

**water**

NEW ZEALAND

*The New Zealand Water & Wastes Association Waiora Aotearoa*



# 2009/2010 National Performance Review Report

## Water Utilities

## **National Performance Review 2009/2010**

Welcome to Water New Zealand's 2009/2010 National Performance Review. This report marks the second annual review, realising the aim of the Association to provide a benchmarking tool for the water industry for the benefit of both asset owners and managers. The review process allows increased transparency of the industry, and facilitates public understanding of the value delivered from investment in the three waters assets.

The review has gradually expanded from eight participants in the pilot project in 2007/2008, to fourteen for the 2009/2010 review. Participants reported their performance in environmental, social and economic areas relating to the three waters.

The 2009/2010 national performance review involved the following organisations:

- Capacity–Hutt City (CAPH)
- Capacity–Wellington (CAPW)
- Christchurch City Council (CCC)
- Dunedin City Council (DCC)
- Hamilton City Council (HCC)
- Invercargill City Council (ICC)
- New Plymouth District Council (NPDC)
- Palmerston North City Council (PNCC)
- Tauranga City Council (TCC)
- United Water International-Papakura (UWIP)
- Whangarei District Council (WDC)
- Timaru District Council (TDC)
- Waikato District Council (WKDC)
- Waipa District Council (WPDC)

*NB: Capacity is the trading name of Capacity Infrastructure Services Limited, a council controlled trading organisation.*

*NB: United Water International-Papakura does not operate the Stormwater network in the Papakura District.*

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## Introduction: Method and Reporting for the 2009/2010 National Performance Review

This report provides detailed comparisons of selected measures from the 2009/2010 National Performance Review, relating to performance in environmental, social and economic areas of water supply, wastewater and stormwater services.

All variable measures relate to the 2009/2010 financial year.

For the review process, participating organisations attempted to report on 111 measures, and a further 44 measures were calculated automatically from reported measures. The exception is United Water International-Papakura which is only responsible for water supply and wastewater management and purchases its water and wastewater services from Watercare Services. Participants submitted spreadsheets of data to Water New Zealand, where it was collated before undergoing an independent audit for validation of the data.

The audit process focused on all measures, both input and calculated. A desk top review involved comparing data from the 08/09 review against 09/10 data, identifying missing data, and looking for data which was significantly different from similar sized participants. Queries arising from any anomalies were sent to each organisation for their comment. Following the desktop review, an on-site audit for five of the participating organisations was carried out, focusing on the full list of measures. Participants for the on-site audit were selected taking into consideration organisational size and location to gain a reasonably random group that reflected the overall participants.

This report aims to provide as relevant comparisons as possible, and in some instances throughout the report, more complex tables are split into two, with the data from utilities with a higher total jurisdictional population (over 100,000) in the first table, and data from utilities with a population of less than 100,000 in the second. The groups are as follows:

**Group 1 (Population > 100,000):**

Christchurch City Council  
Capacity-Wellington  
Hamilton City Council  
Dunedin City Council  
Tauranga City Council  
Capacity-Hutt City

**Group 2 (Population < 100,000):**

Palmerston North City Council  
Whangarei District Council  
New Plymouth District Council  
Invercargill City Council  
United Water International-Papakura  
Timaru District Council  
Waikato District Council  
Waipa District Council

The report is separated into four areas of well-being.

Section A sets the context for comparison between the water utilities. This includes population, area, number of properties, asset quantities, and water supply and wastewater volumes.

Section B focuses on environmental well-being and includes a comparison of water loss characteristics, and overflow events.

Section C concentrates on social well-being and covers water utilities' interaction with their customers and pricing mechanisms.

Section D covers economic well-being, comparing revenue and costs for each participant across each of the three waters.

## Confidence Ratings

For each section (environmental, social, economic), ratings show the degree of participant confidence in the data provided. A shaded bar is used to present these details. A confidence level of A, (the darkest shade) illustrates a very high degree of confidence in the accuracy of the data. Confidence decreases as the shade lightens – the lightest shade illustrates that no data was available. The bars displayed within the report show individual levels of confidence for each organisation, however in general the darker the bar appears the stronger the level of confidence for that data input.



Some measures in the review are calculated using a combination of other values. For example: Measure WSF9 (total cost of water supply services) = WSF3 (total water supply revenue) ÷ WSB5 (total water serviced properties). The lowest confidence rating given by a participant to the factors in the calculation (i.e. WSF3 or WSB5) becomes the confidence rating for the measure in question (i.e. WSF9).

When the measure was not applicable to one or more water utilities, the width of the shaded bar has been reduced accordingly.

## Water Loss

The water loss section of the performance review has presented some difficulties due to utilities' differing methods of collection and calculation of data. This has highlighted the need for a nationally consistent methodology for calculating water loss.

Although the water loss figures in this report have been assembled into a relatively comparable set of data, they should be viewed with a measure of caution.

## Section A: Context for Comparison

Section A considers the general characteristics of each water utility in terms of their size and resources. This includes a comparative overview of:

- *jurisdictional area*
- *jurisdictional population*
- *number of properties in each jurisdictional area*
- *asset quantities*
- *water supply and wastewater volumes*

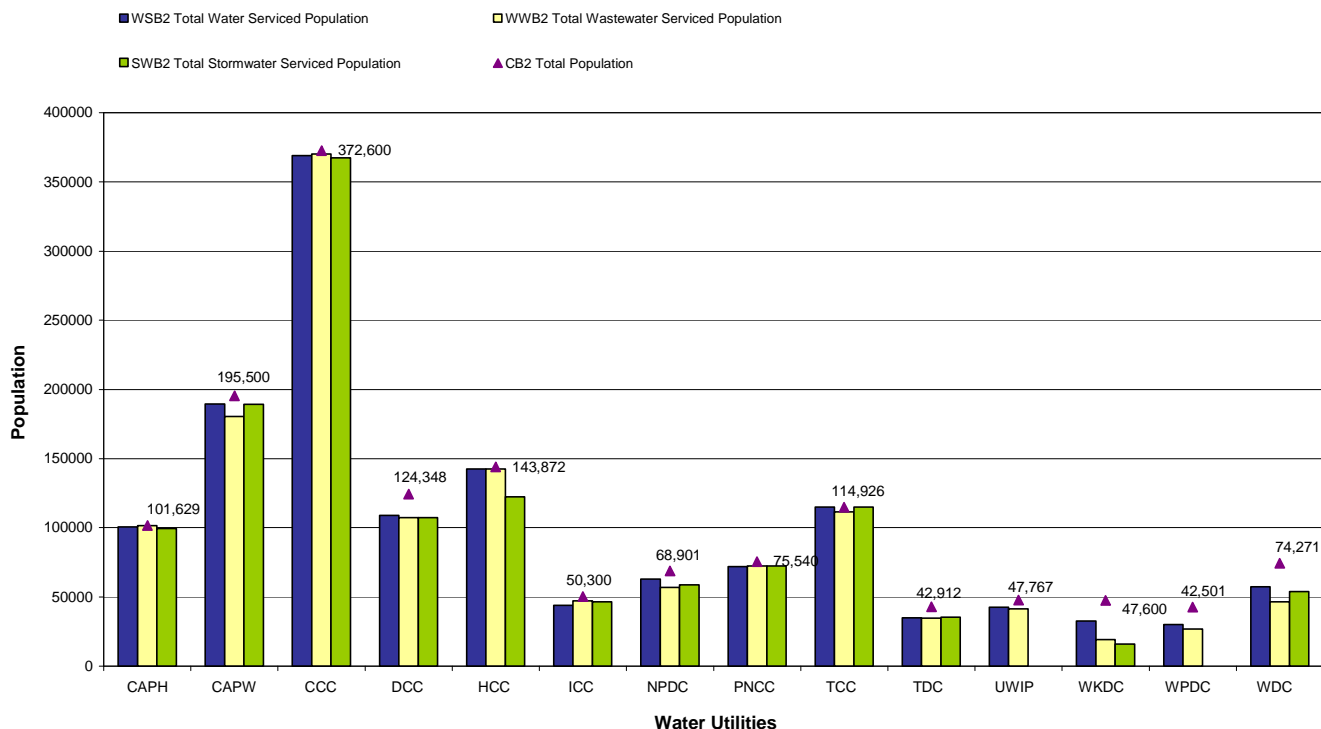
The varying sizes of the fourteen water utilities are illustrated in the table below. Christchurch City Council has the largest land area of 356,029 hectares which was greatly increased from last year's value of 160,711 hectares. This higher figure reflects its merge with Banks Peninsula District Council in 2006. It has also had a small increase in population of 3,200. This year a new participant, Waipa District Council has the smallest population of 42,501.

The number of properties in the total jurisdictional area for Christchurch City Council is over eight times more than the area serviced by United Water International Papakura.

### General size comparisons

Utility	CCC	CAPW	HCC	DCC	TCC	CAPH	PNCC	WDC	NPDC	ICC	UWIP	TDC	WKDC	WPDC
<b>CB1</b> Total Jurisdictional Area (Ha)	356,029	29,900	9,860	334,922	13,380	37,998	32,293	272,192	232,400	38,000	12,600	273831	318,800	147,372
<b>CB2</b> Total Jurisdictional Population	372,600	195,500	143,872	124,348	114,926	101,629	75,540	74,271	68,901	50,300	47,767	42,912	47,600	42,501
<b>CB8</b> Total Jurisdictional Properties	160,101	73,591	52,750	54,812	50,506	39,721	29,800	63,859	35,369	24,635	18,691	21,857	19,019	20,332

### Total and Served Population

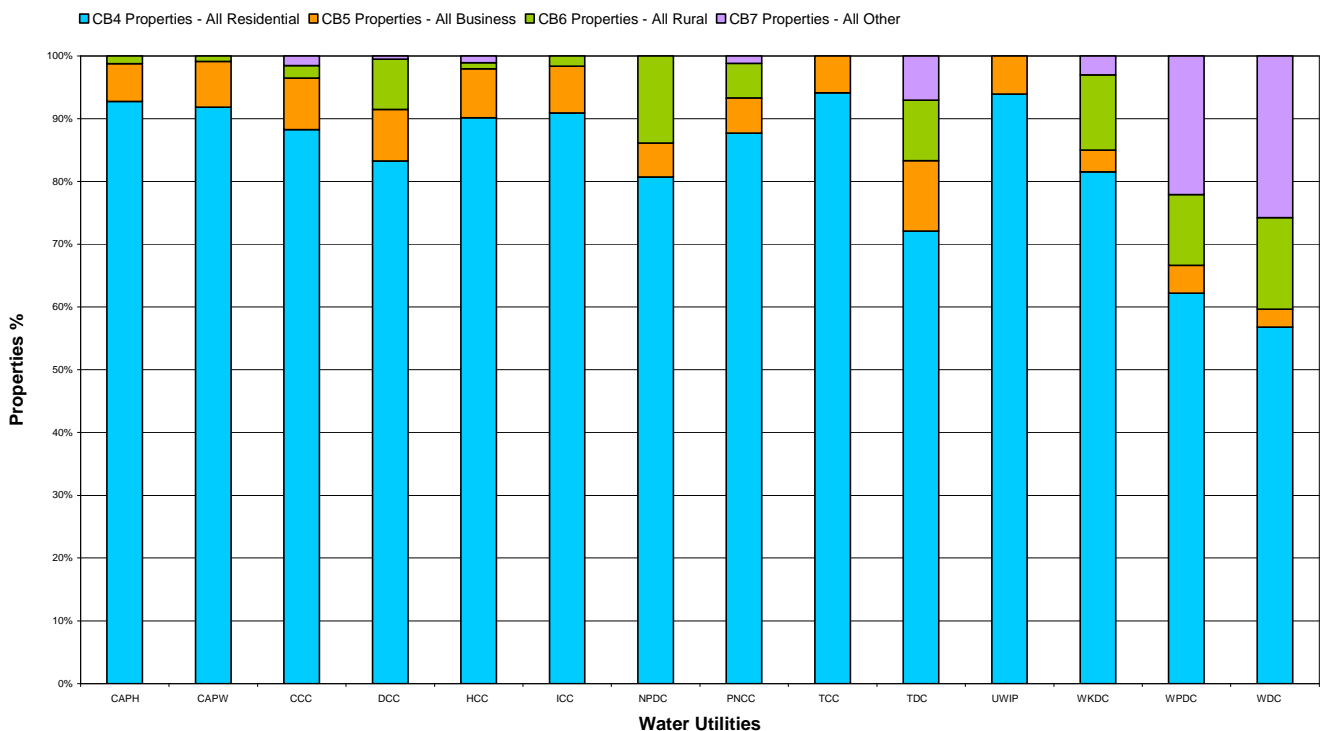


Compared to last year's results there have been relatively small changes to population within all the areas serviced. The only exceptions have been in New Plymouth, Tauranga and Papakura. These changes in population were due to corrections to incorrect returns from 08/09 and natural growth increases in population. The other area of interest in this graph is that in Dunedin, New Plymouth, Waikato, Waipa and Whangarei there are reasonably significant levels of the community that are not served by any of the three waters. This reflects the rural base for the communities and the larger district makeup.

