

National Performance Review 2018/19

DEFINITION GUIDELINES



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1 Common Information

Background

1.1 TOTAL AREA (km²) CB1

Total land area under the participants' jurisdiction, sourced from Statistics New Zealand, Rural Urban Profile Update.

1.2 TOTAL POPULATION CB2

Total usually resident population living in the area under the participants' jurisdiction. Data has been sourced from the Statistics New Zealand most recent population projection.

If an organisation has access to a more accurate population estimate the default calculation may be overwritten. In these circumstances the "Comments" column should be used to outline the approach used to derive the population estimate.

1.3 PROPERTIES – RESIDENTIAL, NON-RESIDENTIAL, TOTAL CB3, CB4, CB5

CB3 Residential properties: Total number of residential properties in the area under the participants' jurisdiction. This includes occupied and unoccupied dwellings.

Multi-unit premises should be counted based on the number of separately occupied dwellings. This may be determined based on the number of dwellings that are separately billed/rated, or if alternative approaches are used specify this in the comments field.

Previously this measure had been automatically populated based on census data. It is now required to be entered by participants.

CB4 Non-residential properties: Total number of properties other than residential including commercial properties and other public buildings (e.g. public schools and hospitals) in the area under the participants' jurisdiction.

CB5 Total Properties: Total number of all properties in the area under the participants' jurisdiction.

$$\text{Total Properties (CB5)} = \text{Residential Properties (CB3)} + \text{Non – Residential (CB4)}$$

1.4 HOUSEHOLD OCCUPANCY CB6

Average number of usual residents per household.

$$\text{Household Occupancy (CB6)} = \frac{\text{Total Population (CB2)}}{\text{Residential properties (CB3)}}$$

1.5 HOUSEHOLD INCOME CB7

Average household income in the jurisdiction. Data has been sourced from the most recent Statistics New Zealand census on the household income by Territorial Area.

Staff

1.6 INTERNAL STAFF CB10

The number of full-time employees on the organisations payroll directly or indirectly involved in the delivery of 3 waters services.

It may be necessary to apportion staff providing 'overhead' functions that support the delivery of these services. This may include staff in roles such as; accountants, administrators, AMIS, billing, communications/public relations, customer service, GIS, human relations/training, lawyers, planning and strategy. Only staff that spend greater than 50% of their time supporting water service delivery are required to have their overheads apportioned.

Clarification added by listing the types of supporting roles which may need to be included.

1.7 STAFF VACANCIES (FTE) CB10a

The number of vacancies in water, wastewater and stormwater services as time of reporting.

1.8 RETIRING STAFF (Number) CB10b

The number of internal staff (included in field CB10) reaching retirement age (65) within the next five years.

1.9 CONTRACTED STAFF (FTE) CB11

Total number of contracted staff providing water, wastewater and stormwater services (includes only contractors permanently working on service delivery).

The number of full-time employees not on the organisations payroll but exclusively involved in the delivery of 3 waters services for the organisation.

This may include staff involved in the delivery of the following functions; bulk system maintenance repairs, CCTV/condition inspections (if ongoing), construction, distribution system maintenance repairs, engineering design renewals, lab services (sample collection/analysis), reticulation operation, pipe/reservoir cleaning and treatment plant operation and maintenance.

Does not include consultancies contracted to perform one of tasks.

Does include consultants employed to backfill vacant positions e.g. a consultant working for the organisation for three months, full time to backfill a vacant position would be recorded as 0.25FTE.

Clarification added by listing the functions which may need to be included in this measure.

1.10 NEAR MISS REPORTS (Number) CB12

Include near misses reported by staff and contractors working on drinking, waste and stormwater networks, and notified to either the organisation or Worksafe.

A near miss is defined as any incident that had the potential to cause damage to people, environment, property and/or the organisations reputation, but for some reason did not cause any harm or damage.

1.11 LOST TIME INJURIES (days)

CB13

Loss of at least one complete shift or day off work (or more) by a staff or contractors as a result of a workplace incident causing illness or injury.

