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# 2008 Municipal Water Pricing Report

**Municipal Water Pricing: 2004 Statistics**

Canada 

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“This report highlights key findings from the “pricing” portion of Environment Canada’s 2004 Municipal Water and Wastewater Survey (MWWS)”--p. 1

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# 2008 Municipal Water Pricing Report

## Municipal Water Pricing: 2004 Statistics

### INTRODUCTION

This report highlights key findings from the “pricing” portion of Environment Canada’s 2004 Municipal Water and Wastewater Survey (MWWS). The MWWS evolved from the Municipal Water Use and Pricing Survey (MUD/MUP), which has been carried out every two to three years since 1981. Since the 2004 survey year, the MWWS has replaced the MUD/MUP.

The statistics presented in this report were developed using a summary database and full set of tables on water and wastewater pricing that were released in March 2008. They can be found on Environment Canada’s Freshwater Website at [www.ec.gc.ca/water/MWWS](http://www.ec.gc.ca/water/MWWS) along with search and export functionality for the complete MWWS database.

### METHODOLOGY

The 2004 Municipal Water and Wastewater Survey surveyed all municipalities in Canada (except those on federal lands) with more than 1000 residents as well as a representative sample of 660 communities with fewer than 1000 residents. The 2004 MWWS was the second survey of this type to be administered completely online with full data collection and expanded search capabilities (the 2001 survey was the first).

Response rates to the pricing portion of the 2004 survey varied considerably, depending on the question. The survey responses were supplemented with call-backs to large municipalities and Internet searches for readily available information. Information from all of these sources was compiled in the 2004 MWWS pricing summary database. Responses from the communities with fewer than 1000 residents were excluded from this summary database in order to ensure consistency with previous survey results.

The pricing portion of the 2004 survey collected information from municipalities with more than 1000 residents, covering a total of 17.5 million people.<sup>1</sup> Using the previous survey database (2001 year) to adjust for non-response, where possible, the total population covered was raised to 24.7 million residents in municipalities across all size groups, thereby accounting for 80% of the population in those municipalities surveyed.

Although the data were gathered at the water and wastewater systems level, the complexity of the online MWWS database structure, combined with varying rates of response in the pricing survey section, necessitated that the pricing data be

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<sup>1</sup> See Table 18 in the complete set of summary tables online for more information on response rates.

aggregated at the municipal level. In addition, low response to revenue and expenditure breakouts resulted in only the total revenue and expenditure values for both water and wastewater being retained.

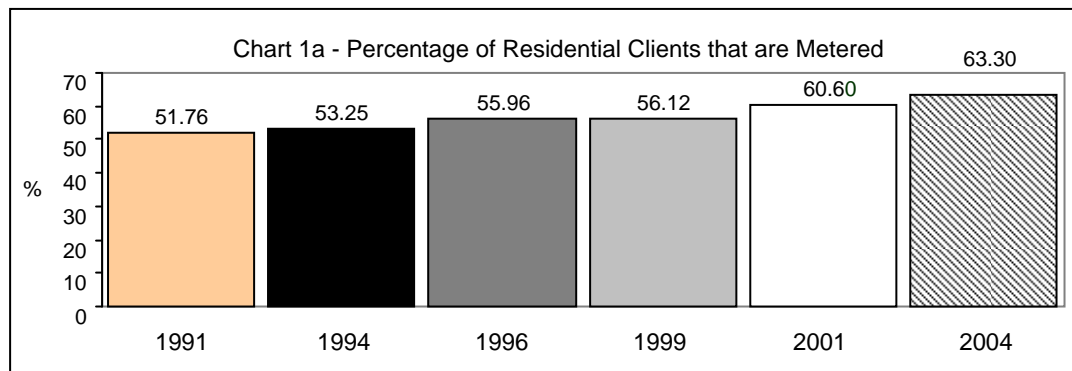
It should be noted that some less commonly used rate structures in some municipalities were omitted from the summary database in the process of aggregating data to the municipal level. In the vast majority of municipalities, this resulted in minimal or no effect, and this omission had a minimal overall effect on the representative quality of the statistics presented here. For complete individual municipal responses, see [www.ec.gc.ca/water/MWWS](http://www.ec.gc.ca/water/MWWS) (Search/Report).

Most of the statistics presented in this report are population-weighted<sup>2</sup> where appropriate to make them more representative of the Canadian population.

## SURVEY HIGHLIGHTS

- **Canada continued its gradual trend toward complete municipal water metering, but installations varied significantly across the country.**

Between 2001 and 2004, survey responses indicate that the percentage of Canadian residential clients with water meters increased from 61% to 63%. These latest figures continue the upward trend in metering recorded since at least 1991 (see Chart 1a).

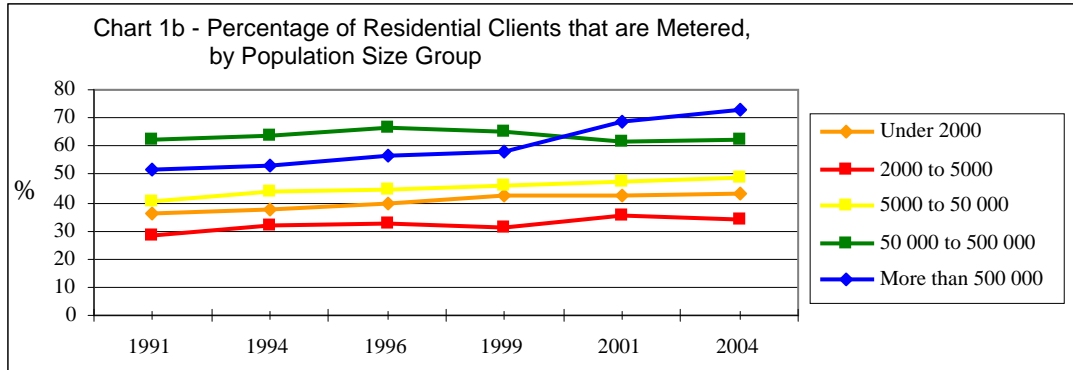


Although the number of meter installations continues to rise, the 2004 survey results indicate that installation rates vary greatly across Canada (Table 1<sup>3</sup>). A comparison based on population size group shows that the percentage of residential clients with water meters has historically (since 1991) been lowest in communities with 2000 to 5000 residents and highest in communities with 50 000 to 500 000 residents. The percentage rises as population size group increases. After 1999, however, municipalities with more than 500 000 residents overtook all

<sup>2</sup> Weighting refers to a statistical technique that takes into account the relative importance, or “weight,” of individual elements in a data set instead of treating them all as equal. Calculations using weighted data (a weighted average, for example) often approximate reality more closely than do those using unweighted data.

