



# **Water New Zealand National Performance Review 2008/2009 Summary Report**

**January 2010**

## **National Performance Review 2008/2009**

The 2008/2009 National Performance Review follows Water New Zealand's successful pilot project in 2007/2008. It realises the aim of the Water New Zealand Board to establish an annual national performance review programme as a critical benchmarking tool for the water industry. This initiative is intended to provide a valuable building block for asset owners and managers alike, to be able to publicly confirm the standing of the industry along with the value delivered from public investment in the three waters assets.

The 2007/2008 pilot national performance review expanded the existing Auckland Water Group annual performance review into a national context, involving eight utilities. The 2008/2009 national performance review saw 11 participants complete a spreadsheet providing various performance indicators relevant to the three waters. Participants reported their performance in environmental, social and economic areas.

International and local experience of such reviews shows that they continually evolve and improve, producing increasingly more effective comparisons. The results of this project to date have been positive and it is expected that other participants will join the programme in future reviews, eventually leading to a comprehensive nation-wide comparison.

The 2008/2009 national performance review involved eleven participating organisations.

- Capacity–Hutt City (CAPH)
- Capacity–Wellington (CAPW)
- Christchurch City Council (CCC)
- Dunedin City Council (DCC)
- Hamilton City Council (DCC)
- 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)

*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 2008/2009 National Performance Review

The results of the 2008/2009 National Performance Review are presented in this report.

The review required the 11 participating water utilities to submit spreadsheets of data to Water New Zealand. The organisations attempted to report on 101 measures with the exception being United Water International which is only responsible for water supply and wastewater management and who purchase water and wastewater services from Watercare Services. A further 35 measures were calculated automatically from other measures. The data was then collated to enable an independent audit to be carried out for validation of the data. The auditing process focused on all 101 input measures as well as checking the calculated measures. An on-site audit for four of the participating organisations was carried out, focusing on the full list of measures. The independent auditor again offered helpful recommendations which will be implemented in the next national performance review.

The desktop audit identified ratings for consistency and accuracy in terms of the data in the 80-85% range, data confidence levels in the 80-85% range, and data sources in the 75-80% range. All of these ratings remained unchanged following the onsite audit.

This report provides detailed comparisons of selected measures, relating to performance in environmental, social and economic areas of water supply, wastewater and stormwater services.

All variable measures relate to the 2008/2009 financial year.

In many cases an important factor influencing participating water utilities was the number of people served within each jurisdiction. Each table and graph was sorted in order of population size. In some instances throughout the report, more complex tables are split into two, with the data from larger utilities (with total jurisdictional populations of over 100,000) in the first table, and data from smaller utilities (population of less than 100,000) in the second. The groups are as follows:

**Group 1 - Larger Utilities:**

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

**Group 2 - Smaller Utilities:**

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

The overall aim is to provide relevant comparisons.

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 area of well-being (environmental, social, economic) ratings have been illustrated to inform the degree of participant's confidence in the data provided. A shaded bar is used to present these details. 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.



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.

## 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.*

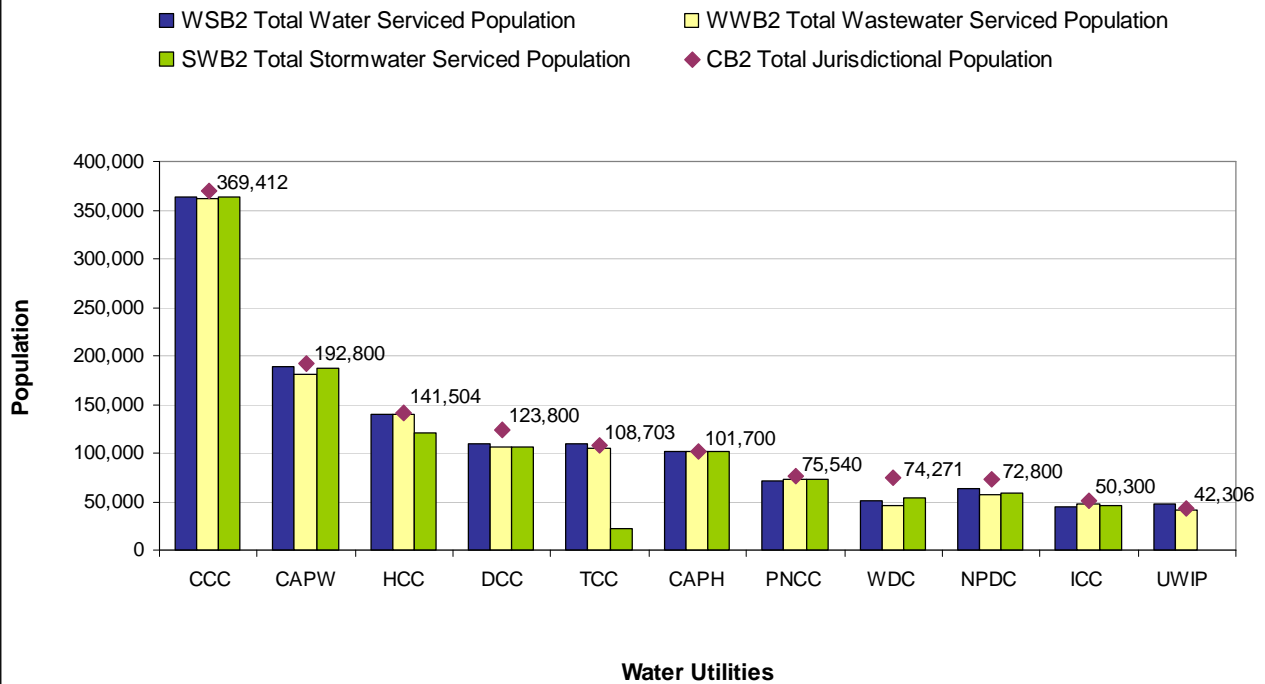
The table below lists three measures which illustrate the varying sizes of the eleven water utilities. Dunedin City Council has the largest land area of 334,922 hectares, but is the fourth largest in terms of total jurisdictional population. Christchurch has the largest total jurisdictional population with 369,412 people, while Invercargill City Council and United Water International-Papakura serve the smallest populations – at 50,300 and 42,306 respectively. The number of properties in the total jurisdictional area for Christchurch City Council is around 9 times more than the area serviced by United Water International.

As mentioned earlier, the utilities have been categorised in order of population size throughout the report. This enables comparison with utilities of similar size.

### General size comparisons

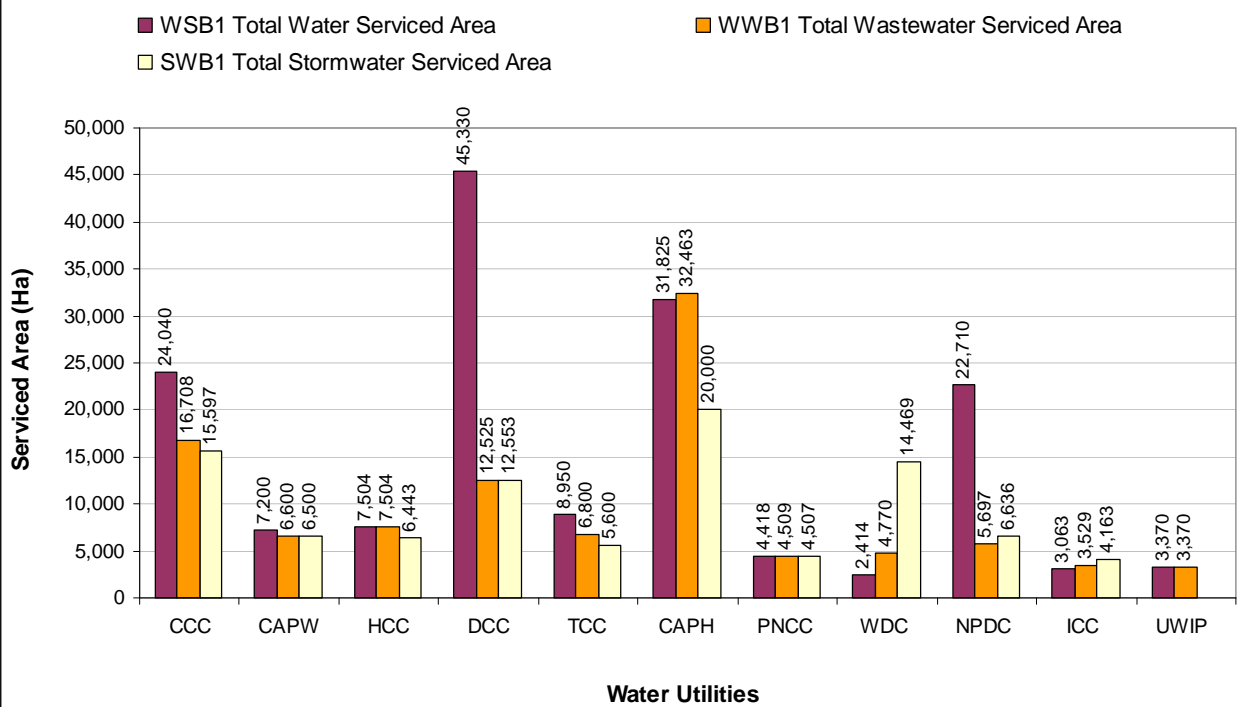
Water Utility	CCC	CAPW	HCC	DCC	TCC	CAPH	PNCC	WDC	NPDC	ICC	UWIP
<b>CB1</b> Total Jurisdictional Area (Ha)	160,711	29,000	9,860	334,922	12,825	37,998	32,594	272,187	22,000	38,000	12,600
<b>CB2</b> Total Jurisdictional Population	369,412	192,800	141,504	123,800	108,703	101,700	75,540	74,271	72,800	50,300	42,306
<b>CB8</b> Total Jurisdictional Properties	158,331	73,479	52,718	54,499	51,124	40,681	32,137	62,111	33,465	27,152	17,031

## Total and Served Population



NB: The majority of utilities calculated the measure SWB2 by number of properties and average occupancy. TCC reported only those properties actually discharging directly into the stormwater network – explaining the much lower figure for stormwater serviced population. Discrepancies can be avoided in the future by way of clearer definition in the guidelines.