## Properties in the Jurisdictional Area

The graph below shows a breakdown of residential, rural, business and other properties, providing another context for comparison of water utilities. For example, greater than 90% of properties served by Capacity-Wellington, Hamilton City Council, Tauranga City Council, Capacity-Hutt, and United Water International-Papakura are categorised as 'residential' properties. In comparison, 13.8% of New Plymouth District Council properties are categorised as 'rural'. There are similar levels of rural properties in Dunedin, Timaru, Waikato, Waipa and Whangarei.

Properties in Jurisdictional Area %



## Asset Quantities

Detail of pipe networks for each water utility is illustrated in the two tables below.

United Water International-Papakura does not operate the stormwater network or the bulk water and wastewater systems (including treatment facilities) in the Papakura District, so has not provided any of this asset data.

The density of population compared to length of mains needed to service the community varies greatly across the organisations. Christchurch and Wellington have almost double the density of population per length of mains than all the other authorities. This is an advantage to the network operator although (probably due to topographical issues) this advantage does not lead to reduced property servicing costs for Wellington. Christchurch has a very large number of water pump stations compared to all others in the survey however, this is offset by their reduced volume of reservoir storage and a unique network configuration with a very high level of connectivity.



In considering wastewater assets and installed capacities, Wellington, Hutt, Invercargill and Whangarei have very high levels of wastewater treatment plant capacity compared to their respective populations

Overall, Whangarei District Council and Christchurch City Council have the most wastewater treatment plants with 8 plants each. Both have one large plant and a number of smaller plants that serve small communities within their boundaries.

In terms of stormwater assets Tauranga City has 180 treatment devices and Christchurch has more than 1025 km of stormwater pipes and some 375 km of lined and unlined channels.

Utility	CCC	CAPW	HCC	DCC	TCC	CAPH	PNCC	WDC	NPDC	ICC	UWIP	TDC	WKDC	WPDC
<b>WSA1</b> Total Watermain Length	1,805	1,020	1,075	1,425	1,100	697	507	725	792	399	340.5	400.2	627.3	534.4
<b>WWA3</b> Total Wastewater Pipe Length	1856	1046	782	867	1074	568	383	568	469	369	254	337	202	223
<b>WSA4</b> Total Water Pump Stations	127	33	6	27	8	13	5	20	5	7	1	8	8	10
<b>WWA5</b> Total Wastewater Pump Stations	119	62	134	82	145	24	29	138	32	30	29	20	78	44
<b>SWA3</b> Total Stormwater Pipe Length	1025	650	640	363	687	527	269	272	292	444	N/A	163	72	123

## Other Asset Quantities

Utility	CCC	CAPW	HCC	DCC	TCC	CAPH	PNCC	WDC	NPDC	ICC	UWIP	TDC	WKDC	WPDC
<b>WSA6</b> Total Water Meters (Nu)	129,602	4,400	3,455	4,040	51,340	2,012	1,990	24,834	2,223	1,372	15,187	764	4,430	2,980
<b>WSA7</b> Total Water Meters on Residential Connections (Nu)	115,087	700	0	134	46,774	81	50	22,032	106	0	14,183	14	2,160	1,173
<b>WSA5</b> Total Water Storage Reservoirs (Nu)	117	82	7	58	39	24	5	44	19	6	1	7	29	13
<b>WWA6</b> Total Wastewater Treatment Plants (Nu)	8	2.4	1	7	2	1	3	8	3	3	N/A	4	8	2
<b>WWA7</b> Wastewater Treatment Plant Capacity per Day (m <sup>3</sup> /day)	234,916	313,600	45,000	75,701	40,000	225,504	46,620	123,254	79,758	98,000	N/A	45,000	15,070*	14,200
<b>WWA4</b> Total Wastewater Manholes (Nu)	32,449	35,700	14,786	12,049	14,731	13,863	5,278	8,512	7,259	4,519	4,560	3,851	2,858	3,753
<b>SWA4</b> Lined Channel Length (Km)	122.7	1	3.2	0	1	0	3	2.6	0	0	0	0	0	0
<b>SWA5</b> Unlined Channel Length (Km)	252.9	1	56.7	150	76	29	21	0.7	57	27	0	15.6	9.6	231
<b>SWA7</b> Total Stormwater Manholes (Nu)	13,230	17,400	12,144	6,580	11,025	11,200	4,728	6,035	4,910	3,178	0	2,409	1,553	2,212
<b>SWA8</b> Stormwater Treatment Devices (Nu)	-	80	125	0	180	5	1	19	3	0	0	7	40	1

**NB:** CCC does not use volumetric charging for residential metering, although they are universally metered.

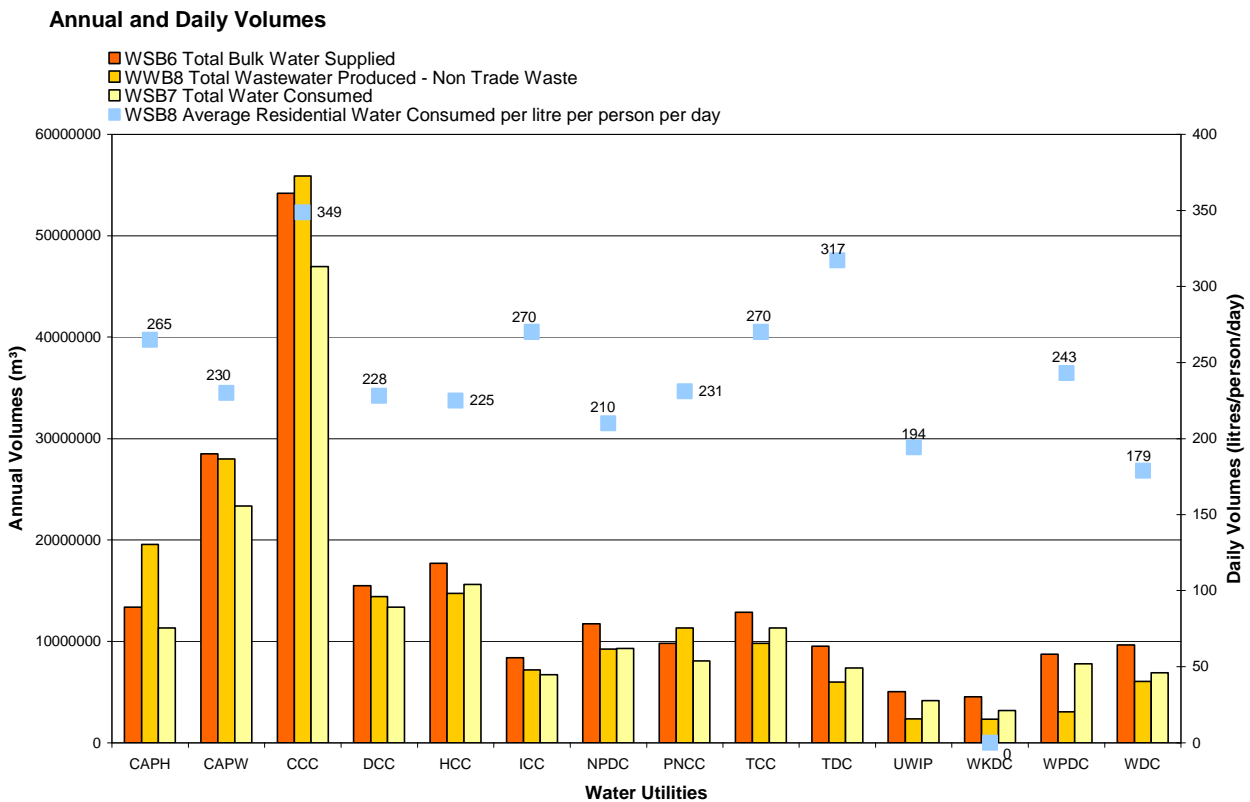
\*Data changed at request of WKDC post release of the final report

## Water and Wastewater Volume

Water and wastewater volumes managed by each of the participants are illustrated in the graph below. Higher rates of residential water consumption were reported by Christchurch City Council with 349 litres per person per day, and Timaru District Council with 317 litres per person per day. Christchurch City Council again supplied the most water annually at 54,179,822m<sup>3</sup>, consumed the most per person average at 349 l/h/d and produced the most wastewater across the year.

Figures of consumption for the remaining participants were significantly lower – ranging from 179 litres (Whangarei District Council) to 270 litres (TCC and ICC) per person per day. The smaller water utilities also showed similarities in terms of their bulk water supply, water consumed and wastewater produced. Three organisations seemed to produce more wastewater than water produced (CAPH, CCC and PNCC), which could be a function of the flat topography resulting in a greater propensity for infiltration into the wastewater system.

Participants used different methods to calculate the average residential water consumed per litres per person per day (WSB8), ranging from calculations, to databases, spreadsheets and estimated assessments. In all cases bulk water supplied was more than the total water consumed, the difference between these figures is non revenue water which is made up of real and apparent losses.



## Section B: Environmental Well-Being

*Environmental well-being focuses on measures that relate to the capacity of the natural environment to support, in a sustainable way, the activities of the communities in each jurisdiction.*

### Average System Pressure

#### Definition

#### Measure

**WSE5** Average System Pressure in the network, measured in metres head of water. (1 m = 10 kilopascals or m/head 'kPa')

#### Confidence Gradings

A	A	N	C	C	N	D	C	A	B	B	C	D	B	WSE5
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Average system pressure was reported alongside the water loss measures. The average for all organisations ranged from 40m recorded by Hamilton City Council, to 80m from part of Waipa. Data submitted was drawn from a range of sources, including historical figures, the NZ Fire Service Survey, network models and pressure monitoring.

Utility	CCC	CAPW	HCC	DCC	TCC	CAPH	PNCC	WDC	NPDC	ICC	UWIP	TDC	WKDC	WPDC
<b>WSE4</b> Average System Pressure (m)	57	65	40	77	55	65	50	51	65	50	74	53	46	20-80

### Water Loss

#### Definition

#### Measure

**WSE1** (Non-Revenue Water) Volume of bulk water supplied (system input) minus (a) any exported billed water, minus (b) the billed volume of water supplied to serviced properties, minus (c) the volume of water billed via issued water permits, in the "Total Water Serviced Area".

m<sup>3</sup>

**WSE2** Real system water losses = Non-revenue water – (unbilled authorised consumption + apparent losses)

m<sup>3</sup>

**WSE3** Estimated real system water losses per 100km of "Total Watermain Length"

m<sup>3</sup> per 100km

#### Confidence Gradings

N	N	N	N	N	N	N	N	N	N	N	N	N	N	WSE1
A	A	N	D	C	N	C	C	A	B	B	E	D	B	WSE2
A	A	N	C	C	N	C	C	A	B	B	N	B	B	WSE3

The aim is to identify the volume of water that is 'lost' from the water reticulation system before reaching customers. Non-revenue water represents the volume of water from the water distribution network that is not billed (or in other words is water lost before it reaches the customers). It comprises water losses and unbilled authorised consumption such as fire fighting and network maintenance use and apparent losses such as water metering inaccuracies or unauthorised water use.