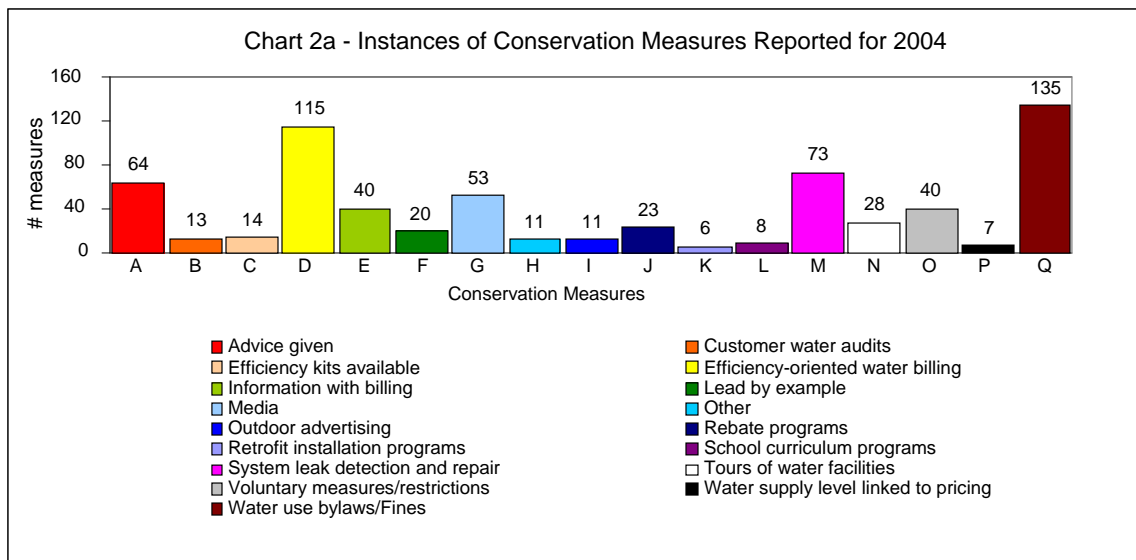
<sup>3</sup> See Appendix A for all tables. All tables in this document have been taken directly from the Municipal Water Pricing 2004 Summary Tables document and have been renumbered ([http://www.ec.gc.ca/water/en/manage/data/e\\_MUP2004.htm](http://www.ec.gc.ca/water/en/manage/data/e_MUP2004.htm)). Table 1 = Table 1, Table 2 = Table 26, Table 3 = Table 21, Table 4 = Table 3, Table 5 = Table 8, Table 6 = Table 12, Table 7 = Table 15, and Table 8 = Table 27.

other smaller municipalities and had the highest percent metering with 69% in 2001 and 73.2% in 2004 (see Chart 1b).

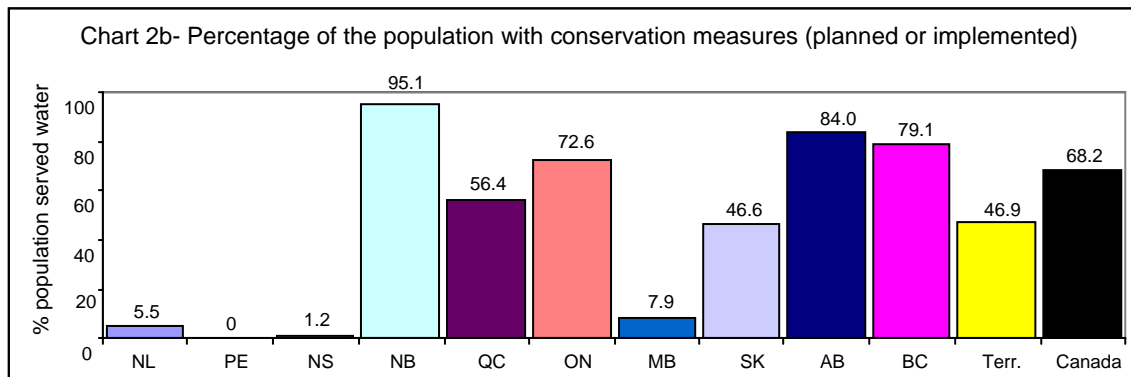


- **Water conservation measures to manage demand have been implemented in many municipalities in Canada, but at different levels.**

Survey results show that water conservation measures, such as efficiency audits, lawn watering bylaws, or installation of water-efficient equipment, are underway or are planned in many municipalities across Canada. In 2004, the most popular conservation measure across Canada was water use bylaws and fines (such as for watering lawns), the same as in 2001. According to the 2004 survey, 135 out of 1043 municipalities of any size that responded had water use bylaws in place or were planning them (see Chart 2a and Table 2). Other popular measures include efficiency-oriented (metered) billing methods in 115 municipalities (although this figure under-represents the overall usage of water meters—the water metering section below has more complete information) and system-leak detection and repair in 73 municipalities. These priorities have changed slightly since 2001, when the two most popular measures after bylaws and fines were home water audits and public advertising. The least used measures listed in the 2004 survey were special school curriculum, retrofit installation programs, and pricing linked directly to water supply level (Chart 2a).



Among the provinces, the percentage of the population affected by conservation measures varies greatly (Chart 2b). New Brunswick, Alberta, British Columbia, and Ontario are ahead of the rest of the provinces and territories, with 95.1% (New Brunswick) to 72.6% (Ontario) of their residents that are served by municipal water supply being affected by some sort of conservation measure (planned or in place). Trailing behind are Manitoba, Newfoundland and Labrador, Nova Scotia, and Prince Edward Island, with between 7.9% (Manitoba) and 0% (Prince Edward Island) of residents served being affected by a conservation measure (see Chart 2b and Table 3).



The Weighted Conservation Index (WCI) was calculated by multiplying the number of conservation measures (planned or implemented) in a province/territory by the extent to which these measures are currently being implemented (expressed as a percentage) and then weighting that by the population. Using this measure, Ontario and Alberta are ahead of the pack with 6.6 and 5.9 conservation measures actually being implemented, respectively, whereas Prince Edward Island and the territories (Nunavut, Yukon, and Northwest Territories), with WCIs of 0 and 0.8, respectively, have next to no conservation measures in place.