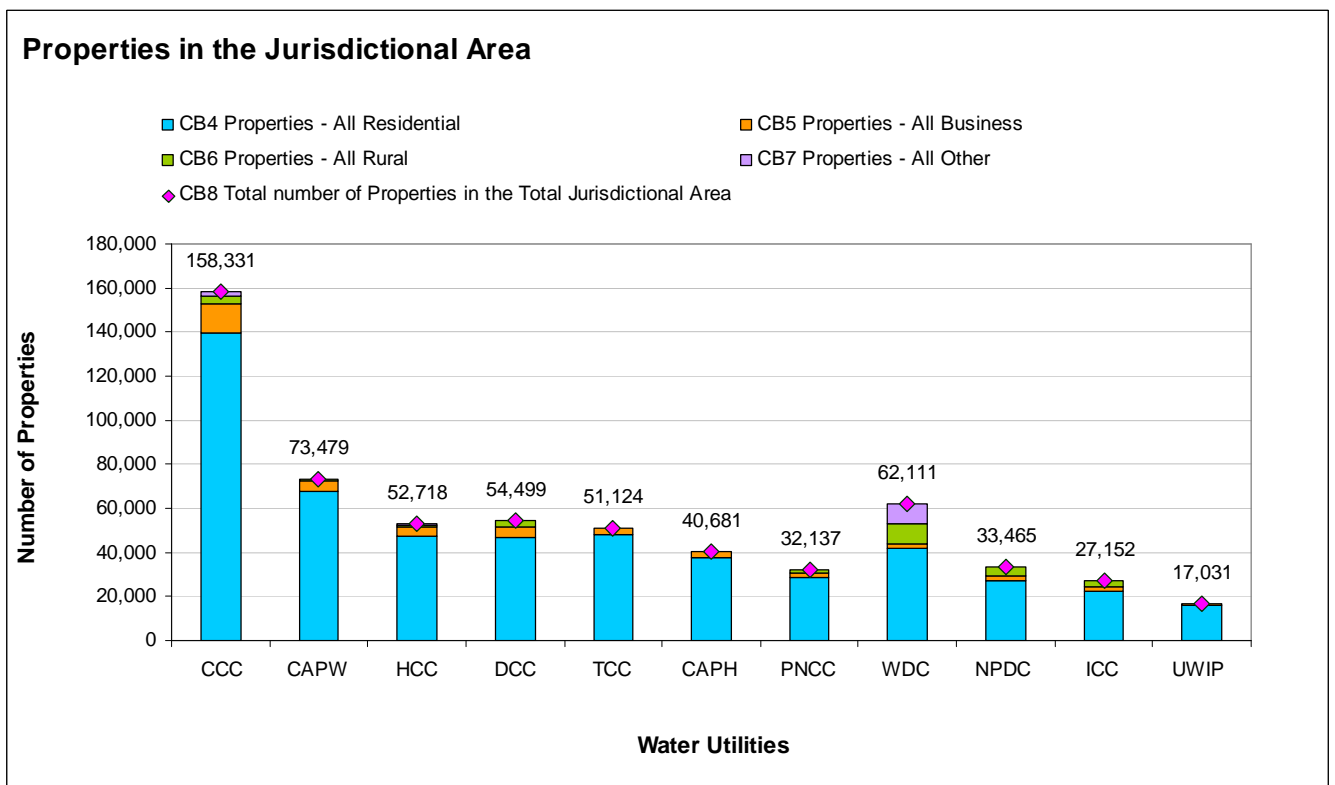
## Served Areas



## Properties in the Jurisdictional Area

The graph below illustrates the number of properties in more detail, showing a breakdown of residential, rural, business and other properties. This provides another context for comparison of water utilities. For example, 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, 12.5% of New Plymouth District Council properties are categorised as 'rural', while 33% of properties served by Whangarei District Council are either 'rural', 'business' or 'other'.





## Asset Quantities

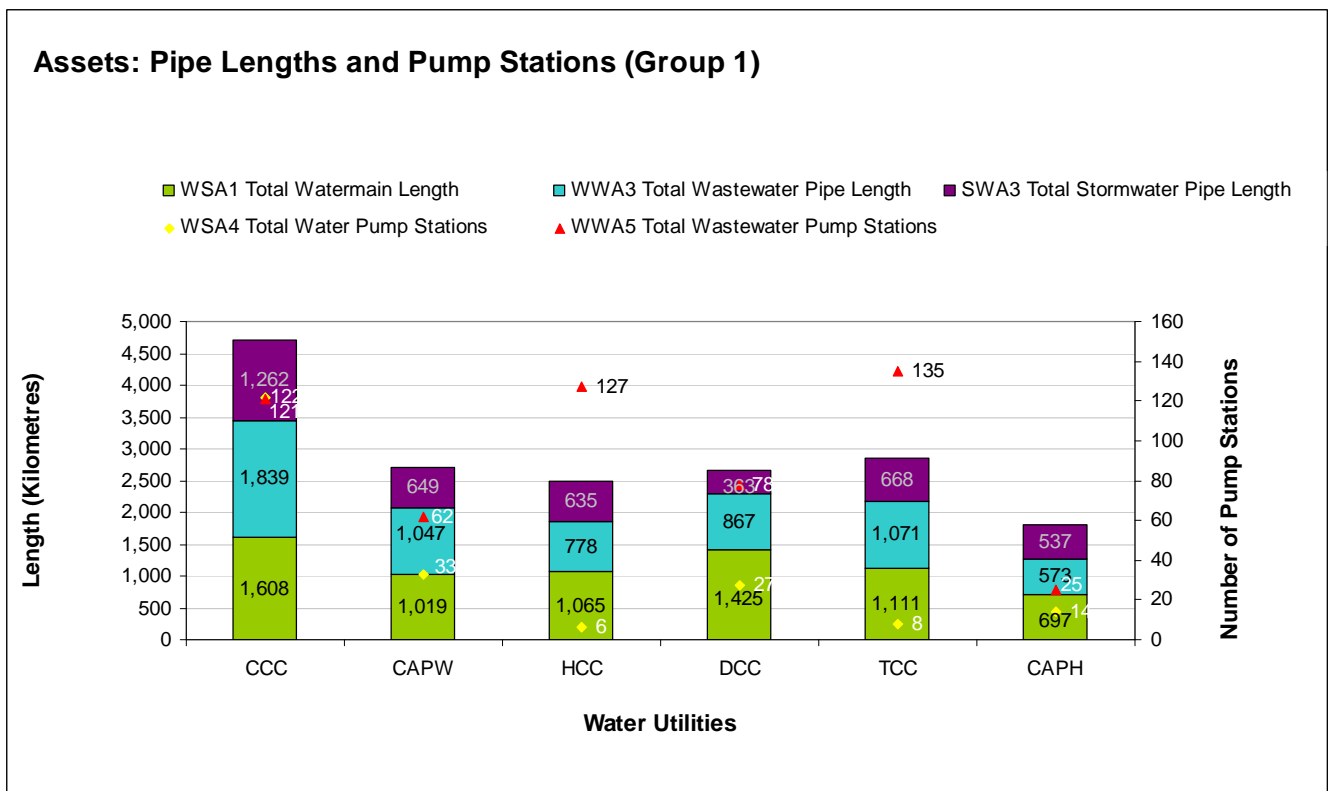
Detail of pipe networks for each water utility is illustrated in the two graphs below. Additional asset data is presented in the tables following the graphs.

United Water International-Papakura does not operate the stormwater network in the Papakura District, so has not provided any stormwater data.

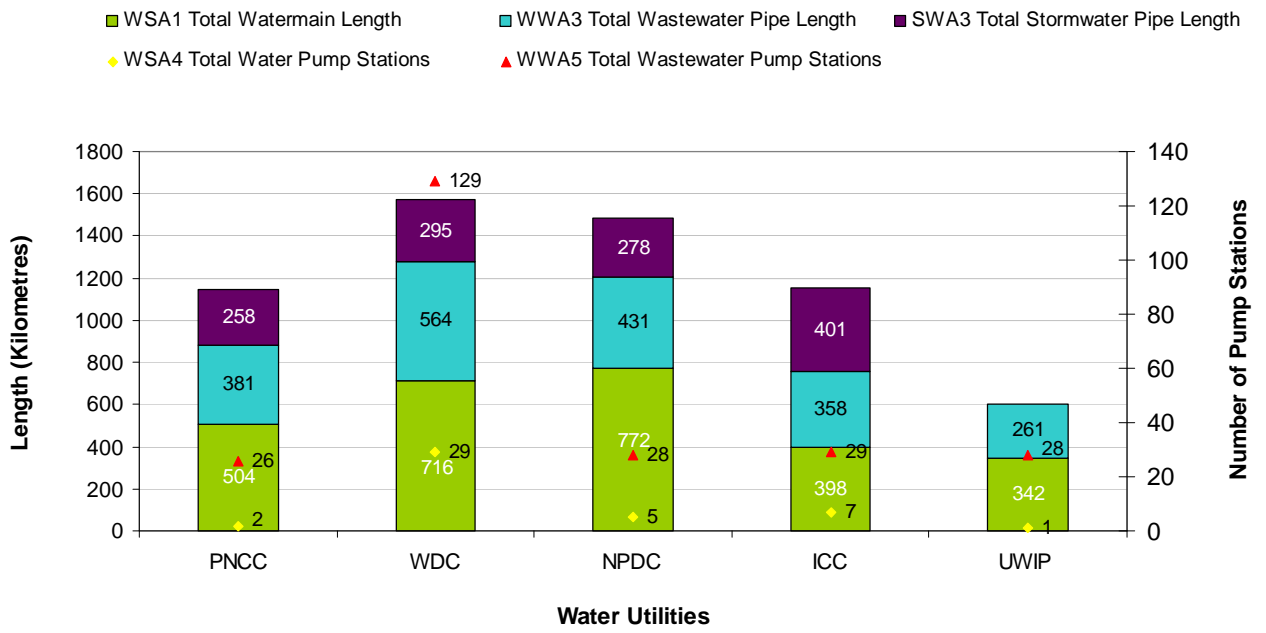
In comparing the six largest water utilities, the total watermain length, wastewater pipe length and stormwater pipe length is averaged at 2869km. Christchurch City Council has the largest network, supported by 122 water pump stations, 121 wastewater pump stations, 128,310 water meters, 28,055 wastewater manholes and 12,488 stormwater manholes.

The smaller water utilities have an average total pipe length of 1192km. Whangarei District Council has the largest network, including a significantly higher number of wastewater pump stations (129) than other utilities in the group, however New Plymouth District Council has the longest total watermain length by 56km. Whangarei and United Water International have the largest number of water meters, 22,138 and 15,954 respectively, with the majority of these on residential connections.

Overall, Whangarei District Council has the most wastewater treatment plants – 9 plants with a total wastewater treatment capacity of 60,654m<sup>3</sup> per day – while Capacity-Hutt has one wastewater treatment plant with the capacity to treat 225,504m<sup>3</sup> of wastewater per day.