Record as the number of days lost per full time employee (e.g. a staff member working 4 hours per day and has 2 days off would be recorded as 1).

1.12 STAFF TRAINING (days)

CB14

The average number of hours per year that staff are allocated for attending (included in field CB10) professional training or development activities. This may include time to attend industry events and workshops in addition to structured training courses.

The hours allocated should be listed, regardless of whether these have been up taken by staff.

1.13 QUALIFICATIONS OBTAINED

CB15a, CB15b, CB15c, CB15d

The number of staff (included in the field CB10) who obtained qualifications listed in fields CB15a-CB15d below.

If a staff member holds one or more of the qualifications listed below, they may be counted more than once (e.g. a staff member with a bachelor of engineering and a diploma in water treatment should be counted against each of these fields).

If staff hold equivalent international qualifications these should be included and the name of the qualification and certifying body of the qualification provided in the comments field.

Include only staff who have completed their qualification. Staff who are currently enrolled but have not yet completed their course of study should not be included.

CB15a Bachelor of Engineering: Bachelors, Masters or Doctor of Engineering or a Bachelor of Engineering Technology. Qualifications should be accredited by Engineering New Zealand (excepting international qualifications).

CB15b NZ Diploma: Diploma in Water Treatment, Wastewater Treatment, Engineering or Drinking Water Assessment. Qualifications should be accredited by NZQA (excepting international qualifications).

CB15c NZ Certificate: Certificate in Water Treatment, Wastewater Treatment, Water Reticulation, Pipe Installations or Utilities maintenance. Qualifications listed should be accredited by NZQA (excepting international qualifications).

CB15d Apprenticeship: Water treatment, wastewater treatment or pipeline construction and maintenance apprenticeships, registered on the NZQA framework.

1.14 CONTINUING PROFESSIONAL DEVELOPMENT

CB16

The number of staff (included in field CB10) enrolled in a continuing professional development programme. List programmes in the comments field (e.g. Water Industry Professional Association, Engineering New Zealand, New Zealand Planning Institute etc.)

The number of staff (included in field CB10) enrolled in a continuing professional development programme (e.g. water industry professionals programme, Engineering New Zealand etc.)

Technology

1.15 SCADA (Supervisory control and data acquisition) CB19a, CB19b, CB19c, CB19d

CB19a Analogue SCADA: The approximate proportion of the SCADA system utilising analogue communications.

CB19b Digital SCADA: The approximate proportion of the SCADA system utilising digital communications. Reference any “Industrial Internet of Things” applications in use in the comments field.

CB19c SCADA Controls: The approximate proportion of your network that can be controlled using your SCADA system.

Definition changed from “The approximate proportion of your network that can be controlled using your SCADA system.”

To

“The approximate proportion of pump stations and treatment plants that have elements which can be controlled using SCADA.”

CB19d SCADA Monitoring: The approximate proportion of monitoring points in the network connected to the SCADA system. A monitoring point is defined as any digital or analogue field input into the SCADA system (e.g. flow monitoring points, overflow monitoring point etc.).

Definition changed from “The approximate proportion of monitoring points in the network connected to the SCADA system.”

To

Definition changed from “The approximate proportion of pump stations and treatment plants that have elements which can be monitored by SCADA”.

2 Water Supply

Background

2.1 WATER SERVICED POPULATION WSB1a

Total residential population serviced by a reticulated water supply. This field will populate automatically based on census data and properties serviced.

This is a built-in calculation in the spreadsheet determined using the following formula:

$$\begin{aligned} \text{Total Water Serviced Population [WSB1a]} \\ &= \text{Household Occupancy [CB6]} \\ &\times \text{Water Serviced Properties: Residential [WSB2]} \end{aligned}$$

If an organisation has access to a more accurate figure the default calculation may be overwritten. In these circumstances the “Comments” column should be used to outline the approach used to derive the population estimate.

2.2 WATER SUPPLY SERVICE COVERAGE WSB1b

The percentage of the population serviced by the public reticulated water supply network.