In the tables below real water loss is shown as a volumetric total and “CARL” (Current annual real losses) as m<sup>3</sup> per 100km of pipeline.

The water loss section of the survey again caused some confusion for participants, and almost all of the data had to be reworked to obtain reasonable results for each organisation. ILI (Infrastructure leakage index) was not able to be reliably reported for all the authorities due to a number of inconsistencies in the data received. Initial raw figures received ranged from 0.1998 to 5.809 (including a number of zero responses). After a further set of clarification questions, the auditor assessed the range to be between 0.9 to 3.5, although figures under 1.0 are unusually low.

### Water Loss Data (Group 1)

Utility	CCC	CAPW	HCC	DCC	TCC	CAPH
<b>WSA1</b> Total Watermain length (km)	1,805	1,020	1,075	1,425	1,100	697
<b>WSB6</b> Total Bulk Water Supplied (m <sup>3</sup> )	54,179,822	28,510,771	17,687,842	15,484,747	12,883,800	13,368,295
<b>WSE1</b> Non-Revenue Water (m <sup>3</sup> )	7,205,917	5,161,757	2,069,477	2,115,449	1,552,800	2,038,393
<b>WSE2</b> Real System Water Losses (m <sup>3</sup> )	4,496,926	3,736,218	1,185,085	1,341,212	908,610	1,369,978
<b>WSE3</b> Current Annual Real Losses	86.80	149.21	60.94	42.20	49.97	94.12
<b>WSE5</b> Unavoidable Annual Real Losses	72.21	65.13	75.61	85.61	80.32	72.21

### Water Loss Data (Group 2)

Utility	PNCC	WDC	NPDC	ICC	TDC	UWIP	WPDC	WKDC
<b>WSA1</b> Total Watermain length (km)	507	725	792	399	400	341	535	627
<b>WSB6</b> Total Bulk Water Supplied (m <sup>3</sup> )	9,814,308	8,722,639	11,721,262	8,401,780	9,536,933	5,047,674	8,722,639	4,560,306
<b>WSE1</b> Non-Revenue Water (m <sup>3</sup> )	1,740,022	2,745,696	2,425,944	1,680,380	2,142,326	893,666	942,045	1,368,092
<b>WSE2</b> Real System Water Losses (m <sup>3</sup> )	1,249,307	2,263,917	1,839,931	1,260,291	1,665,479	641,282	505,913	1,140,077
<b>WSE3</b> Current Annual Real Losses	113.93	253.49	161.85	161.71	276.02	115.69	131.03	323.54
<b>WSE5</b> Unavoidable Annual Real Losses	71.74	86.67	81.75	73.85	80.32	78.23	85.55	128.02

## **Combined Sewers**

None of the participating water utilities operate combined sewers. All utilise separate sewer and stormwater pipe networks.

## Overflow Events

Definition	Measure
<b>WWE1</b> The total number of separate sewer overflow events from the 'Separate Sewer Length' caused by wet weather.	Nu/annum
<b>WWE3</b> Total number of wet and dry weather overflow events from all wastewater pump stations in the "Total Wastewater Serviced Area"	Nu/annum

### Confidence Gradings

N	B	A	N	C	E	N	N	A	C	B	C	C	C	WWE1
N	A	A	C	B	B	B	N	A	C	A	C	C	C	WWE3

These measures give an indication of the sewer main and pump station overflow events which may adversely impact on water quality, human health or ecosystem stability. The number of such overflow events can be used as an indicator of the capacity and condition of the sewerage network and how effectively it is being managed.

A number of organisations do not distinguish between wet and dry overflow events; also systems for recording the time and duration of an overflow are variable as to their reliability. Many organisations rely on their contractor to accurately report incidences, and some of the very low reported overflow numbers appear to be due to the contractor's inability to accurately measure an overflow event. This is especially true for pump station overflows.

The confidence gradings for this data show that most of the organisations believe that they are accurately reporting overflow events; however the on-site auditors found that generally there was only an average understanding of the number and length of overflow events.

Utility	CCC	CAPW	HCC	DCC	TCC	CAPH	PNCC	WDC	NPDC	ICC	UWIP	TDC	WKDC	WPDC
<b>WWE1</b> Separate Sewer Overflow Events	6	73	10	No Data	1	0	1	2	0	0	8	3	8	1
<b>WWE3</b> Total Pump Station Overflow Events	0	11	135	1	4	0	0	12	2	0	1	2	3	0

## Section C: Social Well-Being

*Social well-being evaluates the factors enabling individuals, their families, hapu and communities to set goals and achieve them. These include education, health, the strength of community networks and associations, financial and personal security, rights, freedom, and levels of equity.*

These measures include a comparison of:

- water quality complaints
- written complaints responses
- consultation policies
- unplanned interruptions
- pricing for each of the three water services.

### Water Quality Complaints

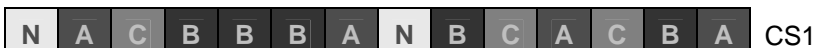
#### Definition

#### Measure

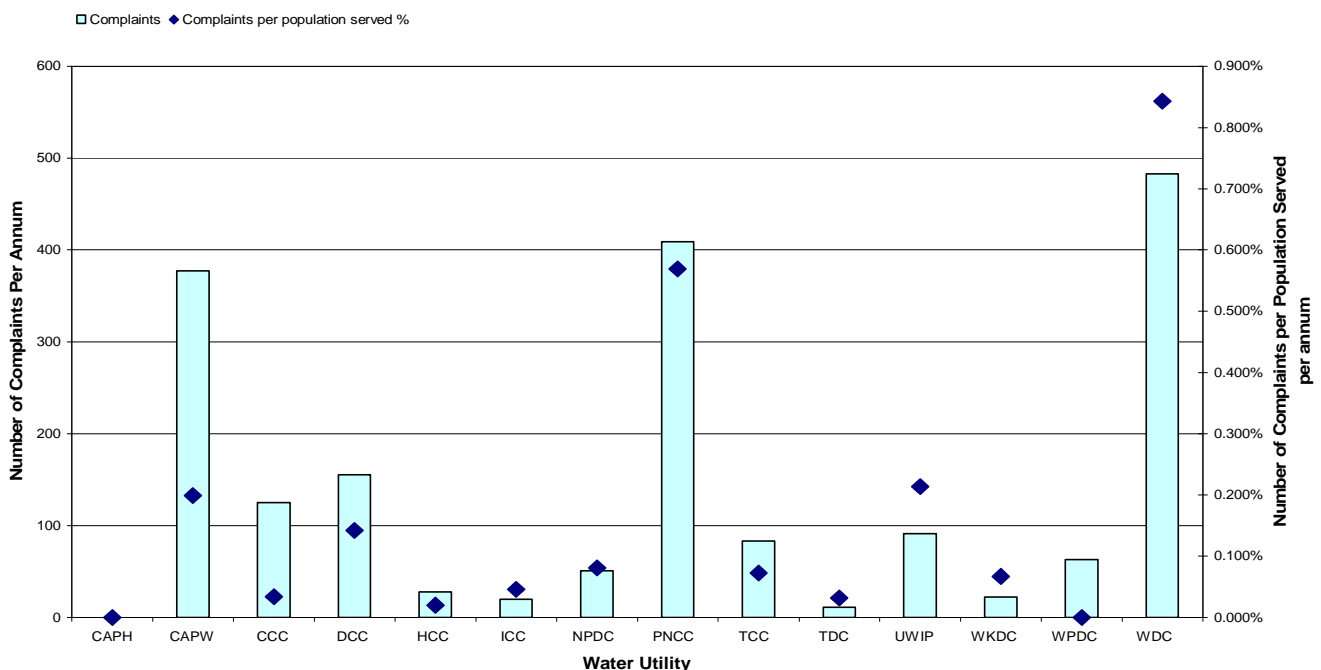
**CS1 Water Quality Complaints:** The total number of water quality complaints received by the organisation per annum.

Nu

#### Confidence Gradings



#### Water Quality Complaints



This measure illustrates the total number of water quality complaints received by the organisation. Whangarei District Council recorded the highest number of complaints per year (483) with the next highest, Palmerston North City Council, recording 409, slightly more than last year. The lowest number reported was by Capacity-Hutt with 0 complaints in 09/10 and 10 complaints in 08/09. Both Whangarei District Council and Palmerston North City Council repeated the trend with much higher complaints per population served.



# Written Complaints Response

**Definition**

**Measure**

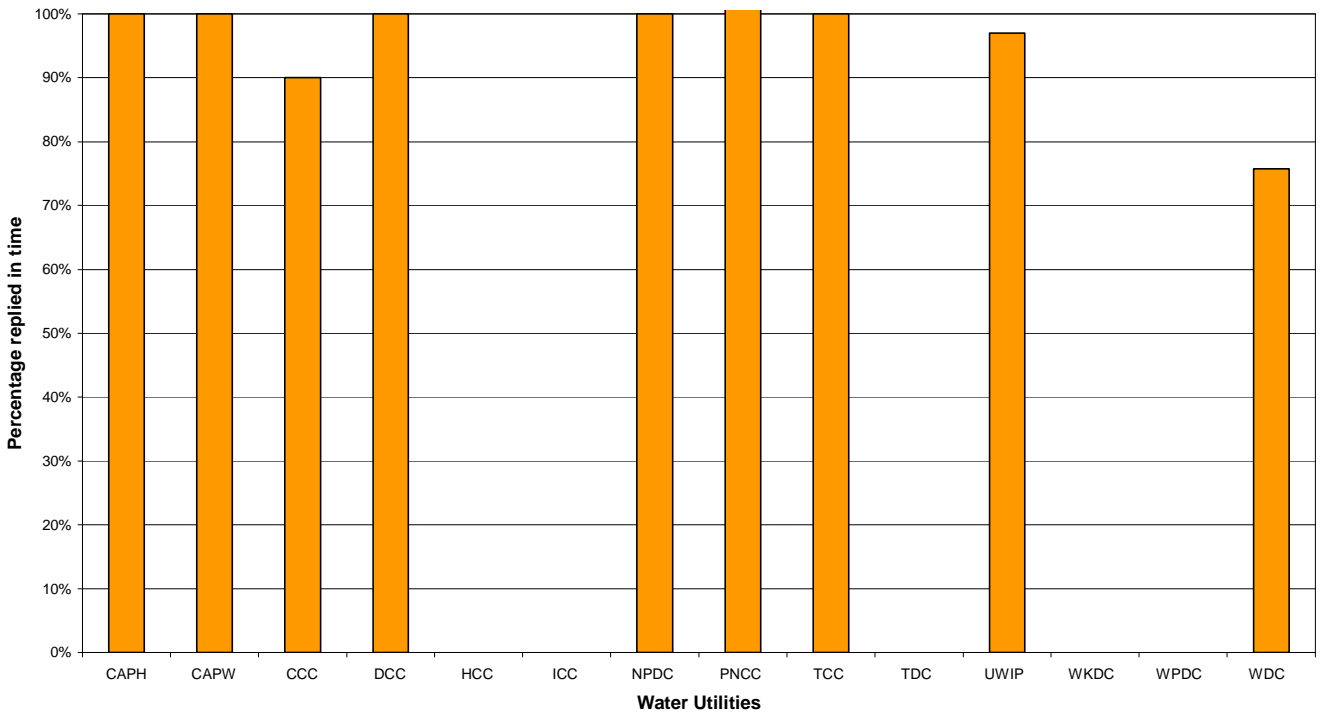
**CS2 Written Complaints Response:** The percentage of complaints received that were replied to within 10 days.