### Assets: Pipe Lengths and Pump Stations (Group 2)



## Other Asset Quantities

Water Utility	CCC	CAPW	HCC	DCC	TCC	CAPH	PNCC	WDC	NPDC	ICC	UWIP
<b>Water Supply</b>											
<b>WSA6</b> Total Water Meters (Nu)	128,310	4,300	3,435	4,021	50,650	1,962	1,982	24,287	1,632	1,365	17,031
<b>WSA7</b> Total Water Meters on Residential Connections (Nu)	113,845	700	11	146	46,605	0	50	22,965	123	0	15,954
<b>WSA5</b> Total Water Storage Reservoirs (Nu)	87	82	7	58	39	24	4	44	27	6	1
<b>Waste Water</b>											
<b>WWA6</b> Total Wastewater Treatment Plants (Nu)	8	2.4	1	7	2	1	3	9	2	3	0
<b>WWA7</b> Wastewater Treatment Plant Capacity per Day (m3/day)	368,916	313,600	45,000	75,701	40,000	225,504	46,620	60,654	75,000	98,000	See above
<b>WWA4</b> Total Wastewater Manholes (Nu)	28,055	35,415	14,691	12,049	14,731	13,377	5,209	8,453	7,022	3,378	4,717
<b>Stormwater</b>											
<b>SWA4</b> Lined Channel Length (Km)	123.16	1	3.16	197.55	1	0	3	2.6	0	0	
<b>SWA5</b> Unlined Channel Length (Km)	202.96	1	56.7	84.38	76	26	21	0.7	0	27	
<b>SWA7</b> Total Stormwater Manholes (Nu)	12,488	17,400	12,035	6,580	10,093	11,509	4,700	5,969	4,571	3,178	
<b>SWA8</b> Stormwater Treatment Devices (Nu)	214	Data not captured	125	0	57	0	0	19	2	0	

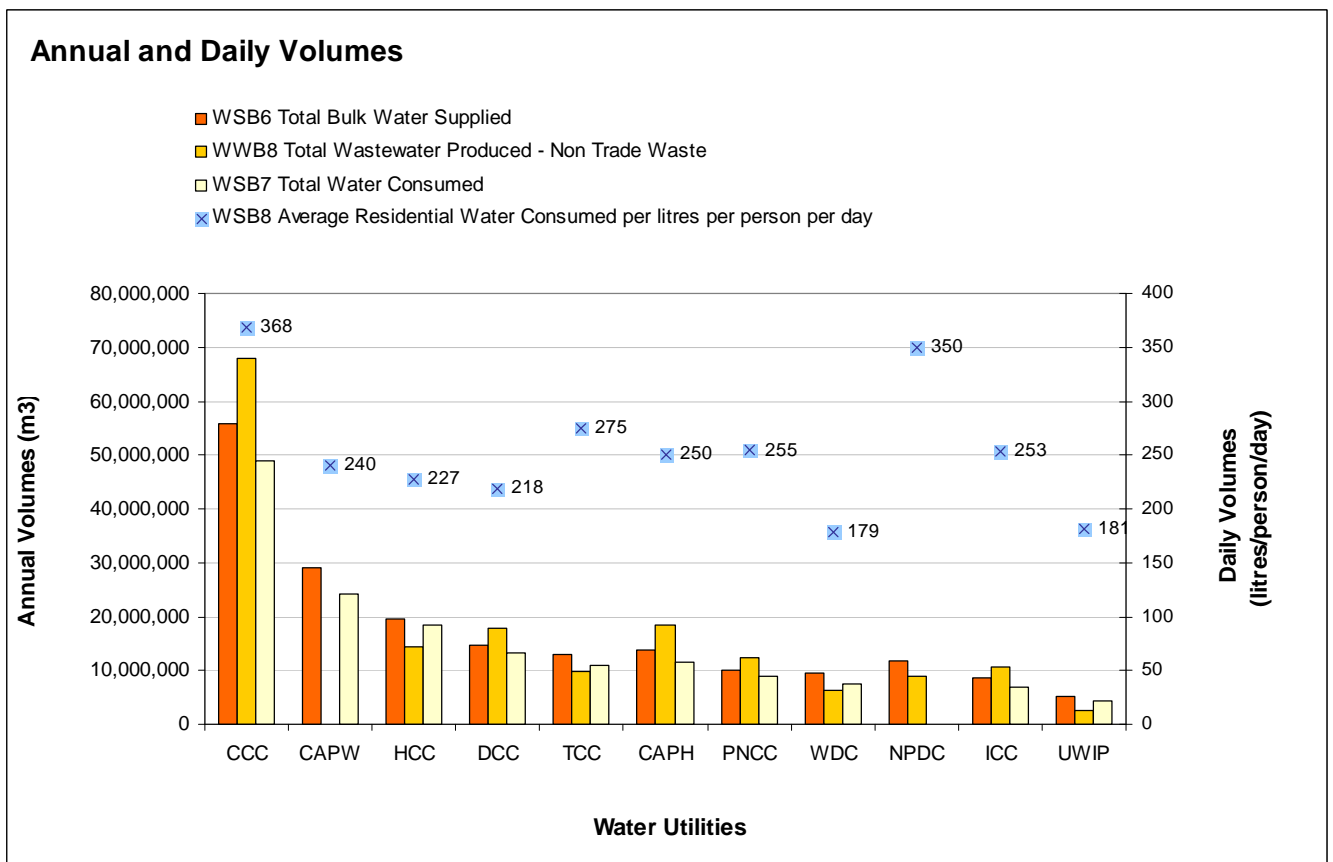
**NB:** CCC does not use volumetric charging for residential metering.

## Water and Wastewater Volume

An indication of the water and wastewater volumes managed by each of the participants is illustrated below. Christchurch City Council and New Plymouth District Council have a significantly higher rate of residential water consumption, with Christchurch City Council reporting 368 litres per person per day, and New Plymouth District Council 350 litres per person per day. Christchurch City Council also supplied the most water annually at 55,873,280m<sup>3</sup>, consumed the most per person and produced the most wastewater across the year.

The remaining participants all showed similarities in terms of their consumption per person – ranging from 218 litres (DCC) to 275 litres (TCC) per person per day. The smaller water utilities also showed similarities in terms of their bulk water supply, water consumed and wastewater produced. New Plymouth District Council supplied the most of this group at 11,747,500m<sup>3</sup>; however Palmerston North City Council produces the most wastewater at 12,386,889m<sup>3</sup> per year.

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 future reviews, an automatic calculation or clearer guidelines may result in more consistent figures.



**NB:** Data was not available from CAPW for the measure WWB8.  
Data was not available from NPDC for the measure WSB7

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

#### Confidence Gradings



This measure was reported alongside the waterloss measures. The average system pressure for all organisations ranged from 40m recorded by Hamilton City Council, to 75m from Capacity-Wellington and United Water International-Papakura. Data submitted was drawn from a range of sources, including historical figures, the NZ Fire Service Survey, network models and pressure monitoring. In future reviews it may be useful to try and set data source option(s) for greater consistency.

Water Utility	CCC	CAPW	HCC	DCC	TCC	CAPH	PNCC	WDC	NPDC	ICC	UWIP
<b>WSE5</b> Average System Pressure (m)	57	75	40	60	55.5	65	50	57	65.43	50	75

### Water Loss

Definition	Measure
<b>WSE1</b> (Non-Revenue Water) Volume of bulk 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 Serviced Area".	m <sup>3</sup>
<b>WSE2</b> Real system water losses = Non-revenue water – (unbilled authorised consumption + apparent losses)	m <sup>3</sup>
<b>WSE3</b> Estimated real system water losses per 100km of "Total Watermain Length"	m <sup>3</sup> per 100km

#### Confidence Gradings



The aim of these measures 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. It comprises water losses and unbilled authorised consumption such as fire fighting and network maintenance use.

Water Losses are made up of 'real losses' from the piped network (through leaks and bursts) and 'apparent losses' arising from customer metering under-registration and unauthorised water use.

In the tables and graphs below real water loss is shown as a volumetric total and per 100km of pipeline.

### Water Loss Data (Group 1)

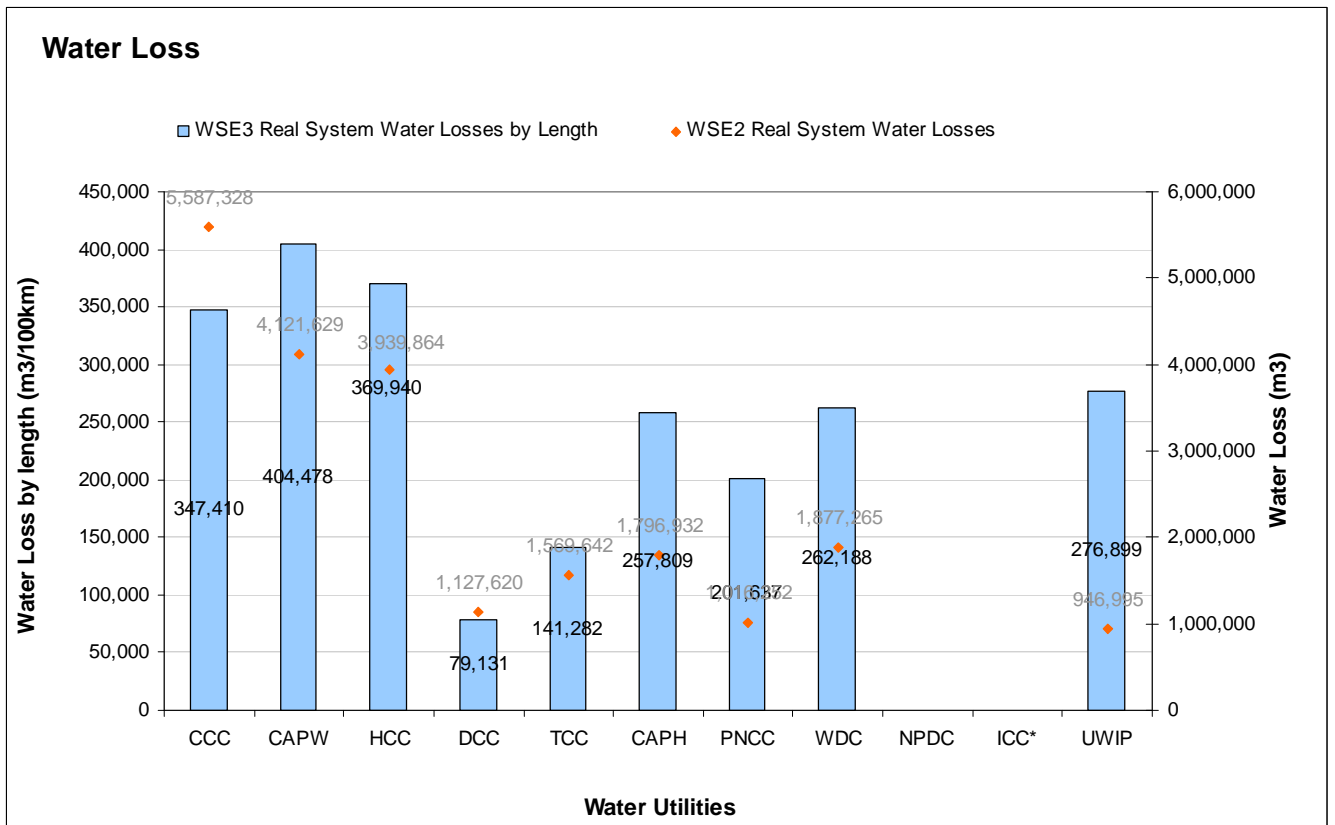
Water Utility	CCC	CAPW	HCC	DCC	TCC	CAPH
<b>WSA1</b> Total Watermain length (km)	1,608.28	1,019	1,065	1,425	1,111	697
<b>WSB6</b> Total Bulk Water Supplied (m <sup>3</sup> )	55,873,280	29,134,464	19,699,318	14,674,371	12,819,735	13,762,036
<b>WSE1</b> Non-Revenue Water (m <sup>3</sup> )	7,040,033.28	4,879,125	4,452,046	1,509,154	1,902,955	2,154,745
<b>WSE2</b> Real System Water Losses (m <sup>3</sup> )	5,587,328	4,121,628.94	3,939,863.73	1,127,620.35	1,569,641.89	1,796,932.06
<b>WSE3</b> Real System Water Losses by Length (m <sup>3</sup> per 100km)	347,410.15	404,477.82	369,940.26	79,131.25	141,281.90	257,809.48