This is a built-in calculation in the spreadsheet determined using the following formula:

$$\text{Total Water Serviced Population [WSB1b]} = \frac{\text{Total Water Serviced Population [WSB1]}}{\text{Total Population [CB2]}}$$

If an organisation has access to a more accurate figure the default calculation may be overwritten. In these circumstances the “Comments” column should be used to outline the approach used to derive the population estimate.

2.3 WATER SERVICED PROPERTIES: RESIDENTIAL WSB2

Total number of residential properties serviced by a reticulated water supply. Include method for determining number of serviced properties in multi-unit complexes in the comments field.

The number of residential water serviced properties;

- connected to the organisations public reticulated water supply network
- the subject of billing for water supply (fixed and/or consumption)

It does include connected but non-rateable properties.

It does not include rated but unconnected properties.

A tenanted property which is separately metered and in respect of which the tenant is liable for water usage counts as 1 property (i.e. the owner and tenant of a rented property are not counted as separate properties).

Multi-unit dwellings should be counted based on the number of separately occupied dwellings. The approach used to determine this figure is to be specified in the comments field. This may be determined based on the number of dwellings that are separately billed/rated e.g. a body corporate with only one supply connection but with 100 apartments, each receiving a separate water bill will be counted as 100. If a multi-unit dwelling (e.g. retirement village) received a

single bill, but consists of multiple dwellings these should be included, where information is available to do so.

2.4 WATER SERVICED PROPERTIES: NON-RESIDENTIAL WSB3

Total number of non-residential properties serviced by a reticulated water supply.

Non-residential is defined as any business or other property that is not identified as a residential connection.

Where a single non-residential connection services multiple tenancies, but multiple accounts are issued, the number of accounts (not the number of connections) should be recorded.

2.5 TOTAL WATER SERVICED PROPERTIES WSB4

Total number of all properties serviced by a reticulated water supply.

This is a built in calculation in the spreadsheet determined using the following formula:

$$\begin{aligned} \text{Total Water Serviced Properties [WSB4]} \\ &= \text{Total Water Serviced Properties: Residential [WSB2]} \\ &+ \text{Total Water Serviced Properties: Non – residential [WSB3]} \end{aligned}$$

2.6 WATER SUPPLIED TO OWN SYSTEM (m³/year) WSB5

Volume of water supplied in area under the Councils' jurisdiction. This is 'Water Supplied' in terms of the standard Water Balance (see below). It includes system losses after the treatment plant.

Own Sources	System Input	Water Exported			Billed Water Exported to other Systems		Revenue Water
		Water Supplied	Authorised Consumption	Billed Authorised Consumption	Billed Metered Consumption by Registered Customers		
Billed Unmetered Consumption by Registered Customers							
Unbilled Authorised Consumption	Metered		Unmetered	Non-Revenue Water			
Apparent Losses	Unauthorised Consumption						
	Customer Metering Under-registration						
Water Losses	Real Losses		Leakage on Mains				
		Leakage and Overflows at Service Reservoirs					
		Leakage on Service Connections up to the street/property boundary					
Water Imported	(allow for bulk meter errors)						

2.7 WATER IMPORTED FROM OTHER AUTHORITIES (m³/year) WSB5a

Volume of water imported from a separate organisations supply that is used to supply the water network. This is 'Water Imported' in terms of the standard water balance shown in WSB5.

2.8 WATER EXPORTED TO OTHER AUTHORITIES (m³/year) WSB5b

Volume of water provided from sources managed by the organisations that is exported for use to other water networks. This is 'Water Exported' in terms of the standard water balance shown in WSB5.

2.9 AUTHORISED CONSUMPTION (m³/year) WSB6

Total volume of potable water consumed by all customers (residential and non-residential) in the water serviced area including any water exported to other systems.

This is "Billed Authorised Consumption" and "Unbilled Authorised Consumption" in terms of the standard Water Balance (see above).

This relates to both metered and unmetered consumption by both residential and non-residential customers.

2.10 NON-RESIDENTIAL WATER CONSUMPTION (m³/year) WSB7

Water consumption for non-residential properties, including rural and agricultural uses, and outdoor areas.