%

**Confidence Gradings**

A N C A N B B N A N N N B B CS2

**Written Complaints Response within 10 days**



This measure reports participant’s responsiveness to customer complaints. United Water International-Papakura and Christchurch City Council both require response to written complaints within 10 working days as part of their customer charter. However, Christchurch City Council (along with Hamilton City Council, Invercargill City Council, Timaru District Council, Waikato District Council and Waipa District Council) did not keep a record of response to complaints, and any figure shown above is therefore an estimate of response time.

## Consultation Policy

Definition	Measure														
<p><b>CS3</b> Does the organisation provide services to customers on the basis of a formal customer charter? Describe main features of the charter in Comments Box</p>	Yes or No														
<p><b>CS4</b> If the organisation has adopted a formal consultation policy, how are the public/customers able to access or obtain a copy of the policy and what are the main features of the policy. If not, how does the organisation consult with or involve the public/customers in decision making - Description in Comments field.</p>	Yes or No														
<b>Confidence Gradings</b>															
<table border="1"> <tr> <td>A</td><td>A</td><td>A</td><td>N</td><td>A</td><td>A</td><td>A</td><td>N</td><td>A</td><td>A</td><td>A</td><td>A</td><td>N</td><td>A</td> </tr> </table>	A	A	A	N	A	A	A	N	A	A	A	A	N	A	CS3
A	A	A	N	A	A	A	N	A	A	A	A	N	A		
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A	A	A	N	A	A	C	N	A	N	A	A	N	A		

This comparison provides an insight into each organisation's consultation process, and how they provide key information about themselves to their customers.

The table below presents each water utility's approach. Four of the fourteen water utilities currently employ the web for public consultation.

Utility	CS3 Customer Charter	CS4 Public Consultation Policy or Process
CCC	Yes Internal CCC customer service standards include; telephone calls to be answered promptly with name given on answer, voicemail messages to be returned in 1 working day, letters/emails/faxes responded to fully within 10 working days (acknowledgement to occur within 5 working days), face-to-face customers addressed on the spot or another meeting time to be suitably arranged. at present is difficult to track & document all correspondence, primarily due to limited system and human resource availability.	Yes Adopted by Council in 2003. Accessible from website (refer <a href="http://www.ccc.govt.nz/Policy/ConsultationPolicy/">http://www.ccc.govt.nz/Policy/ConsultationPolicy/</a> ). Key features - key objectives, key principles and levels of consultation.
CAPW	Yes Water Charter is in existence, "formality" debatable as there is no link to a bylaw nor expressed contract with customer. Currently being reviewed with input from internal policy, legal, communications and infrastructure departments.	Yes LTCCP process - documented within LTCCP and also within council policy papers and procedures.
HCC	No Long term plan is to develop customer charter	Yes Available online: <a href="http://hamilton.co.nz/index.aspx?PageID=2145827721">http://hamilton.co.nz/index.aspx?PageID=2145827721</a> Reviewed 10 March 2008.
DCC	No Currently in draft form.	Yes Council wide consultation policy but most projects are consulted on a case by case basis.
TCC	Yes TCC calls it a Customer Commitment, it spells out how we will interact with customers, how we will treat them, how we will respond to different methods of contact and the turn-around times for each method of communication.	Yes Available via the internet or request from Service Centre or by phone or in writing. POLICY OBJECTIVES <ul style="list-style-type: none"> <li>To strengthen and improve the way in which Council interacts with, and involves, the community in its decision making processes.</li> <li>To encourage public</li> </ul>
CAPH	No	Yes Available online: <a href="http://www.huttcity.govt.nz/Documents/council%20documents/Appendix%209.pdf">http://www.huttcity.govt.nz/Documents/council%20documents/Appendix%209.pdf</a>

<p><b>PNCC</b> No</p>	<p>Yes Policy found on PNCC website.</p>
<p><b>WDC</b> Yes The charter identifies our commitment to putting customers first and providing services that are responsive, courteous, timely, accurate and accessible.</p>	<p>Yes Council has consultation guidelines which it uses for all consultations as required under the LGA 2002. The guidelines are an internal document but available on request. Consultation is undertaken for Annual plans, LTCCP, structure and district plan amendments and on a project by project basis for larger projects.</p>
<p><b>NPDC</b> Yes Main headings of customer charter document: Your rights as a Customer; Our Commitment to You; Customer Feedback; Complaints Procedure. The charter has standard times to provide a written response to customers (7 days) and complaints (5 working days).</p>	<p>No As per LGA requirements.</p>
<p><b>ICC</b> No</p>	<p>No Council consults through Annual Plan, LTCCP, Bylaw and Resource Consent Consultation, and in regard to specific issues through newsletters.</p>
<p><b>UWIP</b> Yes Customer Charter incorporates water and wastewater ownership (boundary between public and private), service standards (queries and complaints, water quality, water pressure and flow rates, interruptions, overflows and blockages, development processing, new connections, meter reading, leakage allowance, tariffs, billing, special meter readings, disconnection and reconnection)</p>	<p>Yes Customer Information and Consultation are provided in the customer charter.</p>
<p><b>TDC</b> No Primarily use bylaws to define obligations</p>	<p>No TDC does not have a formal consultation policy. Areas are consulted on according to their significance and the degree of community input required or desired. Consultation can range from talking to groups or individuals to full public consultation processes with the wider community. Special Consultative Procedures (SCPs) are used as required under legislation for processes such as the Long Term Council Community Plan and Annual Plan, bylaw reviews and policy reviews. Consultation tools include surveys, focus group meetings, newsletters, website, document</p>
<p><b>WKDC</b> No</p>	<p>No</p>
<p><b>WPDC</b> No</p>	<p>No Public consulted through formal process ie District plans, LTCCP etc and through informal publications- adds, newsletters, website etc</p>

# Unplanned Interruptions

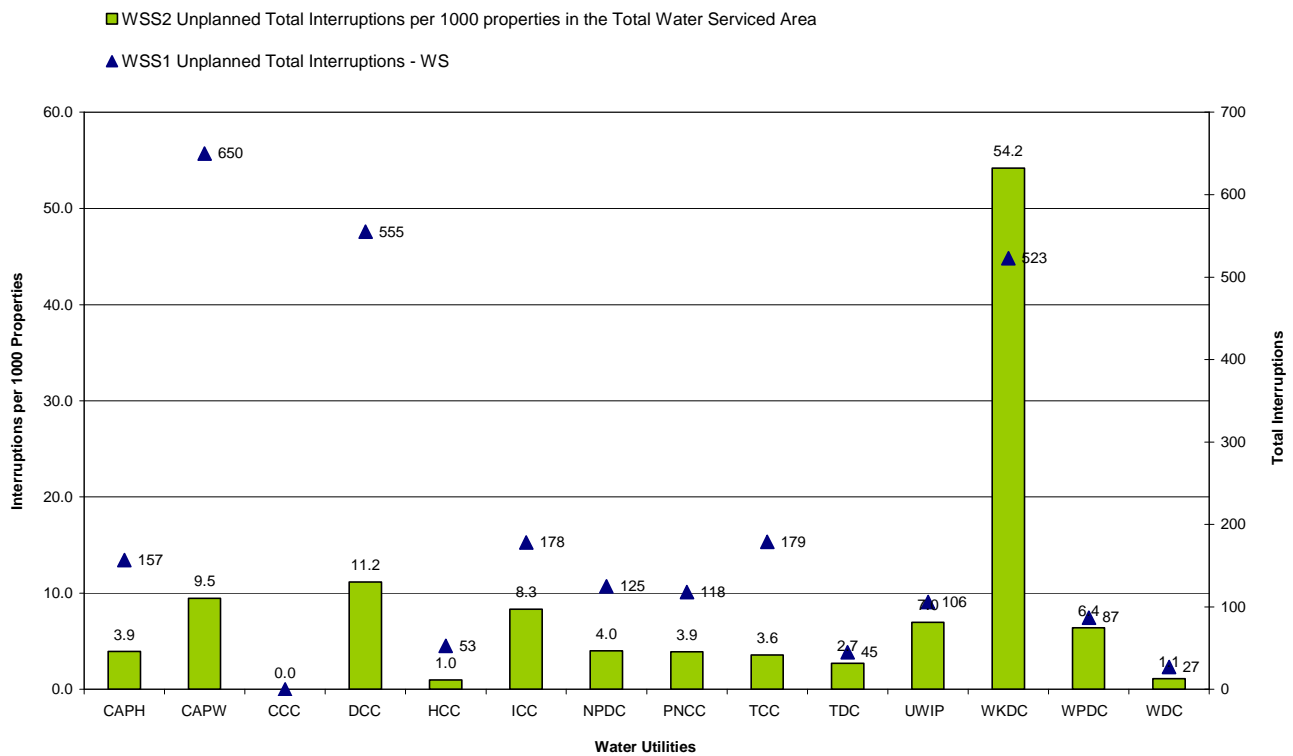
Definition	Measure
<b>WSS1</b> The number of unplanned interruptions to service experienced by properties in the "Total Water Served Area"	Nu
<b>WSS2</b> "Unplanned Total Interruptions" per 1000 properties in the "Total Water Served Area"	Nu/1,000 prop

## Confidence Gradings

N	A	A	N	N	N	D	B	A	C	B	C	N	A	WWS1
B	A	B	B	A	C	B	B	A	B	B	C	C	A	WWS2

The measure of unplanned interruptions to water supply records how often customers experience an unplanned total loss of water supply as a result of an asset failure in the reticulated network.

### Unplanned Interruptions to Water Supply



A high number of unplanned interruptions were reported by Capacity Wellington and Waikato District Council, both total and per 1000 properties. The figure of 57.8 and 54.2 (respectively) unplanned interruptions per 1000 properties was notably higher than the other 12 utilities, which all recorded fewer than 12 interruptions per 1000 properties. Dunedin had 555 total interruptions but as it has large population, the measure of interruptions per 1000 properties was in the lower range of values. Christchurch did not provide information this year so their results show no data.

## Price of Water Supply Services

Definition	Measure
<b>WSS10</b> Price: The fixed charge (inc GST) for residential customers	\$ (inc GST) per annum
<b>WSS11</b> Price: The user charge (inc GST) for residential customers	\$/m <sup>3</sup>
<b>WSS9</b> Price: The minimum annual charge (inc GST) for residential customers	\$
<b>WSS12</b> Price: The average cost of a residential customer's bill based on an annual consumption of 200 m3	\$/200m <sup>3</sup>