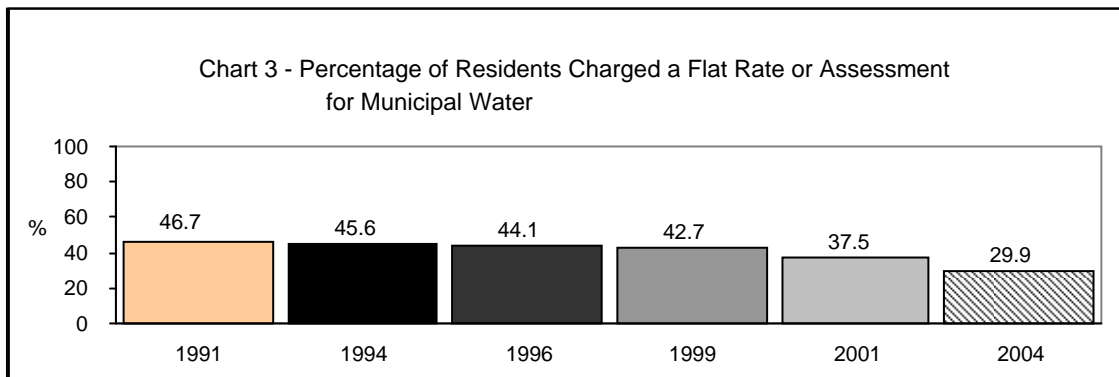
The total response to the conservation measures question accounted for just 14.8 million residents served by municipal water supply (10.1 million of whom indicated conservation measures); therefore, these figures do not represent complete provincial or national total values.

- **Formal water efficiency plans are used only sporadically across Canada.**

Survey results indicate that of the 13.6 million people served by municipal water supply in responding municipalities, just 5.7 million (41.7%) are in a municipality with a formal water efficiency plan. These municipalities are concentrated in Ontario and British Columbia (see Table 3).

- **The use of flat rate structures is in decline in Canada, although the use still varies widely by municipality size.**

Survey results indicate that Canadian municipalities are relying less and less on flat rates. Survey responses since 1991 indicate that the use of flat rates (or assessments<sup>4</sup>) for populations served by municipal water supply has declined by 16.8 percentage points.<sup>5</sup> In 1991, 46.7% of residential ratepayers were being billed this way compared to 29.9% in 2004 (see Chart 3 and Table 4). The decline in the use of flat charges was even greater between 2001 and 2004 than it was between 1999 and 2001 (the next largest drop), with a 7.6 percentage point drop over the three years. In addition, the use of flat rate structures declines as population size group increases. In 2004, 64.1% of residents in municipalities with 2000 to 5000 residents were on flat rate (or assessment) structures, whereas only 24% of residents in cities with a population of more than 500 000 were billed this way (see Table 4).



- **Volume-based rates continue their gradual positive trend toward conservation pricing.**

Water metering is an important step in providing economic incentives for sustainable water management or use; however, there are a variety of ways that consumers can be charged, based on the volume of water they consume. Some categories of volume-based rates provide better economic incentives than others.

Across Canada in 2004, constant unit charge (CUC)<sup>6</sup> was the most frequently used residential volume-based rate, with 45.4% of ratepayers being billed this way (see Chart 4). This continues the trend that has been recorded since 1991—the percentage of people billed by CUC has risen continuously from 33.4% in 1991 to 40.3% in 2001, with CUC consistently being the most common water billing type in Canada. The 2004 survey results indicate that the percentage of population served by municipal water supply and billed by CUC ranges from 23.9% in communities with a population between 2000 and 5000 to 50.6% for communities with a population between 50 000 and 500 000 (see Table 4).

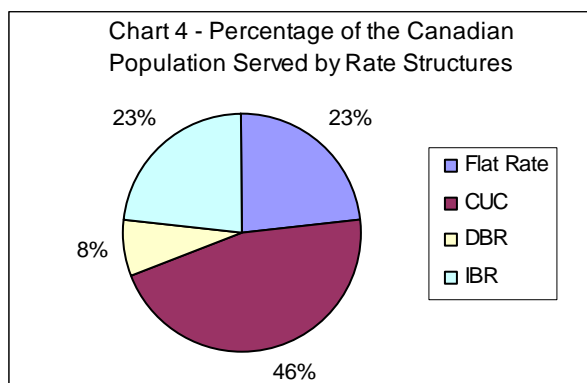
<sup>4</sup> Water bills calculated via tax assessments.

<sup>5</sup> Due to low response rates for the 2004 MWWS pricing questions, these data were aggregated to the municipal level by determining the most common rate type in a municipality and assigning this rate type category to its entire population.

<sup>6</sup> Constant unit charges are the simplest type of volume-based rate. Under this type of pricing, clients are charged a pre-determined amount per unit of water used. Constant unit charges provide incentives for water conservation because users pay more as consumption increases.

The use of declining block rates (DBR)<sup>7</sup> fell over the period from 1991 to 2001. In 1991, 24.0% of residential ratepayers were billed by DBR, down to 13.8% in 1996, and then 7.5% in 2001. Between 2001 and 2004, however, the percentage rose a very small amount to 7.9%, likely reflecting a stabilization or the result of the data being aggregated to the municipal level rather than an increase in the actual use of DBR. Like other types of water pricing, declining block rate pricing is not evenly distributed across Canada. The survey results indicate that the percentage of the population paying for water by DBR ranges from 7.4% in municipalities with populations between 50 000 and 500 000 to 10.6% for municipalities with populations below 2000 (see Table 4). This can be compared to the distribution of pricing using increasing block rates (IBR),<sup>8</sup> from 39.4% where there are more than 500 000 residents down to 2.5% for municipalities with populations below 2000.

Nationally, increasing block rates represent 23.3% of the residential ratepayers billed in 2004 (see Chart 4). The opposite of the trend seen with DBR, billing using IBR has been increasing since 1991, when it encompassed only 3% of the Canadian population served by municipal water supply. This rate type is, however, confined mostly to Ontario and Alberta, where 36.8% and 30.9% of residential ratepayers are billed by IBR, respectively, compared with the next highest province, British Columbia, at 4.7% (see Table 4).



- **Residential water prices in Canada are among the lowest in the Organisation for Economic Co-operation and Development (OECD).**

In order to compare water prices over time and among provinces, information about water rates collected in the 2004 survey was used to calculate water prices for standard volumes of monthly usage.<sup>9</sup> As with previous surveys, these price calculations were done for 10, 25, and 35 cubic metres per month. Ten cubic metres is the lower range of monthly water use, while 25 cubic metres is an

<sup>7</sup> Under declining block rates, prices per unit decrease as volumes increase.