If rural schemes include a known number of residential properties, which are not separately metered, an estimate of residential consumption should be subtracted from non-residential water consumption. This water use can be determined by multiplying the number of residential properties in the rural scheme, by the estimated average daily residential water consumption (WSB8).

2.11 AVERAGE DAILY RESIDENTIAL WATER CONSUMPTION (litres/person/day) WSB8

Calculated residential water consumption based on "Water Supplied to Own System" and "Total Water Served Population".

This measure is automatically derived based on the formula below. If a more accurate measure of residential water use exists over-ride the automatic formula (e.g. based on meter reads). If overwritten explain how the figure has been derived in the 'Comments' column.

$$\begin{aligned} & \text{Average Daily Residential Water Consumption [WSB8]} \\ & \text{Water Supplied to Own System [WSB5]} - \text{Total nonresidential Water Consumption [WSB7]} \\ & \quad - \text{Estimated total network water loss [WSE1]} \\ = & \frac{\quad}{365 \times \text{Total water serviced population [WSB1]}} \\ & \times 1000 \end{aligned}$$

2.12 WATER DEMAND FORECASTING WSB9

Has a supply-demand forecast been undertaken to determine the ability to meet future water demands. Any constraints on the capacity future water supply capacity to meet demand are to be included in the comments field (e.g. system capacity, water availability, consents).

Pipelines

2.13 LENGTH OF WATER SUPPLY NETWORK (km) WSA1b, WSA1c

WSA1a,

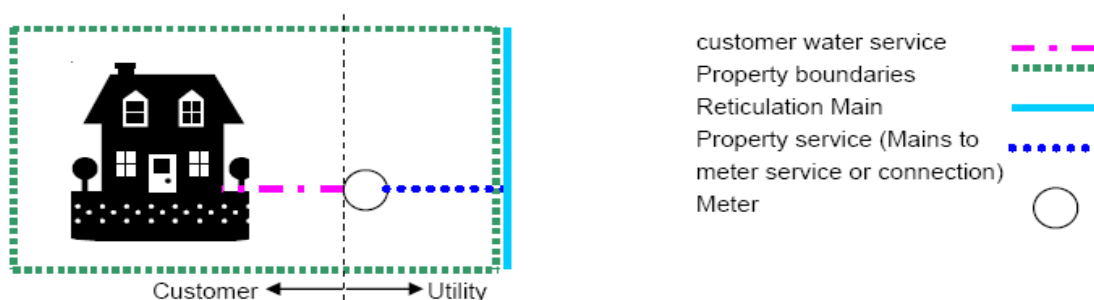
WSA1a Length of Water Supply Network

Total length of public water mains (excluding private laterals). This includes all trunks, reticulation mains and service leads up to the meter, or point of supply for the supply of potable water.

It does not include lengths associated with customer water services within private property boundaries (as indicated on the figure below), or source works such as bore fields not associated with the reticulated water supply network. Do not count disused pipe lengths, even if they are maintained for possible future use.

WSA1b Length of water mains renewed using internal CAPEX

WSA1c Length of new water mains constructed using internal CAPEX (NOT vested to the organisation by developers)



2.14 CONDITION GRADE (%) WSA2a, WSA2b, WSA2c, WSA2d, WSA2e, WSA2f, WSA2g

WSA2a Percentage of water pipelines that have received a condition grading of 1.

WSA2b Percentage of water pipelines that have received a condition grading of 2

WSA2c Percentage of water pipelines that have received a condition grading of 3

WSA2d Percentage of water pipelines that have received a condition grading of 4

WSA2e Percentage of water pipelines that have received a condition grading of 5

WSA2f Percentage of water pipelines that have not had their condition graded

WSA2g Pipeline condition assessment approach: condition grading approached used for WSA2

2.15 AVERAGE AGE OF WATER PIPELINES (years)

WSA3

Weighted average age of all water pipelines within the total water serviced area.