### Confidence Gradings

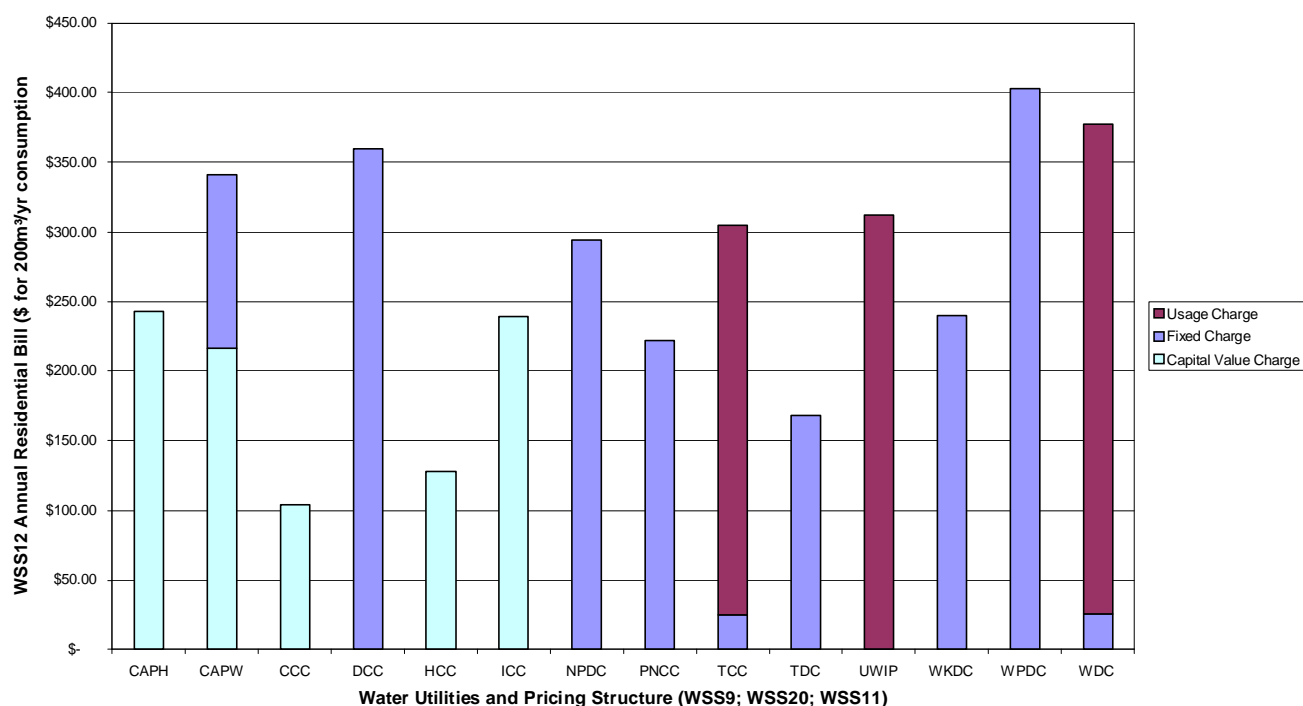
A	A	B	A	N	A	A	A	A	N	N	N	N	A	WSS10
N	N	N	N	N	N	N	A	A	N	A	A	A	A	WSS11
N	N	N	N	N	N	A	A	N	N	N	A	N	N	WSS9
N	A	B	A	A	C	A	A	A	A	A	A	A	A	WSS12

## Pricing - Water Supply

The fourteen utilities use various methods to charge their customers for water, including minimum pricing, fixed charges (uniform annual charge) and user charges (volumetric charging). The minimum fixed water charges were offered by Tauranga City Council (\$25), and Whangarei District Council (\$25.50). For both organisations metered usage beyond a predetermined limit was charged additionally.

The graph below shows the charge for a per annum usage of 200m<sup>3</sup>, whether that is made up from a fixed plus additional charge for consumption or a straight fixed charge. Christchurch City Council had the lowest overall charge of \$104.27, which was increased by \$7.00 from the 08/09 charge. This is less than 50% of the average charge made by the other participants, however Christchurch City Council's water supply has very little treatment costs due to its secure aquifer sources. In addition, the large number of sources located conveniently across the city means that pumping long distances does not occur. The next lowest charge is \$127.92 by Hamilton City Council. Waipa District Council has the highest charge of \$403 non-metered (\$229 metered). The average 200m<sup>3</sup> charge across all the organisations was approximately \$265.

### Pricing - Water Supply



### Price of Wastewater Services

Definition	Measure
<b>WWS4</b> Price: The fixed charge (inc GST) for residential customers	\$ (inc GST) per annum
<b>WWS6</b> Price: (Average Annual Rates Charge) The dollar amount of an average annual rates bill for the supply of wastewater services to residential customers	\$
<b>WWS7</b> Price: (Fixed Uniform Annual Charge) The fixed uniform annual charge included in the rates per residential customer	\$
<b>WWS8</b> Price: The average cost of a residential customer's bill based on an annual consumption of 200m <sup>3</sup>	\$/200m <sup>3</sup>

### Confidence Gradings

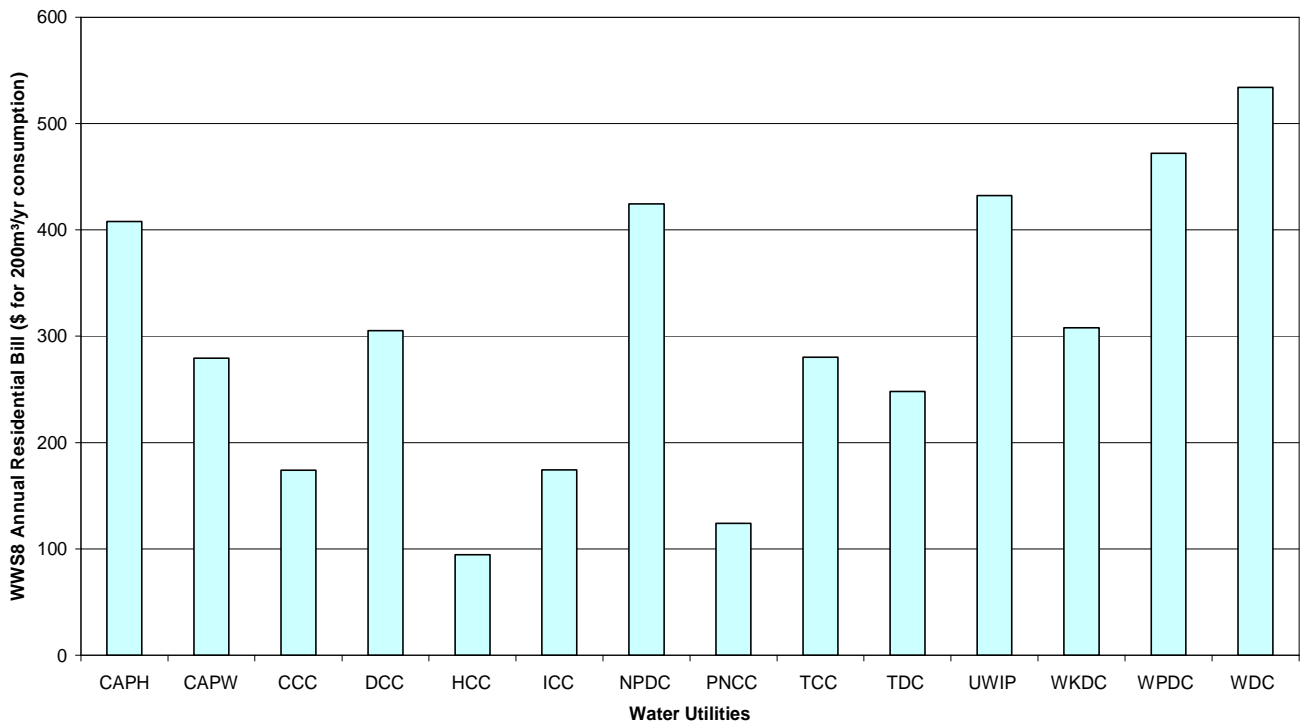
A	N	N	N	N	N	N	N	N	N	N	A	A	N	WWS4
N	A	B	N	A	N	N	N	N	N	N	A	N	N	WWS6
N	A	N	A	N	A	A	A	A	A	N	N	N	A	WWS7
N	A	B	A	A	A	A	A	A	A	N	A	C	A	WWS8

The following graph illustrates the wastewater charge that each utility would apply to each residence for 200m<sup>3</sup> of water consumption. Results range from \$94.64 (HCC) to \$534 (WDC) per annum. The average charge for all the organisations is \$304.

The fourteen water utilities reported three methods of charging for wastewater services. The majority of the participants use the fixed uniform annual charge mechanism, with the exceptions being Christchurch City Council, Capacity Wellington and United Water International-Papakura. Christchurch City Council and Capacity-Wellington both use property value as a basis, whereas United Water International-Papakura charges at 80% of water usage for the average consumption of 200 litres/person/day for an average of 3 people per household.

New Plymouth District Council uses a pro-rata approach based on pans.

**Pricing - Wastewater**



## Price of Stormwater Services

### Definition

### Measure

**SWS2 Price:** (Average Annual Rates Bill) The portion of the average annual rates bill used for stormwater services in the "Total Stormwater Serviced Area" (Inc GST)      cents per \$ (inc GST)

Utility	CCC	CAPW	HCC	DCC	TCC	CAPH	PNCC	WDC	NPDC	ICC	UWIP	TDC	WKDC	WPDC
<b>SWS2</b> Portion of average annual rates bill used for stormwater services	Inconsistent Data Provided	0.03c/\$ <sup>1</sup>	6.07c/\$	3.10c/\$	11.60c/\$	-	5.10c/\$	2.21c/\$	2.00c/\$	5.10c/\$	-	3.85c/\$	7.60c/\$	3.80c/\$

Participants calculated their stormwater services in a variety of ways, from basing them on property and land drainage rates, to dividing the stormwater charge by the annual rates bill.

As shown in the table above, Tauranga has the highest portion of the annual rates bill used for stormwater services, at 11.6 cents per \$. The other organisations that provided data range from 2 cents per \$ (New Plymouth District Council) to 7.6 cents per \$ for Waikato District Council. Capacity-Hutt does not have a targeted or specific stormwater component in their rates, United Water International-Papakura does not cover drainage services for Papakura and Christchurch City Council did not provide correct data, so figures have not been included for these three organisations.

<sup>1</sup> The auditor was unable to confirm this very low figure but proposes that it should be around 3.2 c / \$



## Section D: Economic Well-Being

*Economic well-being involves the financial considerations for each water utility in providing three waters services.*

### Definitions

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**Operating Revenue:** the total income for the reporting year relating to the total serviced area. This includes revenue from rates (minimum or fixed rate charges), but excludes developer cash or asset contributions.

**Total Revenue:** represents the total revenue for the organisation (Operating Revenue + Developer Revenue)

**Operating Cost:** includes operation, maintenance and administration costs (excludes depreciation and interest).

**Total Cost:** the total of all costs (Operating Cost, Depreciation and Interest)

**Capital Expenditure:** the capital expenditure made by each organisation as it relates to the relevant water service (water supply, wastewater or stormwater). This gives an idea of investment expenditure for the reporting period.

The reported measures in this section give an overview of the revenue and costs for the water utilities in the supply of water, wastewater and stormwater services.

The total cost per property includes a component of operating costs, the balance of which is established with the addition of depreciation costs and interest costs. The total cost measure provides an overview of the total costs for each water utility to provide the three waters services.

Capital expenditure is recognised as an investment rather than a cost, and this measure shows the amount invested by each water utility in the provision of water supply, wastewater and stormwater assets.

One utility has not included targeted rates income in their revenue figures for the measures WSF3, WWF3 and SWF3. This is United Water International-Papakura as they chose not to input financial data, deeming it commercially sensitive.

## Water Supply Revenue and Costs

### Confidence Gradings

A	A	B	A	A	A	B	A	A	B	N	A	A	B	WSF3
A	A	B	A	A	B	B	A	A	B	N	B	C	B	WSF4
A	A	B	A	A	B	A	A	A	B	A	B	C	B	WSF6
A	A	B	N	N	B	A	A	N	B	N	A	A	N	WSF9
A	A	B	N	N	B	A	A	N	B	N	B	C	N	WSF10
A	A	B	A	A	B	A	A	A	N	N	N	N	B	WSF11
A	A	B	A	A	B	B	A	A	B	A	B	C	B	WSF12

As shown in the graph on page 27, Tauranga City Council spent the most per property on capital improvements for water supply over the 2009/2010 financial year (\$246). The next highest figure was from Waikato District Council at \$206. Tauranga City Council also reported the highest actual capital expenditure, allocating \$12,230,880 expenditure to water supply capital improvement projects. The average water capital expenditure over all the authorities fell by 13% (between 08/09 and 09/10) to \$126.70 per property.