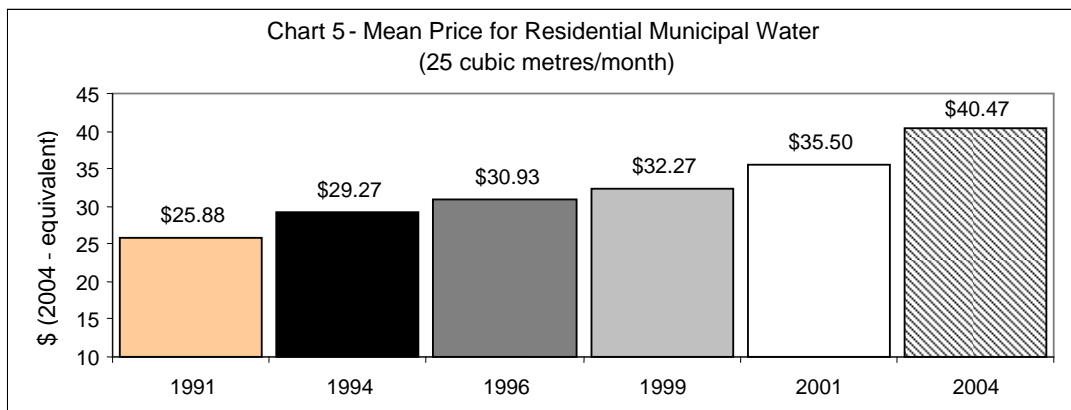
<sup>8</sup> The unit price of water increases in successive blocks of the rate schedule. Most of the few rates that were previously termed “complex” would have fallen into this IBR group for 2004, as the lower block rates used by residential clients were increasing rates in most cases. The effect on overall percentages is minimal.

<sup>9</sup> Charges for wastewater collection and wastewater treatment are included, by default, in these rates.



average family's monthly consumption. Thirty-five cubic metres represents high family water use.

Since 1991, the national average price<sup>10</sup> for residential municipal water and wastewater service for a monthly consumption of 25 cubic metres has increased from \$25.88 in 1991 to \$30.93 in 1996 to \$35.50 in 2001 and up to \$40.47 in 2004—an increase of 56% since 1991 (see Chart 5 and Table 5). Although real prices increased steadily between 1991 and 2004, in general water prices in Canada continue to remain low compared to the actual cost of providing these services



The survey results also show that for 2004, the total average residential price tends to increase by population size group, ranging from \$29.83 to \$44.19 (see Table 5).

Canadian water prices have traditionally been among the lowest in the Organisation for Economic Co-operation and Development (OECD). In a comparison done in the late 1990s of 12 OECD member countries, Canada's price for household water was almost the lowest, with only Hungary charging less per cubic metre. In countries such as the Netherlands, France, and the United Kingdom, household water prices were up to four times higher than Canada's national average, and in the other seven countries the price charged was at least one and a half times higher than the price charged in Canada. Industrial water prices, on the other hand, were fairly similar across the 12 countries.<sup>11</sup>

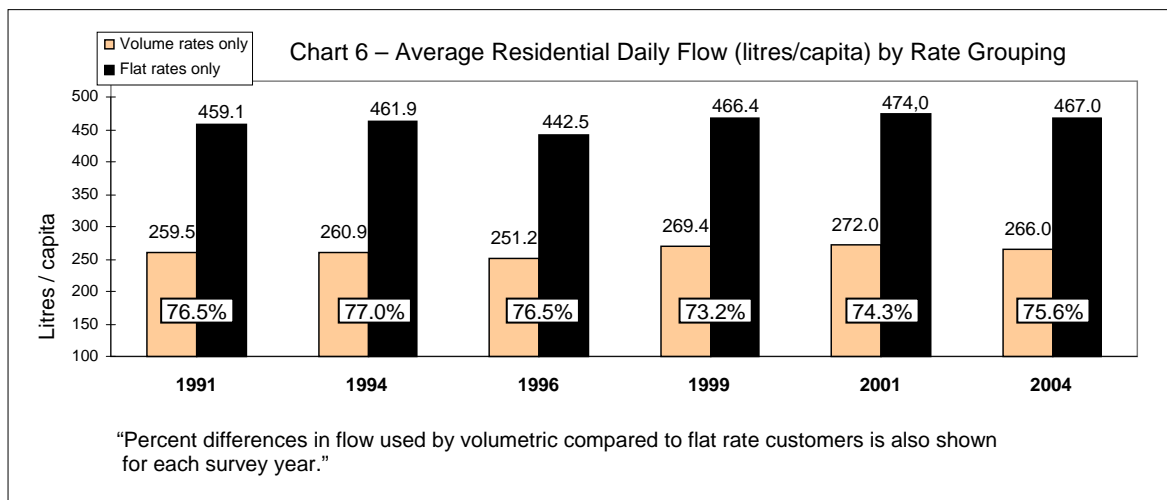
- **Volume-based pricing has proven to be a valuable demand-management instrument to promote the sustainable use of water.**

As discussed, volume-based rates provide better incentives for water conservation than flat charges. This was again evident countrywide from the 2004 survey, which shows residential daily water use at 467 litres per capita

<sup>10</sup> All prices in 2004-equivalent dollars, as calculated by the Bank of Canada:  
[http://www.bankofcanada.ca/en/rates/inflation\\_calc.html](http://www.bankofcanada.ca/en/rates/inflation_calc.html).

<sup>11</sup> Source: OECD.  
[http://www.oecdobserver.org/news/fullstory.php/aid/1801/Water\\_and\\_farms:\\_Towards\\_sustainable\\_use.html](http://www.oecdobserver.org/news/fullstory.php/aid/1801/Water_and_farms:_Towards_sustainable_use.html)  
[http://www.oecdobserver.org/news/fullstory.php/aid/939/Pricing\\_water.html](http://www.oecdobserver.org/news/fullstory.php/aid/939/Pricing_water.html)

when water is charged on a flat rate basis and 266 litres per capita under metered or volume-based rates. Since 1991, this difference has been consistent—with consumption 70 to 80% higher nationally under flat rates than under volume-based rates (see Chart 6).



- **Wastewater collection and treatment charges continue to be an important part of a municipality's rate structure.**

In 2004, the national average wastewater charge was 46.5% of the total amount paid by a family that consumed an average volume of 25 cubic metres of water per month (see Table 6). This seems to be a large increase since 2001, when the national average charge was 38%. However, the newly separated collection of wastewater and water schedules allowed the method by which charges are allocated to be improved. Without this change, wastewater charges would have been approximately 40% of the total cost per family, just two percentage points higher than in 2001. The only time since 1991 that a larger change was recorded was when the percentage of the bill attributed to wastewater rose from 33.6% in 1991 to 39.1% in 1994. The percentage of total water charges attributed to wastewater is highest in communities with populations between 5000 and 500 000 residents and lowest in communities with fewer than 2000 residents (see Table 6).