This should be calculated by taking into account the length and age of pipelines as follows.

$$\frac{\sum(\text{length of pipeline} \times \text{age of pipeline})}{\sum \text{length of pipeline}}$$

Other assets

2.16 WATER TREATMENT PLANTS

WSA4, WSA4a

Total number of water treatment plants

WSA4a Water Treatment plant Standby Generators: the number of water treatment plants with backup generators. If a plant has more than one back-up generator to meet the total power needs list this only as one.

2.17 WATER PUMP STATIONS

WSA5, WSA5a

Total number of water pump stations (after the final stage of the water treatment process) in area under the Council's jurisdiction.

Includes any pump station used to deliver potable water after the final stage of the water treatment process. Do not include treatment plants with a pump station on site to deliver treated water into the water distribution system

WSA5a Water Pump stations standby generators: The number of water pump stations with backup generators. If a pump has more than one back-up generator to meet the total power needs list this only as one.

2.18 WATER SUPPLY RESERVOIRS

WSA6

Total number of water supply reservoirs (but excluding bulk storage reservoirs and sub-surface suction tanks where applicable) in area under the Council's jurisdiction.

Includes distribution system reservoirs, tanks, treated water tanks and reservoirs. Does not include bulk raw water storage facilities or small break pressure rural tanks.

If one site or location has more than one tank/reservoir, then count each tank/reservoir separately.

Clarification added:

“If one site or location has more than one tank/reservoir, then count each tank/reservoir separately.”

2.19 WATER STORED IN RESERVOIRS (m³) WSA7

Annual arithmetic mean of the 24 hour average volume of water stored in reservoirs. Includes the volume stored in distribution system reservoirs, treated water tanks at reservoirs etc. but does not include bulk raw water storage.

2.20 CAPACITY OF WATER STORAGE RESERVOIRS(m³)

WSA8

Total volume of water that could be stored in water supply reservoirs. Include distribution system reservoirs, treated water tanks at treatment plants etc. but not bulk raw water storage.

2.21 PROPERTIES WITH WATER METERS: RESIDENTIAL, NON-RESIDENTIAL WSA9a, WSA9b

WSA9a Number of residential properties with metered connections.

WSA9b Number of non-residential properties with metered connections.

2.22 PROPERTIES WITH WATER RESTRICTORS WSA10

Number of properties with water restrictors (both residential and non-residential).

2.23 WATER TREATMENT SLUDGE PRODUCTION (tDS/year) WSA11

Amount of water sludge produced. The sludge produced from removal of sediment and algae in the raw water and from coagulation of dissolved minerals and use of coagulation and flocculation chemicals, from the treatment of surface water.

2.24 CONDITION ASSESSMENT OF ABOVE GROUND ASSETS WSA13a, WSA13b, WSA13c

WSA13a A yes or no response to clarify if you have a regular condition assessment programme for above ground water supply assets.

WSA13b The protocol used for above ground condition assessments.

WSA13c The percentage of above ground assets are assessed within 3 years.

Water loss

2.25 NETWORK WATER LOSS

WSE1a-WSE1h

Total network water losses using definitions outlined in the “[Benchmarking of Water Losses in New Zealand Manual, February 2008](https://www.waternz.org.nz/waterlossguidance)”, available at the following page;
<https://www.waternz.org.nz/waterlossguidance>

WSE1b Percentage Estimated Total Network Water Loss Is automatically calculated based on the following formula:

$$\begin{aligned} & \text{Percentage estimated total network water loss [WSE1b]} \\ &= \frac{\text{Estimated total network water loss } \left(\frac{\text{m}^3}{\text{year}} \right) [\text{WSE1a}]}{\text{Water supplied to own system } \left(\frac{\text{m}^3}{\text{year}} \right) [\text{WSB5}]} \end{aligned}$$

2.26 AVERAGE SYSTEM PRESSURE (m)

WSE2

Average distribution system pressure. Methods for calculation are outlined in Appendix E of the “Water New Zealand: Water Loss Guidelines February 2010”, available at the following page;
<https://www.waternz.org.nz/waterlossguidance>

Energy

2.27 ENERGY CONSUMPTION AND INTENSITY: WATER SUPPLY (GJ)

WSE3, WSE3a

WSE3 Energy consumption: water supply is the total energy consumed by the water system pumps, and water treatment plants. Do not include energy use related to fleet vehicles or offices.