**NB:** HCC's data for measures WSE3 was obtained from an independent consultant report on 2008 Benchloss calculations.

### Water Loss Data (Group 2)

Water Utility	PNCC	WDC	NPDC	ICC	UWIP
<b>WSA1</b> Total Watermain length (km)	504	716	772	398	342
<b>WSB6</b> Total Bulk Water Supplied (m <sup>3</sup> )	10,130,442	9,453,866	11,747,500	8,662,170	5,320,569
<b>WSE1</b> Non-Revenue Water (m <sup>3</sup> )	1,279,643	2,123,066	Incomplete data	No data*	1,085,330
<b>WSE2</b> Real System Water Losses (m <sup>3</sup> )	1,016,251.51	1,877,265.48	Incomplete data	No data*	946,995.21
<b>WSE3</b> Real System Water Losses by Length (m <sup>3</sup> per 100km)	201,637.20	262,187.92	Incomplete data	No data*	276,899.18

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



NB: NPDC's data is incomplete

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

### 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



These measures give an indication of the sewer 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, including Whangarei District Council which recorded the highest number of separate sewer overflow events. Capacity-Wellington also recorded a higher number, while the other utilities recorded between 2 and 10 events across the year.

Hamilton City Council recorded 100 pump station overflow events, which were broken down into storms, power failure, electrical, mechanical and other events. A number of organisations reported that they had no overflow events from pump stations.

Water Utility	CCC	CAPW	HCC	DCC	TCC	CAPH	PNCC	WDC	NPDC	ICC	UWIP
<b>WWE1</b> Separate Sewer Overflow Events	10	32	8	No data	2	5	6	35	No data	0	2
<b>WWE3</b> Total Pump station overflow events	0	11	100	2	1	32	0	No data	6	0	1




## Section C: Social Well-Being

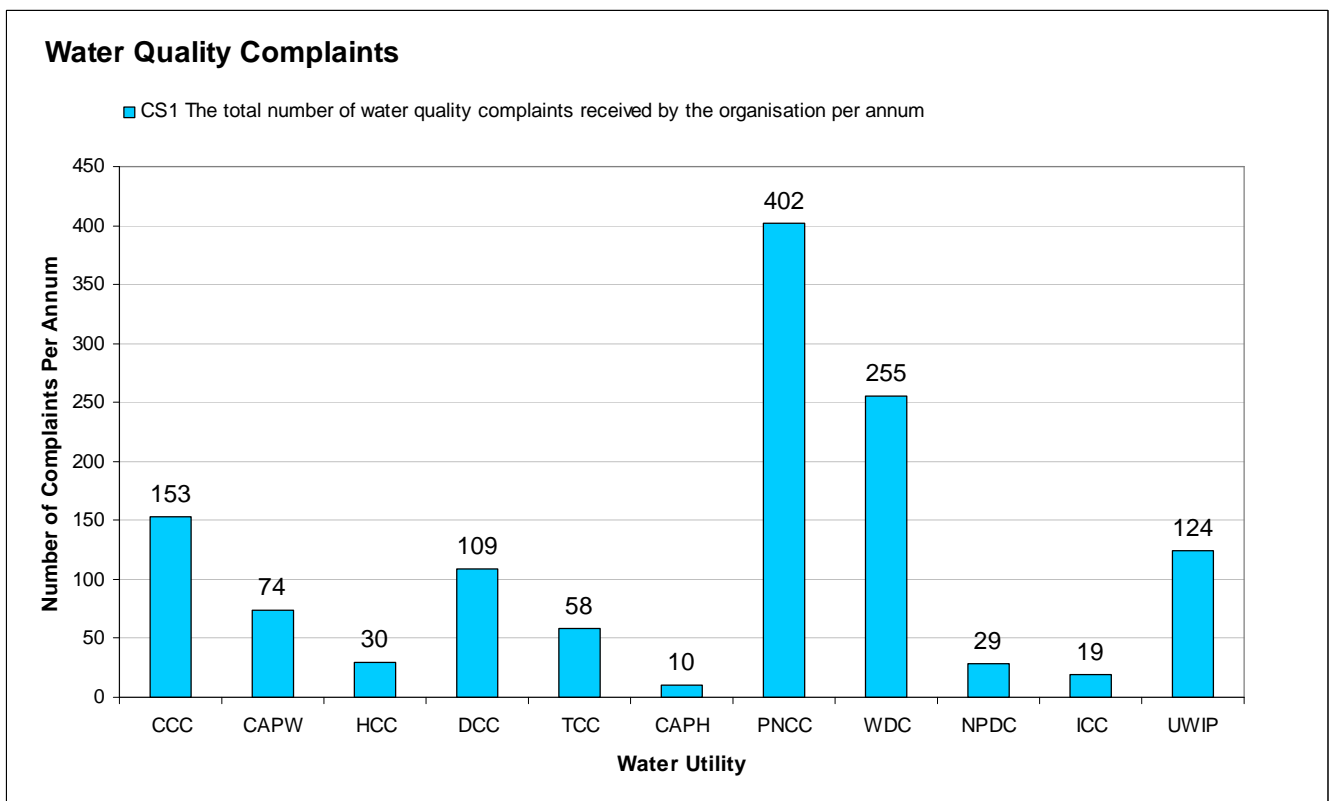
*Social well-being evaluates the factors enabling individuals, their families, hapu and communities to set goals and achieve them. These include education, health, the strength of community networks and associations, financial and personal security, rights, freedom, and levels of equity.*

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
<b>CS1 Water Quality Complaints:</b> The total number of water quality complaints received by the organisation per annum.	Nu
<b>Confidence Gradings</b>	
 CS1	



This measure illustrates the total number of water quality complaints received by the organisation. Palmerston North City Council recorded the highest number of complaints per year (402) with the next highest, Whangarei District Council, recording 255. The lowest data was provided by Capacity-Hutt with only 10 complaints.

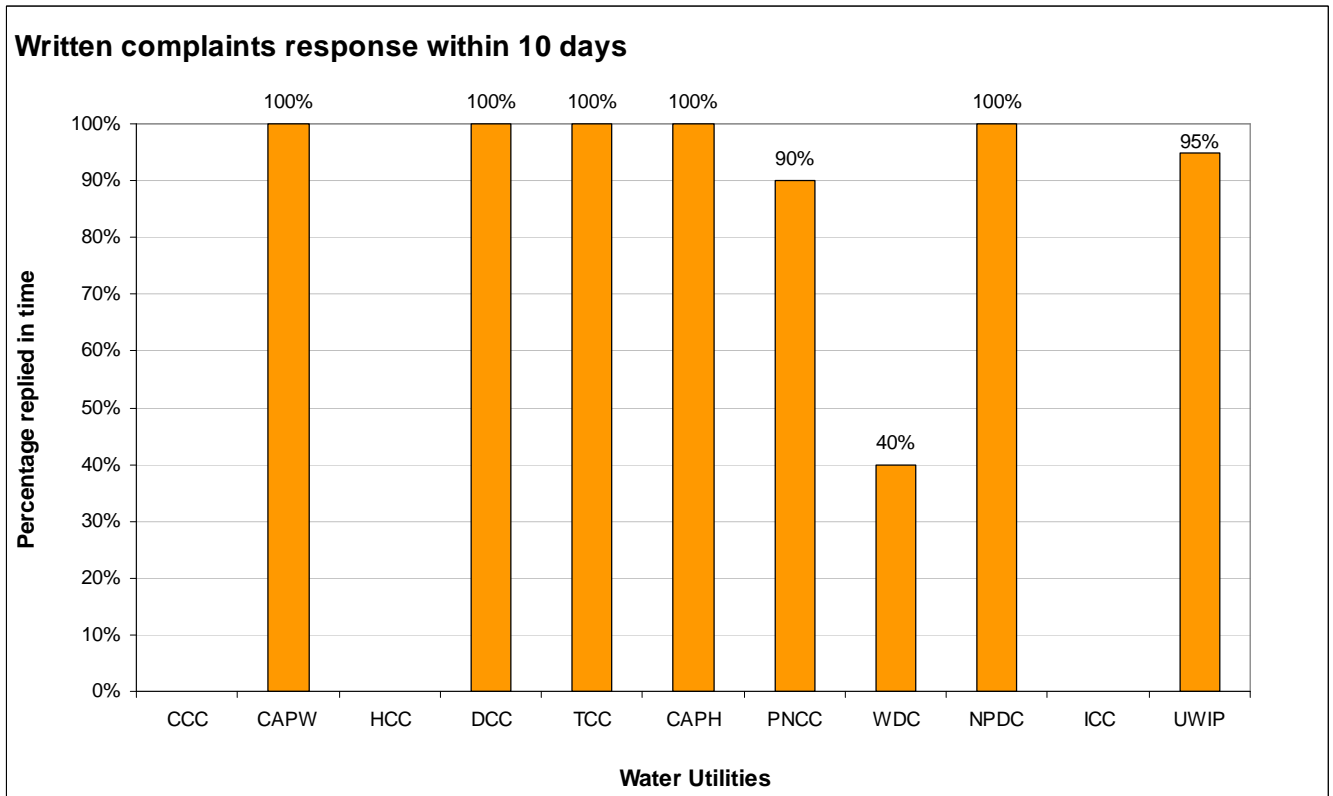
## Written Complaints Response

Definition

Measure

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

Confidence Gradings



**NB:** Data was not available from CCC, HCC and ICC.

This measure illustrates the water utility'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) did not keep a record of its response to complaints. Invercargill City Council did not provide data or comment for this measure.

It was suggested that focusing on written complaints only is too narrow when face to face and telephone are now the more prevalent means of communication. This is something that could be taken into account for next year's review.