### Actual Revenue and Costs – Water Supply (Group 1)

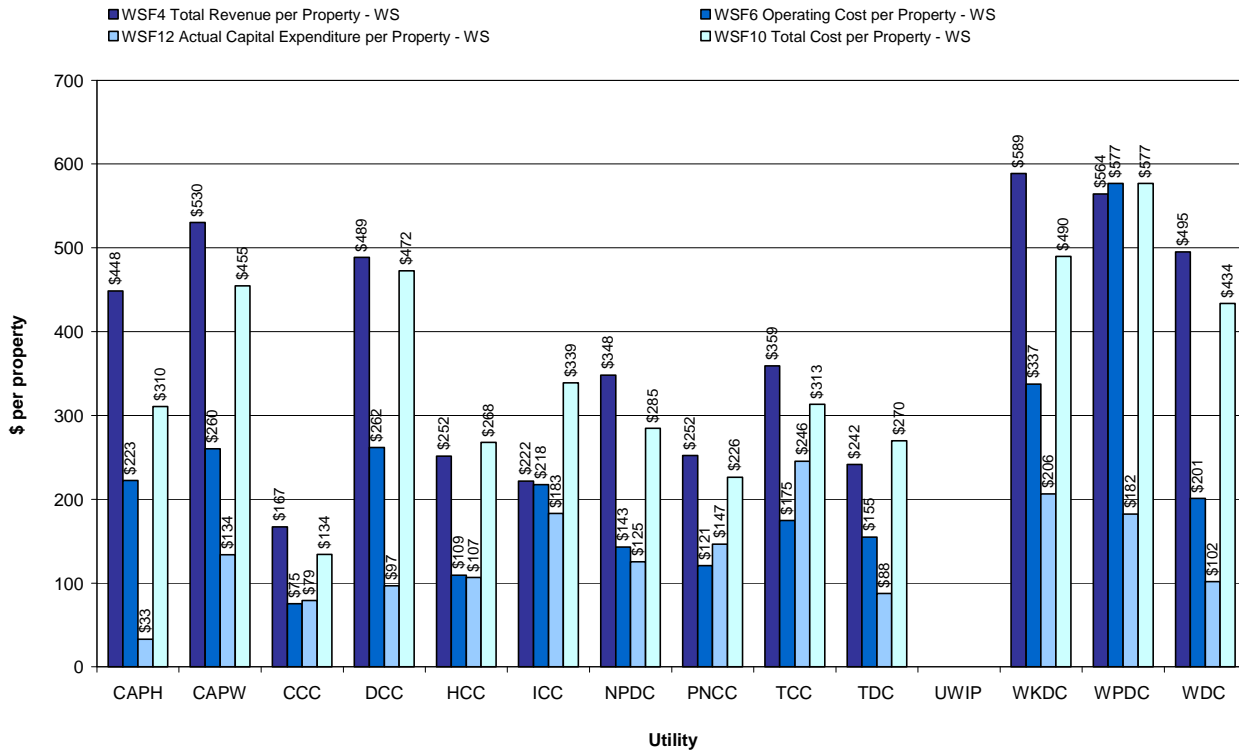
Utility	CCC	CAPW	HCC	DCC	TCC	CAPH
<b>WSF3</b> Total Revenue – WS	23,665,499	36,373,411	13,400,748	24,240,971	17,884,781	17,879,665
<b>WSF9</b> Total Cost - WS	19,030,326	31,186,000	14,270,907	23,428,224	15,607,618	12,378,100
<b>WSF11</b> Actual Capital Expenditure - WS	11,219,984	9,190,000	5,679,983	4,793,477	12,230,880	1,314,000

### Actual Revenue and Costs – Water Supply (Group 2)

Utility	PNCC	WDC	NPDC	ICC	TDC	WPDC	WKDC
<b>WSF3</b> Total Revenue – WS	7,577,421	12,110,967	10,634,000	4,733,029	3,993,455	7,649,083	5,684,186
<b>WSF9</b> Total Cost - WS	6,798,921	10,617,034	9,654,800	7,238,680	4,456,757	10,831,000	4,728,422
<b>WSF11</b> Actual Capital Expenditure - WS	4,402,000	2,488,854	3,901,100	3,907,665	1,451,734	1,392,000	1,991,254

Note: United Water declined to release any financial data

## Revenue, Costs and Expenditure per Property - Water Supply



## Wastewater Revenue and Costs

### Confidence Gradings

A	A	B	A	A	A	B	A	A	B	N	A	A	A	WWF3
A	A	B	A	A	B	B	A	A	B	N	A	B	C	WWF4
A	A	B	B	A	B	A	A	A	B	A	A	B	C	WWF6
A	A	B	N	A	A	N	A	N	B	N	A	A	N	WWF9
A	A	B	N	A	B	N	A	N	B	N	A	B	N	WWF10
A	A	B	A	A	A	B	A	A	B	N	A	A	A	WWF11
A	A	B	B	A	B	B	A	A	B	A	A	B	C	WWF12

Whangarei District Council spent the highest amount per property on wastewater capital improvement projects; amounting to \$638.74 per property (they also spent the most per property in 08/09). The largest total spend on wastewater capital works was \$ 44,057,780 by Christchurch City Council. The average wastewater capital expenditure over all the authorities increased by 17% between 08/09 and 09/10, to \$223.79 per property.

Total revenue per property varied greatly over the total group, from \$190.60 for Palmerston North City Council to \$604.82 for Waipa District Council, with the average being \$334.47.

Hamilton City Council attributes the difference between its cost and revenue figures in the table below to not having a targeted rating system for wastewater, but instead a general rate levied. The revenue figure therefore does not include a targeted rate, and it is not appropriate to include the general rate.

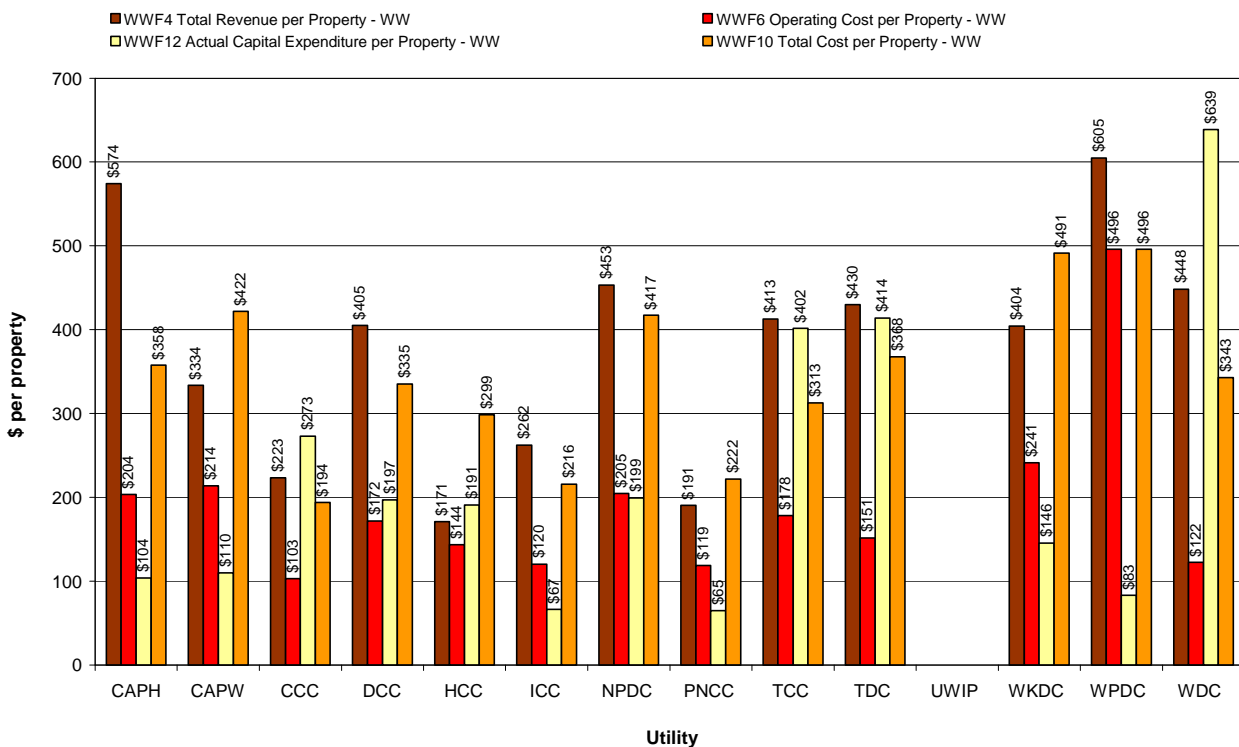
### Actual Revenue and Costs – Wastewater (Group 1)

Utility	CCC	CAPW	HCC	DCC	TCC	CAPH
WWF3 Total Revenue – WW	36,058,806	22,881,847	9,011,831	19,521,120	19,617,718	27,601,144
WWF9 Total Cost - WW	31,314,908	28,921,000	15,754,780	16,145,980	14,873,658	17,187,734
WWF11 Actual Capital Expenditure - WW	44,057,780	7,530,000	10,069,161	9,495,365	19,085,549	4,989,935

### Actual Revenue and Costs – Wastewater (Group 2)

Utility	PNCC	WDC	NPDC	ICC	TDC	WPDC	WKDC
WWF3 Total Revenue – WW	5,788,468	13,030,509	12,628,800	5,594,302	6,984,713	6,501,238	2,769,175
WWF9 Total Cost - WW	6,734,489	9,967,258	11,809,800	4,603,196	5,944,266	7,987,000	3,366,136
WWF11 Actual Capital Expenditure - WW	1,968,000	18,566,980	5,639,100	1,419,254	6,693,797	1,781,000	997,777

### Revenue, Costs and Expenditure per Property - Wastewater



## Stormwater Revenue and Costs

### Confidence Gradings

A	A	B	A	A	A	B	A	A	C	N	A	N	A	SWF3
A	A	B	B	A	B	B	C	A	C	N	A	N	D	SWF4
A	A	B	B	A	B	B	C	A	B	N	A	N	D	SWF6
A	A	B	A	A	A	A	A	N	B	N	A	N	N	SWF9
A	A	B	B	A	B	B	C	N	B	N	A	N	N	SWF10
A	A	B	A	A	A	B	A	A	A	N	A	N	A	SWF11
A	A	B	B	A	B	B	C	A	A	N	A	N	D	SWF12

Most participating utilities spent much less on stormwater capital improvements than on either water supply or wastewater system upgrades.

Waipa District Council stands out as having very high expenditure per property on stormwater drainage. The Council was unable to provide an accurate figure for this measure as the data is not currently readily accessible. Of the Group 1 authorities, Christchurch City Council had the highest total operating cost of \$9,148,821 and the highest actual capital expenditure of \$13,851,522. Of note, Tauranga City Council had a total operating cost of \$3,338,013 and total cost (of providing stormwater services) of \$9,148,821. This latter figure was higher than most of the other larger authorities probably due to Tauranga's large annual interest costs of \$4,109,000 and its depreciation of \$1,705,807.

Of the Group 2 authorities New Plymouth had the highest total operating cost of \$2,368,000 and the highest total cost of \$3,791,600.

The total stormwater revenue figures for Capacity-Hutt and Capacity-Wellington in the tables below do not include targeted rates.