Joules of energy provided by all energy sources including electricity, diesel, gas and biogas should be included.

WSE3a Energy intensity: water supply is the energy used per cubic meter of water supplied, automatically calculated based on the following formula:

$$\begin{aligned} & \text{Energy Intensity: Wastewater [WWE5b]} \\ &= \frac{\text{Energy consumption: Wastewater } \left(\frac{\text{GJ}}{\text{year}} \right) [\text{WSE5a}]}{\text{Total wastewater produced } \left(\frac{\text{m}^3}{\text{year}} \right) [\text{WWB7}]} \end{aligned}$$

Outages

2.28 UNPLANNED TOTAL INTERRUPTIONS: WATER SUPPLY WSS1

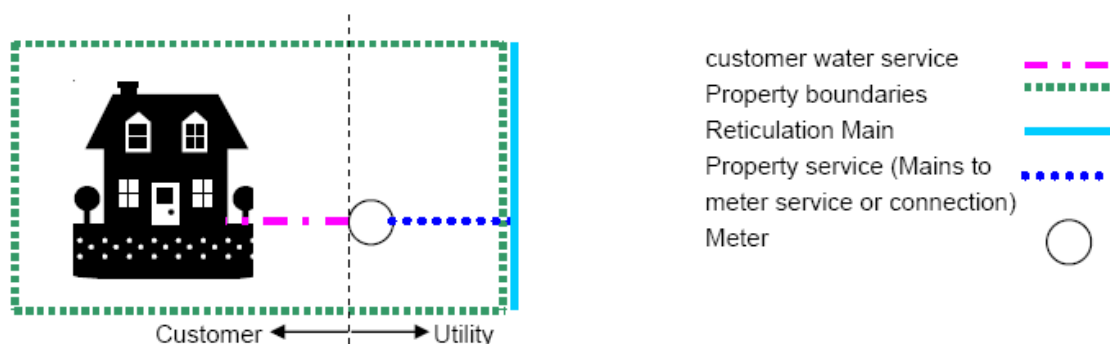
The number of unplanned total interruptions to service experienced by properties excluding interruptions caused by third party damage.

An unplanned water supply interruption is any event causing a total loss (cessation or outage) of water supply to customers due to an asset failure in the public reticulated network.

An interruption can affect just one customer or it can affect many customers but it is only counted once e.g. 1 break affects 30 dwellings in a street but only 1 interruption is recorded.

It includes situations where the duration of a planned interruption exceeds that which was originally notified (e.g. a water organisation advises customers that an interruption to service will occur and will last for three hours. If the interruption actually lasts five hours this counts as one unplanned interruption). If a property experiences more than one interruption each event should be counted.

It excludes interruptions caused by bursts or leaks in the customer water connection (i.e. within the customers' property boundary) or interruptions due to planned meter replacements. It also excludes interruptions caused by third parties as this is not necessarily a result of an asset failure in the public reticulated network.



2.29 UNPLANNED INTERRUPTION FREQUENCY: WATER SUPPLY (Nu/1000 prop) WSS2

This field is automatically calculated based on the following formula:

$$\begin{aligned} & \text{Unplanned Interruption Frequency [WSS2]} \\ &= \frac{\text{Unplanned Total Interruptions [WSS1]}}{\text{Total Water Serviced Properties [WSB4]}} \times 1000 \end{aligned}$$

2.30 PLANNED INTERRUPTIONS: WATER SUPPLY WSS3

Total number of planned interruptions to water service for maintenance or renewal works, excluding water meter or water restrictor replacements.

Total number of interruptions to the water service for maintenance or renewal works. A water supply interruption is any event causing a total loss (cessation or outage) of water supply.

An interruption can affect just one customer or it can affect many customers but it is only counted once e.g. 1 break affects 30 dwellings in a street but only 1 interruption is recorded.

It excludes interruptions that occur in the customer water connection (i.e. within privately owned pipes), or interruptions caused by meter or water restrictor replacement programs.