<b>WDC</b>	No	We use Bylaws to define obligations of Council and customers	No	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.
<b>NPDC</b>	Yes	Main headings of customer charter document: Your rights as a Customer; Our Commitment to You; Customer Feedback; Complaints Procedure	No	The council has decided not to have a formal consultation policy. This is because consultation techniques need to be designed to meet each new situation. Policies are fixed positions on issues and consultation effectiveness would be limited by such fixed positions. Instead the council has guidelines which are designed to assist staff in preparing a consultation exercise. These are available on request from the council. Consultation is ingrained practice within the organisation with teams within the council's Strategy and Policy group available to assist other parts of the organisation.
<b>ICC</b>	No		No	Council consults through Annual Plan, LTCCP, Bylaw and Resource Consent Consultation, and in regard to specific issues through newsletters.
<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)	Yes	Customer Information and Consultation are provided in the customer charter.

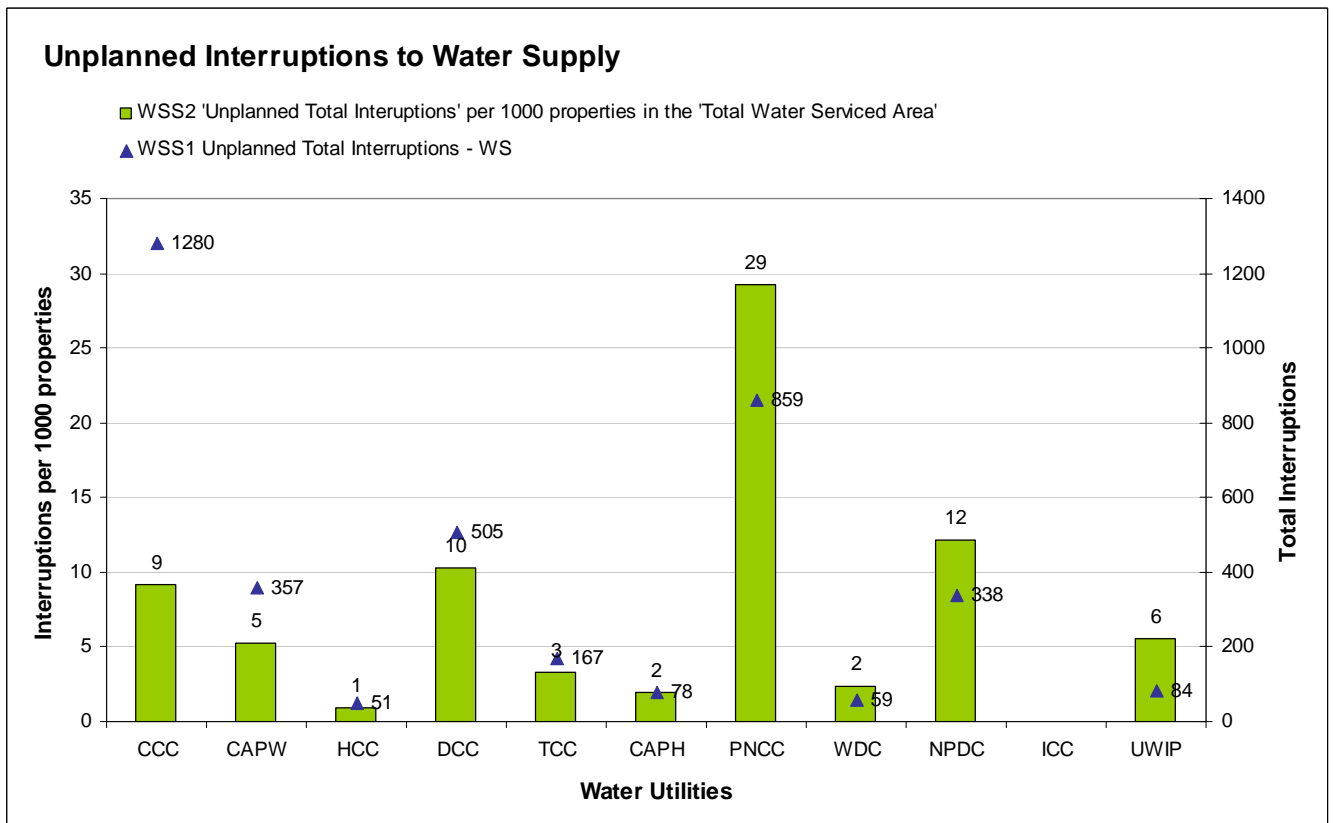
## Unplanned Interruptions

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

### Confidence Gradings



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.



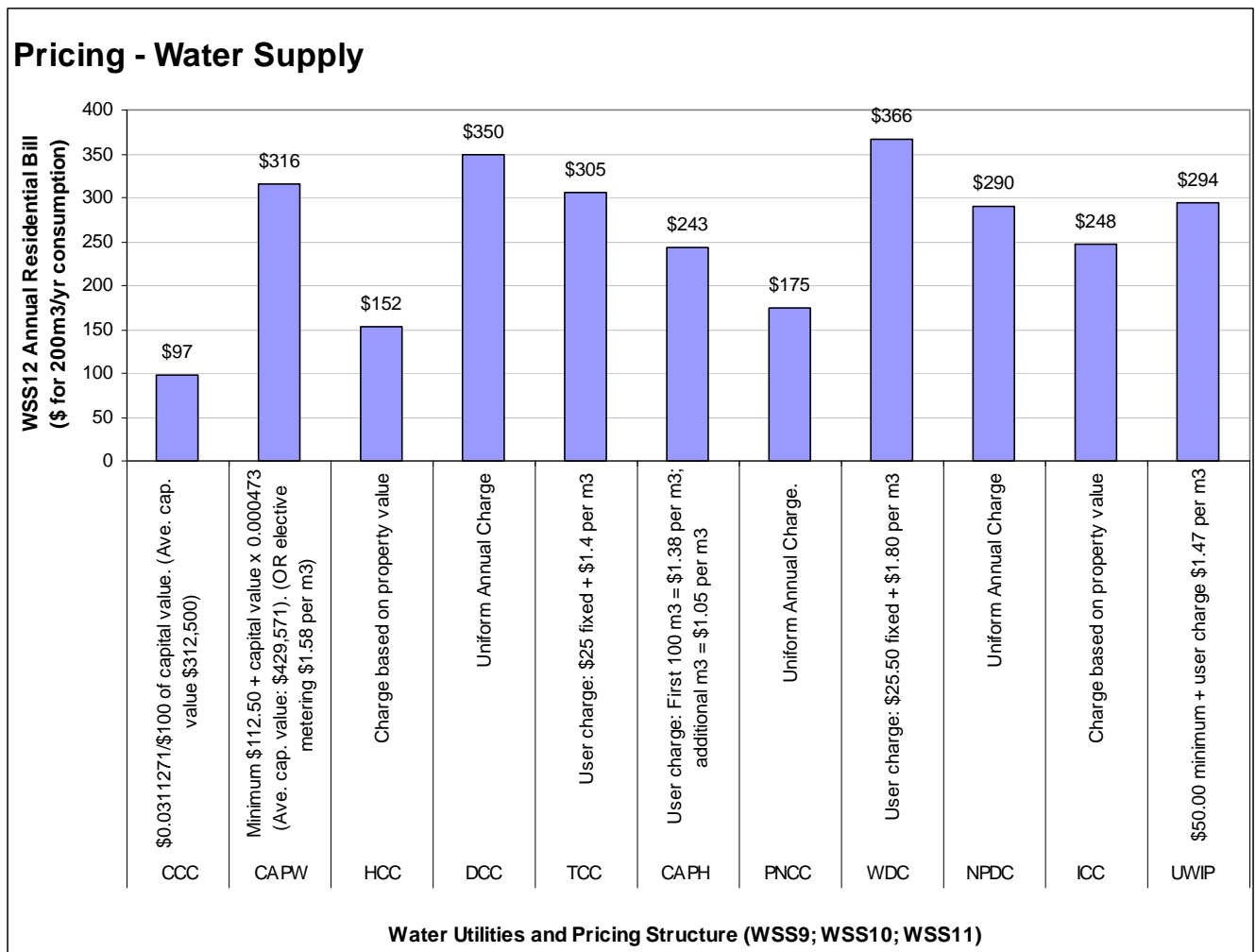
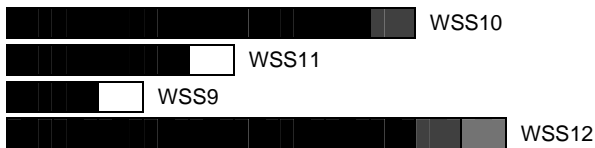
**NB:** ICC unable to distinguish between planned and unplanned interruptions

Palmerston North City Council recorded a high number of unplanned interruptions, both total and per 1000 properties. Its figure of 29 unplanned interruptions per 1000 properties was substantially higher than the other 10 utilities, which all recorded fewer than 15 interruptions per 1000 properties. Christchurch also recorded a high total number of unplanned interruptions, noting that all interruptions are recorded in one database, meaning its figure of 1280 included bursts, leaks and third party damages.

## 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



The price of water is charged to customers in various ways by the eleven water utilities. These include minimum pricing, fixed charges (uniform annual charge) and user charges (volumetric charging). The graph above shows what residential customers with an annual water consumption of 200m<sup>3</sup> would be charged by each utility.

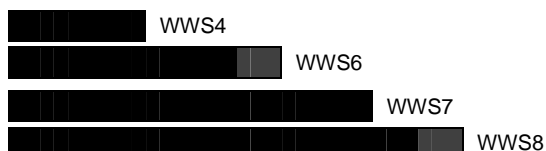
Minimum pricing was offered by United Water International-Papakura at \$50, Tauranga City Council (\$25), and Whangarei District Council (\$25.50), while uniform annual charges were employed by Dunedin City Council (\$350), Palmerston North City Council (\$175), and New Plymouth District Council (\$290). Whangarei District Council also offered a prompt payment discount of 5%.

Capacity-Hutt has a fixed charge of \$308, but also the option of metering. Metered properties were charged by a tiered volumetric system, the first 100m<sup>3</sup> at \$1.38 per m<sup>3</sup>, and any additional consumption at \$1.05 per m<sup>3</sup>. Capacity-Wellington has an optional metering system (\$1.58 per m<sup>3</sup>) but otherwise based their charges on property values. Christchurch City Council, Hamilton City Council and Invercargill City Council also used a property value based system.