- **Commercial/industrial prices are generally higher than residential prices at the same level of consumption.**

As is the case with residential prices, commercial prices<sup>12</sup> vary considerably across Canada (see Table 7). The 2004 national average price for monthly commercial consumption of 100 cubic metres was \$128.76, with a low of \$73.33 for communities of between 2000 and 5000 people and a high of \$212.80 for

<sup>12</sup> Municipalities also provide water and wastewater service to commercial/industrial clients. The Municipal Water Pricing Database covers commercial prices for these services for monthly consumption levels of 10, 35, and 100 cubic metres per month. A higher monthly volume (100 cubic metres) was included, as many commercial enterprises use more water than residences. Comparisons can therefore be made between residential and commercial prices at the 10 and 35 cubic metre levels only.

communities with 5000 to 50 000 people (see Table 7). Commercial prices have tended to be slightly higher than residential prices at the 35 cubic metres per month consumption level (see Table 8). In 2004, the national unweighted average price for commercial clients was \$49.39, while residential clients paid \$37.33. Similar findings hold for previous years of the survey and for weighted values (\$54.18 for commercial versus \$50.44 for residential).

## **CONCLUSION**

The general finding of this report is that in 2004 Canadian municipalities continued their gradual trend towards conservation-oriented water pricing—a key demand-management instrument for sustainable water use.

The MWWS survey results provide a valuable source of information to Canadian communities and water managers, leading to better-informed decision making. For those interested in more detailed survey results, the complete pricing summary tables<sup>13</sup> offer a more detailed picture of water and wastewater pricing in Canada.

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<sup>13</sup> The full 2004 Municipal Water and Wastewater Survey database as well as the summary tables for water use and for water pricing are available on Environment Canada's Freshwater Website at [www.ec.gc.ca/water/mwws](http://www.ec.gc.ca/water/mwws).

## APPENDIX A – Tables

All tables in this document were taken directly from the Municipal Water Pricing 2004 Summary Tables document and have been renumbered ([http://www.ec.gc.ca/water/en/manage/data/e\\_MUP2004.htm](http://www.ec.gc.ca/water/en/manage/data/e_MUP2004.htm)). Table 1 = Table 1, Table 2 = Table 26, Table 3 = Table 21, Table 4 = Table 3, Table 5 = Table 8, Table 6 = Table 12, Table 7 = Table 15, and Table 8 = Table 27.

**Table 1 - 2004**  
**Average Daily Water Use, Water Metering, by Province and by Population Size Group**

Province / Territory	Average Daily Total Flow (Litres per Capita)	Average Daily Residential Flow (Litres per Capita)	Percentage of Residential Clients That are Metered	Percentage of Business Clients That are Metered
Newfoundland and Labrador	780	501	0.0	49.4
Prince Edward Island	569	238	1.5	93.1
Nova Scotia	546	321	93.3	98.6
New Brunswick	1384	438	47.8	82.1
Quebec	848	424	16.0	34.9
Ontario	481	260	92.0	98.2
Manitoba	466	219	96.7	96.7
Saskatchewan	516	303	98.2	98.9
Alberta	488	271	88.6	98.9
British Columbia	649	426	29.8	87.1
Yukon	932	645	8.0	100.0
Northwest Territories	437	257	97.2	100.0
Nunavut	134	113	76.1	14.8
<b>Population Size Group (000's)</b>				
below 1	777	429	38.7	55.5
1 to 2	668	436	43.4	50.4
2 to 5	946	497	34.3	51.3
5 to 50	701	433	49.2	72.4
50 to 500	555	305	62.3	88.1
500+	589	291	73.2	84.4
<b>Total</b>	<b>609</b>	<b>329</b>	<b>63.3</b>	<b>83.0</b>
Responding Population	25,454,421	25,333,378	25,698,580	20,960,777

Table derived from 2004 Municipal Water and Wastewater Survey summary database (for responding municipalities), Sustainable Water Management Division, Environment Canada.

**Table 2 - 2004**

**Conservation Measure Instances by Province / Territory and Size Group**

Code #	Number of Cons. Measures, by Province / Territory												by Size Group (1000's)							Cons. Measure - Instances Populations Served by Instance		
	NL	PE	NS	NB	QC	ON	MB	SK	AB	BC	YT	NT	>1	To 2	To 5	To 50	To 500	>500	Total	total pop.	implemented	%
none	7	2	16	11	62	78	18	19	43	29	1	0	13	37	33	144	54	5	286	8,953,757	8,953,757	100.0
1	0	0	1	0	8	33	2	1	11	8	0	0	1	5	10	15	12	21	64	6,017,227	4,799,244	79.8
2	0	0	0	1	1	1	0	1	6	3	0	0	0	4	1	4	0	4	13	2,165,677	1,486,466	68.6
3	0	0	1	2	1	2	1	0	3	4	0	0	0	2	2	4	4	2	14	3,946,952	2,822,504	71.5
4	0	0	2	4	6	54	4	7	26	11	0	1	4	8	14	44	24	21	115	6,892,786	6,383,905	92.6
5	0	0	0	3	2	20	3	3	9	0	0	0	1	8	3	20	5	3	40	4,195,001	4,096,931	97.7
6	0	0	0	1	2	14	0	0	3	0	0	0	0	1	0	3	0	16	20	6,682,118	4,637,505	69.4
7	1	0	0	3	12	18	0	1	10	8	0	0	0	3	3	23	7	17	53	62,370,340	61,515,923	98.6
8	0	0	0	0	5	3	0	0	3	0	0	0	0	1	0	7	2	1	11	1,142,769	1,103,869	96.6
9	0	0	0	0	3	7	0	0	0	1	0	0	0	0	1	1	3	6	11	3,781,577	2,962,293	78.3
10	0	0	0	0	0	17	0	0	4	2	0	0	0	0	1	1	5	16	23	4,953,759	3,149,616	63.6
11	0	0	0	1	2	1	0	0	0	2	0	0	0	1	0	1	1	3	6	3,905,482	3,126,973	80.1
12	0	0	0	2	0	1	0	0	4	1	0	0	0	1	0	1	1	5	8	4,927,301	4,613,987	93.6
13	5	0	2	4	14	27	1	2	8	10	0	0	0	5	13	37	12	6	73	11,215,285	5,295,996	47.2
14	0	0	0	2	3	8	2	5	6	2	0	0	1	3	2	16	5	1	28	3,117,695	1,876,505	60.2
15	1	0	0	2	2	15	0	0	12	8	0	0	3	4	9	18	3	3	40	4,200,251	2,894,716	68.9
16	0	0	0	0	0	0	0	1	6	0	0	0	0	0	1	6	0	0	7	15,399	15,042	97.7
17	1	0	0	2	39	56	0	7	10	20	0	0	4	12	7	68	24	20	135	7,795,964	6,349,440	81.4
missing	2	1	1	0	27	33	6	6	11	9	0	0	6	13	21	34	18	4	96	555,806	0	0.0
<b>Total</b>	<b>17</b>	<b>3</b>	<b>23</b>	<b>38</b>	<b>189</b>	<b>388</b>	<b>37</b>	<b>53</b>	<b>175</b>	<b>118</b>	<b>1</b>	<b>1</b>	<b>33</b>	<b>108</b>	<b>121</b>	<b>447</b>	<b>180</b>	<b>154</b>	<b>1043</b>	<b>146,835,145</b>	<b>126,084,673</b>	<b>85.9</b>

