1,806,000,000	\$36,120,000	\$40,974,768

*Figures taken from the "Water and Wastewater Master Servicing Plan Update" (2003)

**Based on a 50 year life span or 2% annual replacement