## 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

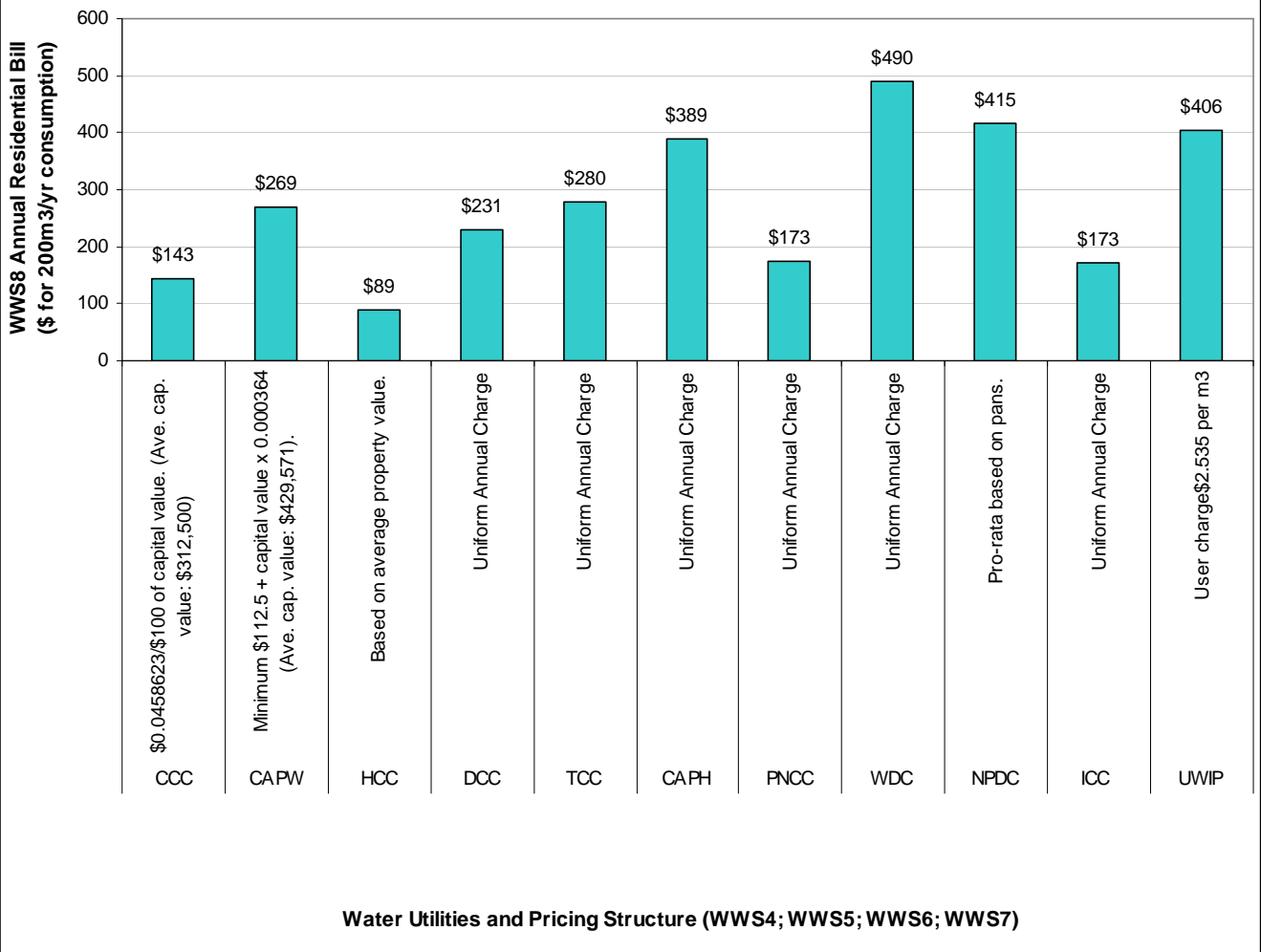


The following graph illustrates the price that each utility would apply to each residence for 200 m<sup>3</sup> of water consumption. The eleven water utilities reported three methods of charging for wastewater services, with results ranging from \$89 (HCC) to \$490 (WDC) per annum.

The majority of the participants use the fixed uniform annual charge mechanism, with the exceptions being Christchurch City Council, Hamilton City Council, and United Water International-Papakura. Christchurch City Council and Hamilton City Council (as well as Capacity-Wellington) all 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 average 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)

Water Utility	CCC	CAPW	HCC	DCC	TCC	CAPH	PNCC	WDC	NPDC	ICC	UWIP
SWS2 Portion of average annual rates bill used for stormwater services	4.7	0.000324	6.7	3.3	9	0	4.26	9.81	6.7	4.6	N/A

The table above shows that of all the utilities, Whangarei has the highest portion of the annual rates bill used for stormwater services, at 10c. The other organisations that provided data range from less than 1c (Capacity-Wellington) to 9c for Tauranga District Council. Capacity-Hutt does not have a targeted or specific stormwater component in their rates.



The method of calculation varied from being based on property and land drainage rates, to simple division of the stormwater charge by the annual rates bill. The measure would benefit from clearer specification of the method of calculation to be used.

## 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 key reporting 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 measures are presented as actual values in tables and per serviced property values in graphs.

The graphs show that the total cost per property includes a component of operating costs. The balance 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 water supply, wastewater and stormwater services.

Alongside these costs is the recognition of capital expenditure. Rather than being identified as a cost, capital expenditure is categorised as an investment. The aim is to illustrate an overview of the magnitude of investment made by each water utility in the provision of water supply, wastewater and stormwater assets.

Three utilities have not included targeted rates income in their revenue figures for the measures WSF3, WWF3 and SWF3. These are New Plymouth District Council, Capacity-Hutt and Capacity-Wellington. The revenue figures for these utilities therefore only reflect direct income such as user charges and recoveries.

**NB:** United Water International-Papakura chose not to input financial data, deeming it commercially sensitive.

## Water Supply Revenue and Costs

### Confidence Gradings



The graph on page 28 shows that Whangarei District Council spent the most per property on capital improvements for water supply over the 2008/2009 financial year (\$529), with the next highest figure from Dunedin City Council at \$440. Dunedin City Council reported the highest actual capital expenditure, allocating \$12,361,000 expenditure on water supply capital improvement projects.

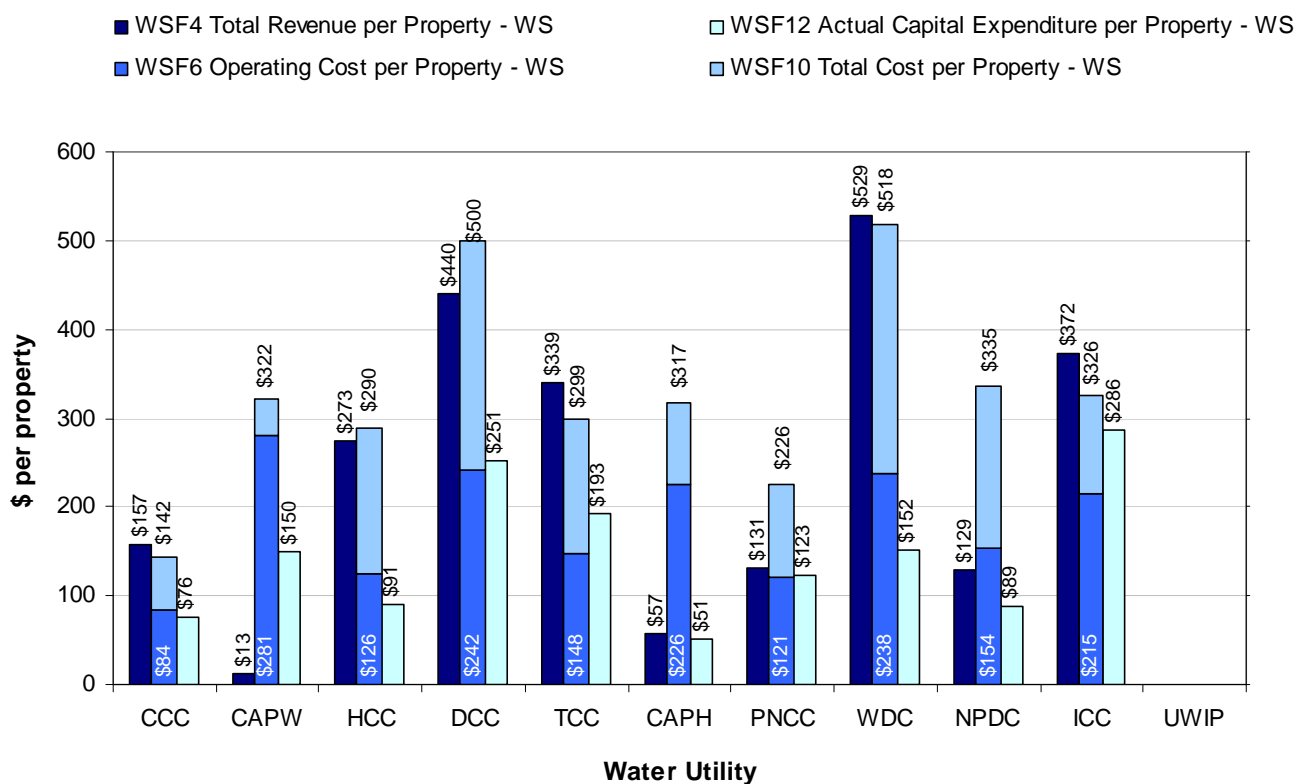
### Actual Revenue and Costs – Water Supply (Group 1)

Water Utility	CCC	CAPW	HCC	DCC	TCC	CAPH
<b>WSF3</b> Total Revenue - WS	21,878,541	884,822	14,553,499	21,665,000	17,060,000	2,274,433
<b>WSF9</b> Total Cost - WS	19,890,681	22,020,831	15,416,500	24,607,000	15,032,000	12,622,900
<b>WSF11</b> Actual Capital Expenditure - WS	10,680,373	10,254,035	4,837,000	12,361,000	9,698,000	2,022,000

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

Water Utility	PNCC	WDC	NPDC	ICC	UWIP
<b>WSF3</b> Total Revenue - WS	3,845,081	12,959,675	3,597,167	7,905,192	
<b>WSF9</b> Total Cost - WS	6,640,593	12,678,602	9,330,900	6,916,897	
<b>WSF11</b> Actual Capital Expenditure - WS	3,618,435	3,710,935	2,467,000	6,077,117	

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



## Wastewater Revenue and Costs

### Confidence Gradings



Whangarei District Council also spent the highest amount per property on wastewater capital improvement projects, amounting to \$408 per property.

In Group 1 (the larger water utility peer group), Christchurch City Council carried out \$38,600,734 capital expenditure, more than twice Tauranga City Council's expenditure. Tauranga City Council however, spent \$341 per property compared to Christchurch's \$281, due to its much smaller population base. Both utilities were well ahead of the other four larger utilities whose capital expenditure ranged from \$3,380,000 (CAPH) to \$8,490,000 (HCC).

In the smaller peer group, New Plymouth District Council spent \$14,857,700; however \$11.84 million of this was for the Oakura sewerage scheme.