Table derived from 2004 Municipal Water and Wastewater Survey pricing summary database, Sustainable Water Management Division, Environment Canada.

Code #	Conservation Measures	Code #	Conservation Measures
1	Advice given	9	Outdoor advertising - billboards, buses, etc.
2	Customer water audits	10	Rebate programs - efficient appliances, fixtures, rainbarrels etc.
3	Efficiency kits available	11	Retrofit installation programs
4	Efficiency-oriented (metered) water billing	12	School curriculum programs
5	Information with billing	13	System - leak detection and repair
6	Lead by example - efficient municipal/company facilities	14	Tours of water facilities
7	Media - TV, radio, newspaper, etc.	15	Voluntary measures - restrictions
8	Other	16	Water supply (source) level directly linked to pricing level
		17	Water use bylaws - fines

**Table 3 - 2004****Populations Served with Conservation Measures\***

Province / Territory	Responding Population Served Water	Population Served Water with Measures	%	Weighted* Mean # of Measures	Unweighted Mean # of Measures	Weighted** Conservation Index***	Unweighted Conservation Index***	Responding Population Eff. Plan	Formal Efficiency Plan (Pop. Served.)	%
Newfoundland and Labrador	137,466	7,548	5.5	2.0	2.0	2.0	2.0	137,466		0.0
Prince Edward Island	45,196	0	0.0					45,196		0.0
Nova Scotia	315,114	3,639	1.2	1.0	1.0	1.0	1.0	311,475		0.0
New Brunswick	216,255	205,671	95.1	3.6	2.0	2.1	1.2	215,204	4,860	2.3
Quebec	788,952	445,302	56.4	1.5	1.8	1.5	1.7	567,081	34,926	6.2
Ontario	8,212,950	5,961,500	72.6	8.2	2.7	6.6	2.0	7,691,540	4,761,581	61.9
Manitoba	697,874	55,332	7.9	3.0	3.0	2.0	1.9	697,874		0.0
Saskatchewan	461,556	215,002	46.6	1.1	1.3	0.8	0.9	259,627	183	0.1
Alberta	2,121,383	1,782,416	84.0	7.1	3.1	5.9	2.2	1,993,503	738,741	37.1
British Columbia	1,782,216	1,410,050	79.1	6.7	2.9	4.0	2.1	1,682,801	126,424	7.5
Yukon, Nunavut and Northwest Territories	34,138	15,999	46.9	1.0	1.0	0.8	0.8	34,138	15,999	46.9
<b>Population Size Group (000's)</b>										
below 2	27,286	14,907	54.6	2.1	1.8	1.3	1.2	24,388	183	0.7
2 to 5	23,468	15,734	67.0	1.4	1.4	1.2	1.2	17,007	2,637	15.5
5 to 50	1,320,806	688,877	52.2	2.1	2.0	1.7	1.5	1,138,644	214,627	18.8
50 to 500	5,054,266	2,784,568	55.1	2.2	2.5	1.7	1.9	4,068,592	504,906	12.4
500+	8,387,276	6,598,372	78.7	9.9	7.6	7.7	5.5	8,387,276	4,960,361	59.1
<b>Total</b>	<b>14,813,102</b>	<b>10,102,459</b>	<b>68.2</b>	<b>7.2</b>	<b>2.4</b>	<b>5.6</b>	<b>1.8</b>	<b>13,635,905</b>	<b>5,682,714</b>	<b>41.7</b>

Table derived from 2004 Municipal Water and Wastewater Survey pricing summary database (for responding municipalities), Sustainable Water Management Division, Environment Canada.

\* Conservation measures are non-price measures to promote water conservation. They may be either planned or underway.

\*\* Weighted refers to applying different emphasis to different municipalities based upon their population served water, meaning that a larger municipality accounts for more.

\*\*\* Conservation Index is the number of water conservation measures multiplied by the percent each is currently implemented.