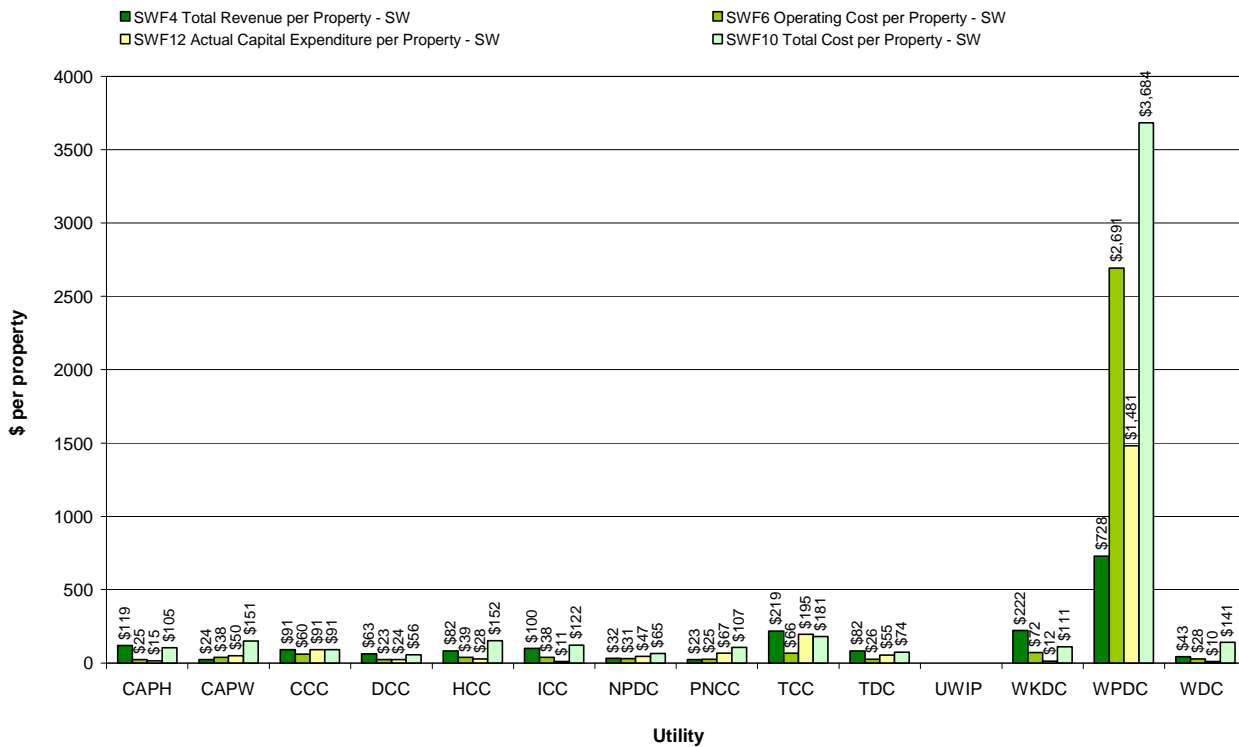
### Actual Revenue and Costs – Stormwater (Group 1)

Utility	CCC	CAPW	HCC	DCC	TCC	CAPH
<b>SWF3</b> Total Revenue - SW	13,790,919	9,983,006	3,662,417	3,023,896	11,064,210	4,681,253
<b>SWF9</b> Total Cost - SW	13,790,918	11,016,000	6,837,304	2,721,955	9,152,820	4,152,830
<b>SWF11</b> Actual Capital Expenditure - SW	13,851,522	3,652,000	1,258,924	1,168,478	9,872,749	576,245

## Actual Revenue and Costs – Stormwater (Group 2)

Utility	PNCC	WDC	NPDC	ICC	TDC	WPDC	WKDC
<b>SWF3</b> Total Revenue – SW	683,056	1,158,961	904,573	2,143,580	1,362,341	2,336,223	1,491,223
<b>SWF9</b> Total Cost - SW	3,237,929	3,811,350	1,839,400	3,605,064	1,232,725	2,619,000	742,873
<b>SWF11</b> Actual Capital Expenditure - SW	2,028,000	281,879	1,319,400	232,388	908,828	1,053,000	78,026

### Revenue, Costs and Expenditure per Property - Stormwater



## Appendix 1: Data Confidence Descriptions

RATING	DESCRIPTION	PROCESSES	ASSET DATA
A	Highly reliable	Strictly formal process for collecting and analysing data. Process is documented and always followed by all staff. Process is recognised by industry as best method of assessment.	Very high level of data confidence. Data is believed to be 95-100% complete and + or - 5% accurate. Regular data audits verify high level of accuracy in data received.
B	Reliable	Strong process to collect data. May not be fully documented but usually undertaken by most staff.	Good level of data confidence. Data is believed to be 80-95% complete and + or - 10% to 15% accurate. Some minor data extrapolation or assumptions has been applied. Occasional data audits verify reasonable level of confidence.
C	Less Reliable	Process to collect data established. May not be fully documented but usually undertaken by most staff.	Average level of data confidence. Data is believed to be 50-80% complete and + or - 15-20% accurate. Some data extrapolation has been applied based on supported assumptions. Occasional data audits verify reasonable level of confidence.
D	Uncertain	Semi formal process usually followed. Poor documentation. Process to collect data followed about half the time.	Not sure of data confidence, or data confidence is good for some data, but most of dataset is based on extrapolation of incomplete data set with unsupported assumptions.
E	Very uncertain	Ad hoc procedures to collect data. Minimal or no process documentation. Process followed occasionally.	Very low data confidence. Data based on very large unsupported assumptions, cursory inspection and analysis. Data may have been developed by extrapolation from small, unverified data sets.
N	No data	No process exists to collect data.	No data available. <i>Please note</i> that 'no data available' is different to collecting a legitimate data value of (0), where the data confidence could potentially be very high.

## Appendix 2: Definitions of Measures

XX Calculated field

<b>Common data: Background Information</b>			
CB1	Total Jurisdictional Area	Total land area under the Council's jurisdiction	Ha
CB2	Total Jurisdictional Population	Total residential population living within the "Total Jurisdictional Area"	Nu
CB3	Predicted Population 2028	Predicted population of the "Total Jurisdictional Area" by 2028	Nu
CB4	Properties – All Residential	Total number of residential properties within the "Total Jurisdictional Area"	Nu
CB5	Properties - All Business	Total number of business properties within the "Total Jurisdictional Area"	Nu
CB6	Properties - All Rural	Total number of rural properties within the "Total Jurisdictional Area"	Nu
CB7	Properties - All Other	Total number of properties other than residential, business and rural properties, within the "Total Jurisdictional Area" Total number of all properties in the "Total Jurisdictional Area"	Nu
CB8	Properties -Total number	Total number of all properties in the "Total Jurisdictional Area"	Nu
CB9	Number of Beaches/Lagoons	Total number of monitored bathing beaches/lagoons in the "Total Jurisdictional Area"	Nu
CB10	Estimated Length of Natural Streams	Total length of natural streams within the "Total Jurisdictional Area"	Km
<b>Common data: Environmental</b>			
CE1	Wet Weather Sewer Overflow Events	Total number of sewer overflow events caused by wet weather	Nu
CE2	Total Number of Dry Weather Sewer Overflow Events	Total number of dry weather sewer overflow events	Nu
CE3	Beach/Lagoon closures	Number of beach/lagoon closure days per annum due to stormwater or wastewater pollution	Nu
<b>Common data: Social</b>			
CS1	Water Quality Complaints	Total number of water quality complaints received by the organisation per annum	Nu
CS2	Written Complaints Response	Written complaints that were meaningfully responded to within 10 days, as a Percentage	%
CS3	Customer Charter	Does the organisation provide services to customers on the basis of a formal customer charter? Describe main features of the charter in Comments Box	Yes/no
CS4	Public Consultation Policy or Process	If the organisation has adopted a formal consultation policy, how are the public/customers able to access or obtain a copy of the policy and what are the main features of the policy. If not, how does the organisation consult with or involve the public/customers in decision making - Description in Comments field	yes/no
<b>Water Supply Measures: Background Information</b>			



WSB1	Total Water Served Population	Total area serviced by the (public) reticulated water supply network area	Ha
WSB2	Total Water Served Population	Total <u>residential</u> population served in the "Total Water Served Area"	Nu
WSB3	Total Water Served Properties - Residential	Total number of <u>residential</u> properties serviced in the "Total Water Served Area"	Nu
WSB4	Total Water Served Properties – Non - residential	Total number of <u>non-residential</u> properties serviced in the "Total Water Served Area"	Nu
<b>WSB5</b>	<b>Total Water Served Properties</b>	<b>Total number of all residential and non-residential properties serviced in the "Total Water Served Area"</b>	<b>Nu</b>
WSB6	Total Bulk Water Supplied	Total volume of bulk water supplied	m <sup>3</sup>
WSB7	Total Water Consumed	Total volume of water consumed by <u>all customers</u> (residential and non-residential) in the "Total Water Served Area"	m <sup>3</sup>
<b>WSB8</b>	<b>Average Residential Water consumed</b>	<b>Average Residential Water Consumed per litres per person per day</b>	<b>l/pd</b>
WSB9	Average age of pipelines	Average Age of All Pipelines within the "Total Water Served Area"	Nu
<b>Water Supply Measures: Asset Quantities</b>			
WSA1	Total Watermain Length	Total length of watermains within the "Total Water Served Area" servicing all customers	Km
WSA2	Total Fire Hydrants	Total number of fire hydrants within the "Total Water Served Area"	Nu
WSA3	Total Water Valves	Total number of water supply valves within the "Total Water Served Area"	
WSA4	Total Water Pump Stations	Total number of water pump stations within the "Total Water Served Area"	Nu
WSA5	Total Water Storage Reservoirs	Total number of water storage reservoirs within the "Total Water Served Area"	Nu
WSA6	Total Water Meters	Total number of water meters within the "Total Water Served Area"	Nu
WSA7	Total Water Meters on Residential Connections	Total number of water meters on residential connections within the "Total Water Served Area"	Nu
<b>Water Supply Measures: Environmental</b>			
WSE1	Non-Revenue Water	Volume of water supplied (system input) minus a) any exported billed water, b) the billed volume of water supplied to serviced properties and c) the volume of water billed via issued water permits, in the "Total Water Served Area".	m <sup>3</sup>
WSE2	Real System Water Losses	Non-revenue water minus a standard allowance for unbilled authorised consumption plus apparent losses	m <sup>3</sup>
WSE3	Real System Water Losses by Length	Estimated real system water losses per 100km of "Total Watermain Length"	m <sup>3</sup> / 1.00km
WSE4	Current Annual Real Losses (CARL)	Current Annual Real Losses expressed in "Litres per connection per day"	Litres/conn/day

WSE5	Average System Pressure	Average system pressure in the network	M
WSE6	Unavoidable Annual Real Losses (UARL)	Unavoidable Annual Real Losses as calculated using the BenchlossNZ Formula (based on IWA) expressed I litres per connection per day	Litres / conn / day
WSE7	Infrastructure Leakage Index (ILI)	Infrastructure leakage Index (ILI) is the ratio of Current Annual Real Losses to Unavoidable Annual Real Losses	Dimensionless
<b>Water Supply Measures: Social</b>			
WSS1	Unplanned Total Interruptions – WS	The number of unplanned interruptions to service experienced by properties in the "Total Water Served Area"	Nu
WSS2	Unplanned Interruption Frequency – WS	"Unplanned Total Interruptions" per 1000 properties in the "Total Water Served Area"	Nu / 1,000 prop
WSS3	Watermain Breaks	Total number of (public) watermain breaks in the "Total Water Served Area" including bursts and leaks in all diameter mains	Nu
WSS4	Third Party Incidents – WS	The number of unplanned interruptions to service caused by third parties	Nu
WSS5	Interruption Incidents – WS	The number of Incidents where one or more customers experienced an unplanned total loss of water supply due to asset failure, includes shut valves for fire fighting requirements, excludes third party damage	Nu
WSS6	Total Interruption Incidents – WS	Total Number of incidents where any customer experienced an unplanned total loss of water	Nu
WSS7	Total Interrupted Hours	Sum of all hours of interruptions across all interruption incidents	Nu
WSS8	Average Interruption Duration per incident - WS	The average duration for which a serviced property in the "Total Water Served Area" is without supply due to unplanned interruptions	Hrs
WSS9	Price - Minimum Charge	The minimum annual charge (inc GST) for residential customers (if applicable to your organisation, otherwise leave blank)	\$
WSS10	Price - Fixed Charge	The fixed charge (inc GST) for residential customers (if applicable to your organisation, otherwise leave blank)	\$
WSS11	Price – User Charge	The user charge (inc GST) for residential customers (if applicable)	\$/m <sup>3</sup>
WSS12	Annual Bill Based on 200 m3/yr Consumption	The average cost of a residential customer's bill based on an annual consumption of 200 m3	\$/200 m <sup>3</sup>
<b>Water Supply Measures: Financial</b>			
WSF1	Operating Revenue - WS	Operating Revenue for the reporting year relating to the "Total Water Served Area" - Excludes Developer contributions	\$
WSF2	Developer Revenue – WS	All WS developer cash or asset contributions	\$
WSF3	Total Revenue – WS	Total water supply revenue for the reporting year, relating to the "Total Water Served Area" (not unserved properties)	\$
WSF4	Total Revenue per Property - WS	Total Revenue per serviced property	\$/property
WSF5	Total Operating Cost – WS	Total water supply operating cost for the reporting year relating to the "Total Water Served Area" (not unserved properties)	\$