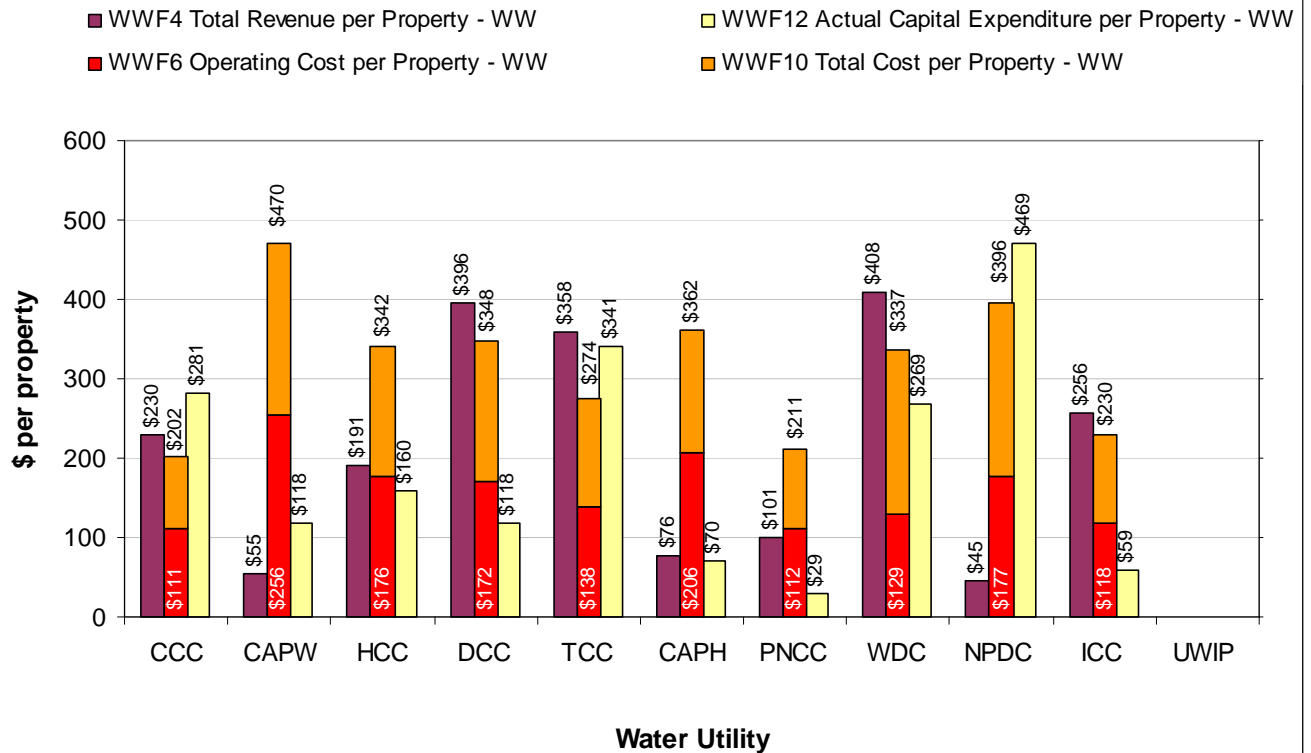
### Actual Revenue and Costs – Wastewater (Group 1)

Water Utility	CCC	CAPW	HCC	DCC	TCC	CAPH
<b>WWF3</b> Total Revenue – WW	31,634,762	3,755,498	10,180,156	18,968,000	18,315,000	3,691,794
<b>WWF9</b> Total Cost - WW	27,724,138	32,127,350	18,185,500	16,663,000	14,027,000	17,529,743
<b>WWF11</b> Actual Capital Expenditure - WW	38,600,734	8,078,000	8,498,000	5,645,000	17,414,000	3,380,000

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

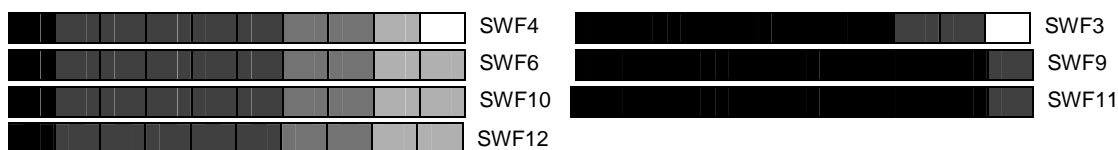
Water Utility	PNCC	WDC	NPDC	ICC	UWIP
<b>WWF3</b> Total Revenue – WW	3,212,055	11,866,311	1,412,700	5,416,522	
<b>WWF9</b> Total Cost - WW	6,720,986	9,794,704	12,525,000	4,854,568	
<b>WWF11</b> Actual Capital Expenditure - WW	937,560	7,825,307	14,857,700	1,250,329	

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



## Stormwater Revenue and Costs

### Confidence Gradings



The majority of the participating water utilities spent much less on stormwater capital improvements than on either water supply or wastewater system upgrades.

Tauranga City Council stands out as having considerably higher values per property in this area compared to the seven other water utilities. When reporting stormwater serviced properties and population, TCC reported only those properties discharging directly into the public stormwater network, (see also the graph at the top of page 7), whereas the majority of other utilities used the total number of serviced properties as a basis for their calculations. Clearer guidelines around this will help avoid such discrepancies in future reviews.

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

Water Utility	CCC	CAPW	HCC	DCC	TCC	CAPH
<b>SWF3</b> Total Revenue – SW	11,604,506	2,232,518	6,132,759	2,806,000	8,291,176	282,664
<b>SWF9</b> Total Cost - SW	11,134,706	13,853,974	8,257,000	3,532,000	6,636,000	6,197,446
<b>SWF11</b> Actual Capital Expenditure - SW	6,972,449	3,806,800	1,052,000	843,000	19,299,000	1,529,000

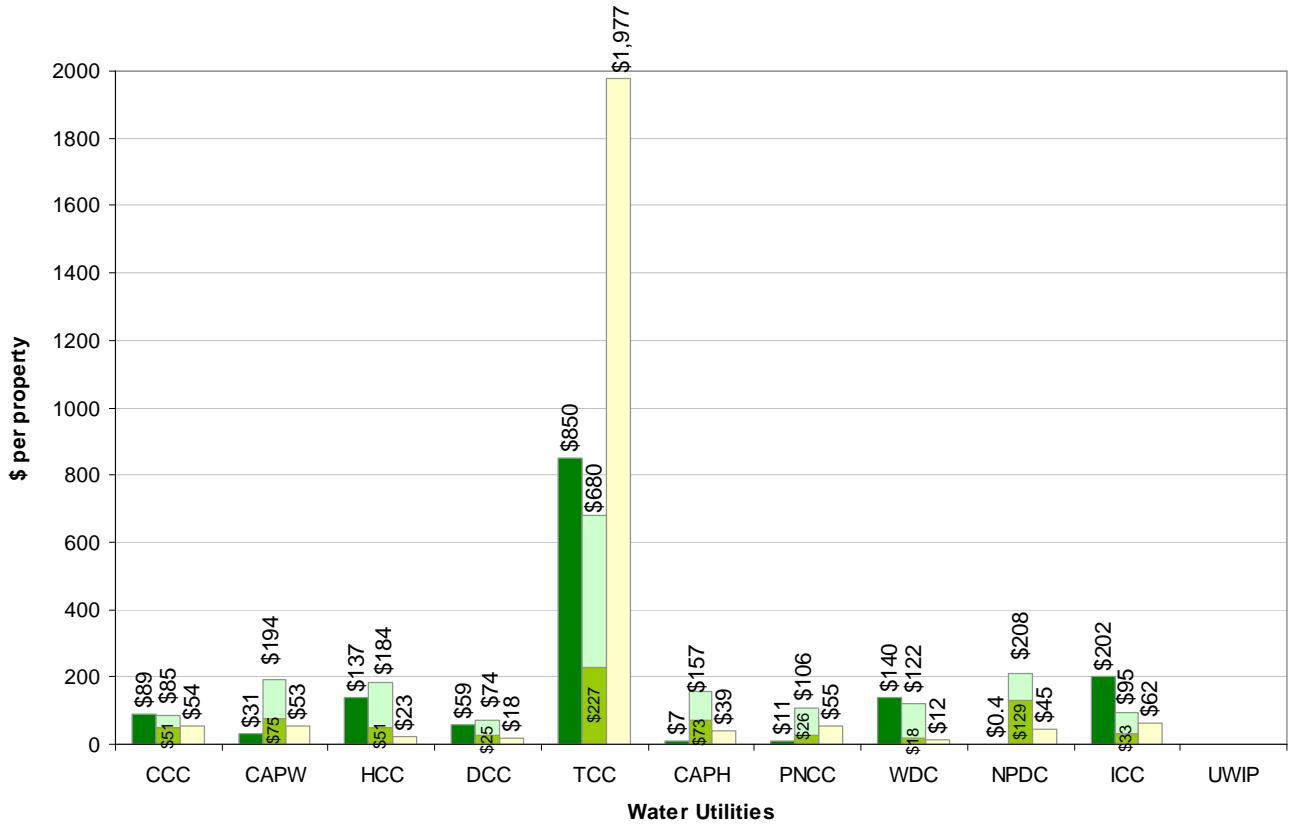
### Actual Revenue and Costs – Stormwater (Group 2)

Water Utility	PNCC	WDC	NPDC	ICC	UWIP
<b>SWF3</b> Total Revenue – SW	341,364	3,796,065	9,800	4,319,319	
<b>SWF9</b> Total Cost - SW	3,302,591	3,306,793	4,584,400	2,029,290	
<b>SWF11</b> Actual Capital Expenditure - SW	1,713,284	332,693	992,000	1,333,215	

NB: the balance of Palmerston North City Council's costs is funded by general rates

## Revenue, Costs and Expenditure per property - Stormwater

- SWF4 Total Revenue per Property - SW
- SWF6 Operating Cost per Property - SW
- SWF12 Actual Capital Expenditure per Property - SW
- SWF10 Total Cost per Property - SW



## 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 <u>minor</u> 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 <u>supported</u> 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 <u>unsupported</u> 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