**Table 4 - 2004**

**Residential Population Served Water by Rate Type, by Province and by Population Size Group**

Province / Territory	Flat		Volume-based Rate Types						Rates	Total	Vol.	Assessed (non-rate) *	Total All Types	Flat + Assessed	
	Rate	%	CUC	%	DBR	%	IBR	%	Total	Vol.-based	%			Assessed	%
NL	311,986	98.6	4,534	1.4	0.0	0.0	0.0	0.0	316,520	4,534	1.4	9,727	326,247	321,713	98.6
PE	55,018	100.0		0.0	0.0	0.0	0.0	0.0	55,018	0	0.0		55,018	55,018	100.0
NS	31,264	17.0	20,577	11.2	130,320	71.0	1,353	0.7	183,514	152,250	83.0		183,514	31,264	17.0
NB	175,677	50.7	159,077	45.9	7,218	2.1	4,860	1.4	346,832	171,156	49.3		346,832	175,677	50.7
QC	1,786,530	85.3	208,844	10.0	2,421	0.1	95,706	4.6	2,093,500	306,971	14.7	1,894,362	3,987,862	3,680,891	92.3
ON	365,666	3.6	5,702,219	55.8	388,002	3.8	3,755,655	36.8	10,211,540	9,845,875	96.4	1,348	10,212,888	367,013	3.6
MB	8,736	1.1	41,431	5.1	760,813	93.8		0.0	810,980	802,244	98.9	15,067	826,047	23,803	2.9
SK	9,270	1.4	347,732	54.1	276,640	43.0	9,073	1.4	642,715	633,446	98.6		642,715	9,270	1.4
AB	50,448	1.9	1,685,320	64.3	76,106	2.9	808,703	30.9	2,620,577	2,570,129	98.1		2,620,577	50,448	1.9
BC	2,037,740	59.7	1,212,438	35.5	2,554	0.1	161,686	4.7	3,414,417	1,376,677	40.3		3,414,417	2,037,740	59.7
YT	20,260	100.0		0.0	0.0	0.0	0.0	0.0	20,260	0	0.0		20,260	20,260	100.0
NT		0.0	28,223	100.0	0.0	0.0	0.0	0.0	28,223	28,223	100.0		28,223	0	0.0
NU		0.0	17,710	100.0	0.0	0.0	0.0	0.0	17,710	17,710	100.0		17,710	0	0.0
Population Size Group (000's)															
below 2	169,433	55.2	97,444	31.7	32,537	10.6	7,636	2.5	307,050	137,617	44.8	6,352	313,402	175,785	56.1
2 to 5	446,219	64.0	166,739	23.9	65,680	9.4	18,797	2.7	697,435	251,216	36.0	2,833	700,268	449,052	64.1
5 to 50	1,799,557	45.7	1,547,652	39.3	358,035	9.1	232,970	5.9	3,938,214	2,138,657	54.3	35,163	3,973,377	1,834,720	46.2
50 to 500	1,849,666	24.9	3,763,251	50.6	546,864	7.4	1,272,053	17.1	7,431,834	5,582,168	75.1		7,431,834	1,849,666	24.9
500+	587,718	7.0	3,853,019	45.9	640,959	7.6	3,305,580	39.4	8,387,276	7,799,558	93.0	1,876,156	10,263,432	2,463,874	24.0
Total	4,852,593	23.4	9,428,104	45.4	1,644,075	7.9	4,837,036	23.3	20,761,808	15,909,215	76.6	1,920,504	22,682,312	6,773,097	29.9

Table derived from 2004 Municipal Water and Wastewater Survey pricing summary database (for responding municipalities with water utilities), Sustainable Water Management Division, Environment Canada.

\* Customers can be tax assessed based upon property conditions in addition to rate schedules or in place of rates (non-exclusive with respect to rate schedules).

**Table 5 - 2004****Total Residential Water Prices (\$/month) for Selected Volumes of Service, by Province and by Population Size Group**

Province / Territory	10 cubic metres per month				25 cubic metres per month				35 cubic metres per month			
	Mean	Median	10th Percentile	90th Percentile	Mean	Median	10th Percentile	90th Percentile	Mean	Median	10th Percentile	90th Percentile
Newfoundland and Labrador	36.79	24.00	15.83	70.00	36.83	24.00	15.83	70.00	36.85	24.00	15.83	70.00
Prince Edward Island	28.08	30.33	19.49	37.33	28.08	30.33	19.49	37.33	28.08	30.33	19.49	37.33
Nova Scotia	20.53	20.20	12.93	26.07	26.65	26.80	17.58	36.89	30.73	31.20	17.58	41.81
New Brunswick	29.19	24.77	17.03	45.17	35.53	32.42	24.99	45.17	39.89	40.86	24.99	53.85
Quebec	18.09	16.83	9.17	27.42	19.90	16.92	10.42	35.50	21.32	17.08	10.42	37.50
Ontario	23.46	15.56	8.86	40.17	41.11	32.74	22.15	63.79	53.50	43.65	31.01	77.77
Manitoba	34.62	39.60	12.60	39.60	62.74	70.64	31.50	70.64	81.47	91.34	44.10	91.34
Saskatchewan	25.24	21.20	17.93	30.76	43.01	37.93	33.50	51.40	54.51	50.46	41.70	65.15
Alberta	29.97	31.03	23.21	36.13	51.57	53.20	38.21	58.93	66.12	67.97	48.30	78.97
British Columbia	31.74	37.33	11.41	48.57	35.81	37.38	15.00	62.92	38.76	38.40	18.01	72.48
Yukon	46.50	44.40	44.40	44.40	46.50	44.40	44.40	44.40	46.50	44.40	44.40	44.40
Northwest Territories	39.41	42.73	33.00	42.73	75.67	82.03	52.50	82.50	99.83	108.20	52.50	115.50
Nunavut	43.03	38.60	27.10	80.00	105.69	96.50	67.75	200.00	147.47	135.10	94.85	280.00
<b>Population Size Group (000's)</b>												
< 2	24.71	22.00	12.08	42.50	31.99	25.69	13.67	54.96	37.32	28.33	14.00	68.59
2 to 5	24.71	23.50	11.94	40.00	29.83	27.00	12.50	48.21	33.60	28.33	13.10	57.39
5 to 50	24.03	21.20	11.25	41.82	32.03	29.63	13.75	58.50	37.74	31.67	14.52	72.05
50 to 500	28.81	26.12	11.41	48.57	42.18	38.40	18.75	62.92	51.81	47.87	19.31	75.37
500+	24.90	15.56	8.86	39.60	44.19	33.49	22.15	70.64	57.13	43.65	31.01	91.34
<b>Total</b>	<b>26.08</b>	<b>20.88</b>	<b>10.03</b>	<b>43.85</b>	<b>40.47</b>	<b>35.31</b>	<b>18.75</b>	<b>63.47</b>	<b>50.44</b>	<b>43.65</b>	<b>20.08</b>	<b>78.97</b>

Table derived from 2004 Municipal Water and Wastewater Survey pricing summary database (for responding municipalities with rate charges), Sustainable Water Management Division, Environment Canada.



**Table 6 - 2004****Average Residential Water and Sewer Prices (\$/month), by Province and by Population Size Group**

Province / Territory	Mean Price* for 25 m <sup>3</sup> Water Service	Mean Price* for 25 m <sup>3</sup> Sewer Service	Total Price** 25 m <sup>3</sup>	Sewer %*** of Total
Newfoundland and Labrador	14.84	8.60	36.83	36.7
Prince Edward Island	11.78	16.54	28.08	58.4
Nova Scotia	22.15	5.10	26.65	18.7
New Brunswick	21.73	13.40	35.53	38.2
Quebec	14.37	6.65	19.90	31.6
Ontario	22.28	23.02	41.11	50.8
Manitoba	30.88	32.34	62.74	51.2
Saskatchewan	24.55	18.45	43.01	42.9
Alberta	30.54	21.19	51.57	41.0
British Columbia	19.87	16.44	35.81	45.3
Yukon	43.77	2.86	46.50	6.1
Northwest Territories	57.78	19.83	75.67	25.5
Nunavut	54.22	19.74	105.69	26.7
<b>Population Size Group (000's)</b>				
< 2	20.48	11.53	31.99	36.0
2 to 5	19.16	11.95	29.83	38.4
5 to 50	19.95	13.62	32.03	40.6
50 to 500	22.13	20.68	42.18	48.3
500+	26.02	23.86	44.19	47.8
<b>Total</b>	<b>22.92</b>	<b>19.95</b>	<b>40.47</b>	<b>46.5</b>

Table derived from 2004 Municipal Water and Wastewater Survey pricing summary database (for responding municipalities with rate charges), Sustainable Water Management Division, Environment Canada.