WSF6	Total Operating Cost per Property – WS	Total Operating cost per <u>serviced</u> property	\$/property
WSF7	Annual Depreciation	The current cost annual depreciation funding for water supply assets	\$
WSF8	Interest	The total interest for the reporting year relating to the "Total Water Serviced Area" (not unserviced properties)	\$
WSF9	Total Cost – WS	The total cost of providing water supply services for the reporting year relating to the "Total Water Serviced Area" (not unserviced properties)	\$
WSF10	Total Cost per Property - WS	Total Cost per <u>serviced</u> property	\$/property
WSF11	Actual Capital Expenditure - WS	Actual capital expenditure on water supply for the reporting year relating to the "Total Water Serviced Area" (not unserviced properties)	\$
WSF12	Actual Capital Expenditure per Property – WS	Actual Capital Expenditure per <u>serviced</u> property	\$/property

#### Wastewater Measures: Background Information

WWB1	Total Wastewater Services Area	Total area serviced by the (public) reticulated wastewater network	Ha
WWB2	Total Wastewater Serviced Population	Total residential population served in the "Total Wastewater Serviced Area"	Nu
WWB3	Total Wastewater Serviced Properties - Residential	Total number of <u>residential</u> properties serviced in the "Total Wastewater Serviced Area"	Nu
WWB4	Total Wastewater Serviced Properties – Non-residential	Total number of <u>non-residential</u> properties serviced within the "Total Wastewater Serviced Area"	Nu
WWB5	Total Wastewater Serviced Properties	Total number of all residential and non-residential properties serviced within the "Total Wastewater Serviced Area"	Nu
WWB6	Total Trade Waste Properties	Total number of trade waste properties by each LNO area	Nu
WWB7	Total Trade Waste Volume	Volume of Trade Waste Produced by each LNO area	m <sup>3</sup>
WWB8	Total Wastewater Produced – Non Trade Waste	Total annual volume of Wastewater produced (excluding trade waste) by "Total Wastewater Serviced Properties" within the "Total Wastewater Serviced Area"	m <sup>3</sup>

#### Wastewater Measures: Asset Quantities

WWA1	Separate Sewer Length	Total length of (public) <u>wastewater</u> piped reticulation (gravity & pressure) servicing all properties in the "Total Wastewater Serviced Area".	Km
WWA2	Combined Sewer Length	Total length of (public) combined piped reticulation (gravity & pressure) servicing all properties in the "Total Wastewater Serviced Area" (if applicable to the organisation)	Km
WWA3	Total Wastewater Pipe Length	Total length of (public) <u>wastewater and combined piped reticulation</u> (gravity & pressure) servicing all properties in the "Total Wastewater Serviced Area"	Km
WWA4	Total Wastewater Manholes	Total number of wastewater (separate & combined) manholes within the "Total Wastewater Serviced Area"	
WWA5	Total Wastewater Pumpstations	Total number of wastewater pumpstations within the "Total Wastewater Serviced Area"	

WWA6	Total Wastewater Treatment Plants	Total number of Wastewater treatment plants owned by (operated for) the organisation in delivering wastewater services within the "Total Wastewater Serviced Area"	
WWA7	Wastewater Treatment Plant Capacity per Day	Total capacity of "Total Wastewater Treatment Plants per day"	m <sup>3</sup> /day
<b>Wastewater Measures: Environmental</b>			
WWE1	Separate Sewer Overflow Events	Total <u>number</u> of separate sewer overflow events from the "Separate Sewer Length" <u>caused by wet weather</u>	Nu
WWE2	Combined Sewer Overflow Events	Total number of combined sewer overflow events from the "Combined Sewer Length" caused by wet weather	Nu
WWE3	Total Pump Station Overflow Events	Total number of <u>wet and dry weather</u> overflow events from all wastewater pump stations in the "Total Wastewater Serviced Area"	Nu
<b>Wastewater Measures: Social</b>			
WWS1	Dry Weather Sewer Overflow Events	Total number of dry weather sewer overflow events	Nu
WWS2	Sewer Breaks and Chokes	Total number of sewer breaks and chokes that occur in the "Total Wastewater Pipe Length"	Nu
WWS3	Price – Minimum Charge	The minimum annual charge (inc GST) for <u>residential</u> customers (if applicable to your organisation, otherwise leave blank)	\$
WWS4	Price - Fixed Charge	The fixed charge (inc GST) for <u>residential</u> customers (if applicable to your organisation, otherwise leave blank)	\$
WWS5	Price – User Charge	The user charge (inc GST) for <u>residential</u> customers (if applicable to your organisation, otherwise leave blank)	\$/m <sup>3</sup>
WWS6	Price – Average Annual Rates Charge	The dollar amount of an average annual rates bill for the supply of wastewater services to residential customers	\$
WWS7	Price – Fixed Uniform Annual Charge	The fixed uniform annual charge included in the rates per residential customer	\$
WWS8	Annual Wastewater Bill, based on 200m <sup>3</sup> /yr Water Consumption	The average cost of a residential customer's wastewater bill based on an annual water consumption of 200 m <sup>3</sup>	\$/200m <sup>3</sup> water
<b>Wastewater Measures: Financial</b>			
WWF1	Operating Revenue – WW	Operating revenue for the reporting year relating to the "Total Wastewater Serviced Area" - Excludes all developer contributions.	\$
WWF2	Developer Revenue – WW	All WW developer cash or asset contributions	\$
WWF3	<u>Total Revenue - WW</u>	<u>Total wastewater revenue for the reporting year, relating to the Total Wastewater Serviced Area (not unserved properties)</u>	<u>\$</u>
WWF4	<u>Total Revenue per Property – WW</u>	<u>Total Revenue per serviced property</u>	<u>\$/property</u>
WWF5	Total Operating Cost – WW	Total Wastewater operating cost for the reporting year <u>relating to the Total Wastewater Serviced Area</u> (not unserved properties)	\$
WWF6	<u>Operating Cost per Property – WW</u>	<u>Total Operating Cost per serviced property</u>	<u>\$/property</u>

WWF7	Annual Depreciation	The current cost annual depreciation funding for wastewater assets	\$
WWF8	Interest	The total interest for the reporting year relating to the "Total Wastewater Serviced Area" (not unserved properties)	\$
WWF9	Total Cost – WW	The total cost of providing wastewater services for the reporting year relating to the Total Wastewater Serviced Area (not unserved properties)	\$
WWF10	Total Cost per Property	Total Cost per serviced property	\$/property
WWF11	Actual Capital Expenditure – WW	Actual capital expenditure on wastewater for the reporting year relating to the Total Wastewater Serviced Area (not unserved properties)	\$
WWF12	Actual Capital Expenditure per Property – WW	Actual Capital Expenditure per serviced property	\$/property
<b>Stormwater Measures: Background Information</b>			
SWB1	Total Stormwater Serviced Area	Total area serviced by the (public) reticulated stormwater network	Ha
SWB2	Total Stormwater Serviced Population	Total residential population served in the "Total Stormwater Serviced Area"	Nu
SWB3	Total Stormwater Serviced Properties – Residential	Total number of residential properties serviced in the "Total Stormwater Serviced Area"	Nu
SWB4	Total Stormwater Serviced Properties – Non Residential	Total number of non-residential properties serviced in the "Total Stormwater Serviced Area" (inside and outside the MUL)	Nu
SWB5	Total Stormwater Serviced Properties	Total number of all residential and non-residential properties serviced in the "Total Stormwater Serviced Area"	Nu
SWB6	Annual Rainfall	The total annual rainfall for the Council's "Total Jurisdictional Area"	Mm
SWB7	Combined Sewer Area	Total area within the "total Stormwater Serviced Area" that is serviced by a combined sewer system	Ha
SWB8	Percentage combined sewer area	"Combined Sewer Area" as percentage of "Total Stormwater Serviced Area"	%
SWB9	Soakage Area	Total area within the "Total Stormwater Serviced Area" that is recognised as good soakage and where this is the predominant method of stormwater drainage	Ha
SWB10	Percentage Soakage Area	"Soakage Area" as a percentage of "Total Stormwater Serviced Area"	%
SWB11	Percentage Other Area	Percentage of "Total Stormwater Serviced Area" that does not rely on combined sewer or soakage for drainage	%
<b>Stormwater Measures: Asset Quantities</b>			
SWA1	Stormwater Pipe Length	Length of (public) stormwater-only pipes within the "Total Stormwater Serviced Area" that are owned and substantially maintained by the organisation	Km
SWA2	Combined Sewer Pipe Length	Length of (public) combined sewer pipes within the "Total Stormwater Serviced Area" that are owned and substantially maintained by the organisation	Km
SWA3	Total Stormwater Pipe Length	Total length of all (public) stormwater and combined sewer pipes within the "Total Stormwater Serviced Area"	Km

SWA4	Lined Channel Length	Total length of (public) lined, engineered open channels within the "Total Stormwater Serviced Area"	Km
SWA5	Unlined Channel Length	Total length of (public) <u>unlined</u> , engineered open channels within the Stormwater Serviced Area"	Km
SWA6	Total Channel Length	Total length of (public) lined and unlined, engineered open channels within the "Total Stormwater Serviced Area"	Km
SWA7	Total Stormwater manholes	Total number of (public) stormwater and combined sewer manholes within the "Total Stormwater Serviced Area"	Nu
SWA8	Stormwater Treatment Devices	Total number of (public) stormwater treatment devices within the "Total Stormwater Serviced Area"	Nu
<b>Stormwater Measures: Environmental</b>			
SWE1	Combined Sewer Overflow Events	Total number of all "Combined Sewer Overflow Events" <u>caused by wet</u> weather (if applicable to the organisation)	Nu
<b>Stormwater Measures: Social</b>			
SWS1	Dry Weather Sewer Overflow Events – Combined System	Total number of dry weather sewer overflow events from combined systems	Nu
SWS2	Price – Average Annual Rates Bill	The portion of the average annual rates bill used for stormwater serviced in the "Total Stormwater Serviced Area" (inc GHS). Please describe in "comments" how this has been calculated	Cents per \$
<b>Stormwater Measures: Financial</b>			
SWF1	Operating Revenue - SW	Operating revenue for the reporting year relating to the "Total Stormwater Serviced Area" Excludes all developer contributions.	\$
SWF2	Developer  Revenue – SW	All SW developer cash or asset contributions	\$
SWF3	Total Revenue – SW	Total stormwater revenue (income for the reporting year, relating to the "Total Stormwater Serviced Area" (not unserved properties)	\$
SWF4	Revenue per Property	Average Revenue per serviced property	\$/property
SWF5	Total Operating Cost	Total stormwater operating cost for the reporting year relating to the " <u>Total Stormwater Serviced Area</u> " (not unserved properties)	\$
SWF6	Operating Cost per Property – SW	Average Operating Cost per serviced property	\$/property
SWF7	Annual Depreciation	The current cost annual depreciation funding for all stormwater assets	\$
SWF8	Interest	The total interest for the reporting year relating to the "Total Stormwater Serviced Area" (not unserved properties)	\$
SWF9	Total cost – SW	The total cost of providing stormwater services for the reporting year, related to the " <u>Total Stormwater Serviced Area</u> " (not unserved properties)	\$
SWF10	Total Cost per Property - SW	Average Total Cost per serviced property	\$/property
SWF11	Actual Capital Expenditure – SW	Actual capital expenditure on stormwater for the reporting year, related to the " <u>Total Stormwater Serviced Area</u> " (not unserved properties)	\$/property

SWF12	Actual Capital Expenditure per serviced property	Actual capital expenditure per serviced property	\$/property
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