Common Measures: Background Information				Page No
CB1	Total Jurisdictional Area	Total land area under the Council's jurisdiction	Ha	6
CB2	Total Jurisdictional Population	Total residential population living within the "Total Jurisdictional Area"	Nu	6,7
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	8
CB5	Properties - All Business	Total number of business properties within the "Total Jurisdictional Area"	Nu	8
CB6	Properties - All Rural	Total number of rural properties within the "Total Jurisdictional Area"	Nu	8
CB7	Properties - All Other	Total number of properties other than residential, business and rural properties, within the "Total Jurisdictional Area"	Nu	8
CB8	Total Jurisdictional Properties	Total number of all properties in the "Total Jurisdictional Area"	Nu	6,8
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	
Common Measures: Environmental				
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	
Common Measures: Social				
CS1	Water Quality Complaints	Total number of water quality complaints received by the organisation per annum	Nu	17
CS2	Written Complaints Response	Written complaints that were meaningfully responded to within 10 days, as a percentage	%	18
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	19
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 orgn consult with or involve the public/customers in decision making - Description in Comments field.	yes/no	19
Water Supply Measures: Background Information				
WSB1	Total Water Serviced Area	Total area serviced by the (public) reticulated water supply network	Ha	7
WSB2	Total Water Serviced Population	Total <u>residential</u> population served in the "Total Water Serviced Area"	Nu	7
WSB3	Total Water Serviced Properties - Residential	Total number of <u>residential</u> properties serviced in the "Total Water Serviced Area"	Nu	
WSB4	Total Water Serviced Properties - Non-residential	Total number of <u>non-residential</u> properties serviced in the "Total Water Serviced Area"	Nu	
WSB5	Total Water Serviced Properties	<u>Total number of all</u> residential and non-residential properties serviced in the "Total Water Serviced Area"	Nu	
WSB6	Total Bulk Water Supplied	Total volume of bulk water supplied	m <sup>3</sup>	12,14
WSB7	Total Water Consumed	Total volume of water consumed by <u>all customers</u> (residential and non-residential) in the "Total Water Serviced Area"	m <sup>3</sup>	12
WSB8	Average Residential Water Consumed per Personper Day	Average Residential Water Consumed per litres per person per day	litres/person /day	12
Water Supply Measures: Asset Quantities				
WSA1	Total Watermain Length	Total length of watermains within the "Total Water Serviced Area" servicing all customers	Km	9,10,14
WSA2	Total Fire Hydrants	Total number of fire hydrants within the "Total Water Serviced Area"	Nu	

WSA3	Total Water Valves	Total number of water supply valves within the "Total Water Serviced Area"	Nu	
WSA4	Total Water Pump stations	Total number of water pump stations within the "Total Water Serviced Area"	Nu	9,10
WSA5	Total Water Storage Reservoirs	Total number of water storage reservoirs within the "Total Water Serviced Area"	Nu	11
WSA6	Total Water Meters	Total number of water meters within the "Total Water Serviced Area"	Nu	11
WSA7	Total Water Meters on Residential Connections	Total number of water meters on residential connections within the "Total Water Serviced Area"	Nu	11
<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 Serviced Area".	m <sup>3</sup>	13,14
WSE2	Real System Water Losses	Non-revenue water minus a standard allowance for unbilled authorised consumption plus apparent losses	m <sup>3</sup>	13-15
WSE3	Real System Water Losses by Length	Estimated real system water losses per 100km of "Total Watermain Length"	m <sup>3</sup> /100Km	13-15
WSE4	Current Annual Real Losses (CARL)	Current Annual Real Losses expressed in "Litres per connection per day"	Litres/conn/day	13-16
WSE5	Average System Pressure	Average system pressure in the network	M	13
WSE6	Unavoidable Annual Real Losses (UARL)	Unavoidable Annual Real Losses as calculated using the BenchlossNZ Formula (based on IWA) expressed in litres per connection per day	Litres/conn/day	13-16
WSE7	Infrastructure Leakage Index	Infrastructure Leakage Index (ILI) is the ratio of Current Annual Real Losses to Unavoidable Annual Real Losses	Dimensionless	13-15
<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 Serviced Area"	Nu	21
WSS2	Unplanned Interruption Frequency - WS	"Unplanned Total Interruptions" per 1000 properties in the "Total Water Serviced Area"	Nu/1000 prop	21
WSS3	Watermain Breaks	Total number of (public) watermain breaks in the "Total Water Serviced 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 experience 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 experience 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 Serviced Area" is without supply due to unplanned interruptions.	Hours	
WSS9	Price - Minimum Charge	The minimum annual charge (inc GST) for <u>residential</u> customers (if applicable to your organisation, otherwise leave blank)	\$	22
WSS10	Price - Fixed Charge	The fixed charge (inc GST) for <u>residential</u> customers (if applicable to your organisation, otherwise leave blank)	\$	22
WSS11	Price - User Charge	The user charge (inc GST) for <u>residential</u> customers (IF APPLICABLE)	\$/m <sup>3</sup>	22
WSS12	Annual Bill Based on 200 m <sup>3</sup> /yr Consumption	The average cost of a <u>residential</u> customer's bill based on an annual consumption of 200 m <sup>3</sup>	\$/200m <sup>3</sup>	22
<b>Water Supply Measures: Financial</b>				
WSF 1	Operating Revenue - WS	Operating Revenue for the reporting year relating to the " <u>Total Water Serviced Area</u> " 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, <u>relating to the "Total Water Serviced Area"</u> (not unserved properties)	\$	27
WSF4	Total Revenue per Property - WS	Total Revenue per <u>serviced</u> property	\$/property	27,28
WSF5	Total Operating Cost - WS	Total water supply operating cost for the reporting year <u>relating to the "Total Water Serviced Area"</u> (not unserved properties)	\$	
WSF6	Operating Cost per Property - WS	Total Operating Cost per <u>serviced</u> property	\$/property	27,28
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 unserved properties)	\$	
WSF9	Total Cost - WS	The total cost of providing water supply services for the reporting year <u>relating to the "Total Water Serviced Area"</u> (not unserved properties)	\$	27
WSF10	Total Cost per Property - WS	Total Cost per <u>served</u> property	\$/property	27,28
WSF11	Actual Capital Expenditure - WS	Actual capital expenditure on water supply for the reporting year <u>relating to the "Total Water Serviced Area"</u> (not unserved properties)	\$	27
WSF12	Actual Capital Expenditure per Property - WS	Actual Capital Expenditure per <u>served</u> property	\$/property	27,28
<b>Wastewater Measures: Background Information</b>				
WWB1	Total Wastewater Serviced Area	Total area serviced by the (public) reticulated wastewater network	Ha	7
WWB2	Total Wastewater Serviced Population	Total <u>residential</u> population served in the "Total Wastewater Serviced Area"	Nu	7
WWB3	Total Wastewater Serviced Properties - Residential	Total number of <u>residential</u> properties serviced within 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>	12
<b>Wastewater Measures: Asset Quantities</b>				
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	9,10
WWA4	Total Wastewater Manholes	Total number of wastewater (separate & combined) manholes within the "Total Wastewater Serviced Area"	Nu	11
WWA5	Total Wastewater Pump Stations	Total number of wastewater pump stations within the "Total Wastewater Serviced Area"	Nu	9,10
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"	Nu	11
WWA7	Wastewater Treatment Plant Capacity per Day	Total capacity of "Total Wastewater Treatment Plants" per day	m <sup>3</sup> /day	11
<b>Water Supply 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	16
WWE2	Combined Sewer Overflow Events	Total <u>number</u> 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)	\$	23,24
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	\$	23,24
WWS7	Price - Fixed Uniform Annual Charge	The fixed uniform annual charge included in the rates per residential customer	\$	23,24
WWS8	Annual Wastewater Bill Based on 200 m <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	23,24
<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	Total Revenue - WW	Total wastewater revenue for the reporting year, <u>relating to the Total Wastewater Serviced Area</u> (not unserviced properties)	\$	28,29
WWF4	Total Revenue per Property - WW	Total Revenue per <u>serviced</u> property	\$/property	28,29
WWF5	Total Operating Cost - WW	Total Wastewater operating cost for the reporting year <u>relating to the Total Wastewater Serviced Area</u> (not unserviced properties)	\$	
WWF6	Operating Cost per Property - WW	Total Operating Cost per <u>serviced</u> property	\$/property	28,29
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 unserviced properties)	\$	
WWF9	Total Cost - WW	The total cost of providing wastewater services for the reporting year <u>relating to the Total Wastewater Serviced Area</u> (not unserviced properties)	\$	28,29
WWF10	Total Cost per Property - WW	Total Cost per <u>serviced</u> property	\$/property	28,29
WWF11	Actual Capital Expenditure - WW	Actual capital expenditure on wastewater for the reporting year <u>relating to the Total Wastewater Serviced Area</u> (not unserviced properties)	\$	28,29
WWF12	Actual Capital Expenditure per Property - WW	Actual Capital Expenditure per <u>serviced</u> property	\$/property	28,29
<b>Stormwater Measures: Background Information</b>				
SWB1	Total Stormwater Serviced Area	Total area serviced by the (public) reticulated stormwater network.	Ha	7
SWB2	Total Stormwater Serviced Population	Total <u>residential</u> population served in the "Total Stormwater Serviced Area"	Nu	7
SWB3	Total Stormwater Serviced Properties - Residential	Total number of <u>residential</u> properties serviced in the "Total Stormwater Serviced Area"	Nu	
SWB4	Total Stormwater Serviced Properties - Non-residential	Total number of <u>non-residential</u> properties serviced in the "Total Stormwater Serviced Area" ( <u>inside and outside</u> the MUL)	Nu	
SWB5	Total Stormwater Serviced Properties	<u>Total number of all</u> 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 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	<b>9,10</b>
SWA4	Lined Channel Length	Total length of (public) <u>lined</u> , engineered open channels within the "Total Stormwater Serviced Area"	Km	<b>11</b>
SWA5	Unlined Channel Length	Total length of (public) <u>unlined</u> , engineered open channels within the "Total Stormwater Serviced Area"	Km	<b>11</b>
SWA6	Total Channel Length	Total length of (public) <u>lined and unlined</u> , 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	<b>11</b>
SWA8	Stormwater Treatment Devices	Total number of (public) stormwater treatment devices within the "Total Stormwater Serviced Area"	Nu	<b>11</b>
<b>Stormwater Measures: Environmental</b>				
SWE1	Combined Sewer Overflow Events	Total <u>number</u> of all "Combined Sewer Overflow Events" caused by <u>wet weather</u> (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 services in the "Total Stormwater Serviced Area" (Inc GST). Please describe in "comments" how this has been calculated.	Cents per \$	<b>24</b>
<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 " <u>Total Stormwater Serviced Area</u> " (not unserviced properties)	\$	<b>30</b>
SWF4	Revenue per Property - SW	Average Revenue per serviced property	\$/property	<b>30,31</b>
SWF5	Total Operating Cost - SW	Total stormwater operating cost for the reporting year, relating to the " <u>Total Stormwater Serviced Area</u> " (not unserviced properties)	\$	
SWF6	Operating Cost per Property - SW	Average Operating Cost per serviced property	\$/property	<b>30,31</b>
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 unserviced 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 unserviced properties)	\$	<b>30</b>
SWF10	Total Cost per Property - SW	Average Total Cost per serviced property	\$/property	<b>30,31</b>
SWF11	Actual Capital Expenditure - SW	Actual capital expenditure on stormwater for the reporting year, related to the " <u>Total Stormwater Serviced Area</u> " (not unserviced properties)	\$	<b>30</b>
SWF12	Actual Capital Expenditure per Property - SW	Actual Capital Expenditure per serviced property	\$/property	<b>30,31</b>