\* Sewer prices assume all of flat sewer charges as well as "% Sewer Charge" of other flat min./meter charges and of vol. charges, are sewer charges.

For the first time, water and sewer means exclude municipalities that have indicated pricing or costs for wastewater are inseparable from those of water.

\*\* This is from the respective averages of Table 8 - 2004 (weighted by population served water).

\*\*\* Water priced are weighted by the population served water, and sewer prices are weighted by the population served sewer, thus the Total Price is not necessarily the sum of the two, and the Sewer % is determined using Total Price less weighted water price.

**Table 7 - 2004**

**Total Commercial Water Prices (\$/month) for Selected Volumes of Service, by Province and by Population Size Group**

Province / Territory	10 cubic metres per month				35 cubic metres per month				100 cubic metres per month			
	Mean	Median	10th Percentile	90th Percentile	Mean	Median	10th Percentile	90th Percentile	Mean	Median	10th Percentile	90th Percentile
Newfoundland and Labrador	30.33	25.00	14.10	34.41	30.90	25.00	15.28	35.30	32.39	25.00	15.95	41.20
Prince Edward Island	20.18	19.42	10.70	**	29.88	29.08	13.73	**	56.62	44.03	13.73	**
Nova Scotia	48.58	28.17	13.75	53.95	58.06	39.42	19.79	75.57	81.19	54.27	25.50	136.90
New Brunswick	23.11	23.14	8.07	38.63	28.64	26.33	10.63	55.37	43.53	27.71	10.63	114.72
Quebec	20.57	17.75	7.92	35.50	39.51	20.83	10.94	42.50	135.06	26.25	11.67	64.61
Ontario	38.45	28.46	9.93	63.33	57.80	49.87	21.76	97.20	110.28	100.90	27.74	207.06
Manitoba	25.41	22.47	7.61	45.27	43.21	39.29	10.95	90.98	107.10	101.90	10.95	222.11
Saskatchewan	29.04	25.29	13.20	42.74	49.38	45.07	30.00	71.46	109.26	110.00	45.75	173.68
Alberta	34.11	29.85	15.80	57.12	58.31	59.20	25.85	86.05	126.49	129.75	39.04	194.82
British Columbia	27.72	25.00	8.09	51.46	55.50	27.23	14.09	60.63	235.35	39.92	16.16	112.85
Yukon	21.42	25.00	11.44	**	30.95	27.81	25.00	**	55.73	27.81	25.00	**
Northwest Territories	37.47	41.00	14.50	**	101.44	108.20	50.75	**	278.78	277.85	145.00	**
Nunavut	55.76	44.60	42.50	**	192.36	156.10	148.70	**	547.56	446.00	425.00	**
<b>Population Size Group (000's)</b>												
below 2	29.34	24.35	9.20	46.11	40.68	30.00	12.73	68.70	74.54	39.38	15.00	166.05
2 to 5	30.80	25.00	11.52	47.09	41.46	31.54	13.33	68.01	73.33	41.14	14.87	143.45
5 to 50	28.50	23.97	9.63	50.09	60.29	34.61	14.32	76.04	212.80	63.61	16.83	172.50
50 to 500	30.20	23.29	4.47	69.62	56.68	50.01	15.53	99.01	123.14	119.76	34.44	192.60
500+	30.31	22.72	6.99	84.61	61.28	52.61	23.08	115.57	125.16	116.36	7.34	225.67
<b>Total</b>	<b>29.50</b>	<b>24.43</b>	<b>9.90</b>	<b>49.52</b>	<b>49.39</b>	<b>33.04</b>	<b>13.34</b>	<b>72.60</b>	<b>128.76</b>	<b>52.75</b>	<b>15.50</b>	<b>165.90</b>

Table derived from 2004 Municipal Water and Wastewater pricing summary database (for responding municipalities with rate structures), Sustainable Water Management Division, Environment Canada.

Note: All values based on unweighted rate schedules.

\*\* Not enough rate structures to determine value.

**Table 8 - 2004****Residential and Commercial Mean Total Prices for 35 m<sup>3</sup> water, by Province and Size Group**

Province / Territory	Unweighted Means			Weighted by Population Served Water		
	Residential	Commercial	# Munic.	Residential	Commercial	Pop. Served
Newfoundland and Labrador	22.06	30.90	88	36.85	29.56	333,159
Prince Edward Island	27.52	29.88	10	28.08	32.54	55,654
Nova Scotia	30.66	58.06	51	30.73	41.78	499,451
New Brunswick	29.21	28.64	167	39.89	32.06	371,048
Quebec	21.69	39.51	616	21.32	29.96	6,218,110
Ontario	50.54	57.80	308	53.50	54.62	10,767,531
Manitoba	45.83	43.21	107	81.47	82.50	848,686
Saskatchewan	48.41	49.38	115	54.51	69.06	647,929
Alberta	50.48	58.31	186	66.12	78.44	2,660,497
British Columbia	27.93	55.50	153	38.76	54.56	3,473,968
Yukon	55.68	30.95	5	46.50	38.59	20,260
Northwest Territories	90.56	101.44	6	99.83	107.27	28,223
Nunavut	146.04	192.36	10	147.47	218.39	17,710
<b>Population Size Group (000's)</b>						
< 1	27.48	31.50	36	28.09	32.48	21,942
1 to 2	36.80	41.69	618	38.03	44.23	343,256
2 to 5	33.76	41.46	528	33.60	38.72	863,969
5 to 50	38.60	60.29	553	37.74	53.94	4,805,581
50 to 500	47.46	56.68	76	51.81	58.77	9,117,507
500+	64.58	61.28	11	57.13	52.47	10,789,972
<b>Total</b>	<b>37.33</b>	<b>49.39</b>	<b>1822</b>	<b>50.44</b>	<b>54.18</b>	<b>25,942,227</b>

Table derived from 2004 Municipal Water and Wastewater Survey pricing summary database (for responding municipalities with rate charges), Sustainable Water Management Division, Environment Canada.