2.31 THIRD PARTY INCIDENTS: WATER SUPPLY WSS4

The number of unplanned interruptions to service caused by third parties.

An 'incident' can affect just one customer or it can affect many customers but it is only counted once e.g. 1 break affects 30 dwellings in a street but only 1 incident is recorded. 1 break affects 1 dwelling, 1 incident is recorded.

Third Party Incidents are the number of incidents where one or more customers experience an unplanned total loss of water supply service caused by third parties (i.e. not the water organisation or its contractor(s)).

It excludes interruptions caused by bursts or leaks in the property service connection i.e. mains to meter connection (see figure overleaf) or customer water service connection.

Complaints

2.32 WATER SUPPLY COMPLAINTS WSS5, WSS5a, WSS5b, WSS5c, WSS5d WSS5e

Total number of complaints received by the organisation in the reporting year. Where water supply complaints related to each of the following categories are available these should be recorded separately:

WSS5a: Drinking water clarity

WSS5b: Drinking water taste

WSS5c: Drinking water odour

WSS5d: Drinking water pressure or flow

WSS5e: Continuity of supply

Total water quality complaints WSS5 are determined by summing complaints listed in the categories above. Where a breakdown of total complaints is not available the calculation in WSS5 should be over-ridden and a total complaints value entered.

Where water quality complaints have been received that do not fall within the above categories this value should be overwritten and total complaints listed. This may include complaints related to:

- discolouration
- stained washing, or
- illness

Complaints should be recorded using the following definition of a complaint in AS/NZS 10002:2014 Complaints management standard:

“Expression of dissatisfaction made to or about an organisation, related to its products, services, staff or the handling of a complaint, where a response or resolution is explicitly or implicitly expected or legally required”.

If an organisation receives a request for service but the customer does not express dissatisfaction this is not defined as a complaint. E.g. a customer may request that their water pressure is reduced, but not be dissatisfied with the delivery pressure.

Where there is more than one complaint per event each individual complainant is counted separately, not each event or occurrence. Where there are multiple complaints made by a single complainant in relation to one event, these may be counted as a single complaint.

Complaints related to council policies and procedures in relation to drinking water service delivery but not assets, operation or water quality should not be included. This may include complaints related to water rates and charging regimes as well as water restrictions.

2.33 WATER QUALITY COMPLAINTS FREQUENCY (Nu/1000 prop) WSS6

"Water Quality Complaints" per 1000 water serviced properties, automatically calculated based on the following formula:

$$\text{Water Quality Complaints Frequency [WSS6]} = \frac{\text{Water Quality Complaints [WSS5]} \times 1000}{\text{Total Water Serviced Properties [WSB4]}}$$

Charges

2.34 NUMBER OF DIFFERENT WATER CHARGING REGIMES WSS7

Some organisations apply different charges for different water supply schemes. The number of different charges should be listed in this field.

As an example, an organisation might operate four schemes. One scheme is charged using a combination of fixed charging and volumetric charging, two schemes are charged with the same targeted rate, and the fourth scheme is charged using based on the numbers of hectares in the property. In this scenario the number of different charging regimes listed should be three.

Do not include different charging regimes related to properties which could be serviced but are not connected to the network.

Definition added to clarify what is meant by a charging regime.

2.35 NON-RESIDENTIAL CHARGE WSS7a, WSS7b, WSS7c

WSS7a Fixed charge: non-residential water: The fixed charge (incl. GST) that some organisations apply for the supply of water services to non-residential customers. If different rates are applied across different schemes, list these in the cells to the right. The median value will populate in the data column. This may be overwritten if a more accurate average exists.

If residential and non-residential charges are the same leave this cell blank.

Do not include charges related to properties which could be serviced but are not connected to the network.

Clarification added

“Do not include charges related to properties which could be serviced but are not connected to the network.”

WSS7b Fixed charge type: non-residential water: The fixed charge type that organisations use for charging for water supply services; general rates, uniform annual general charge, or targeted rates. If other mechanisms are used, specify these in the comments field.

WSS7c Volumetric charge: non-residential water: The volumetric charge (incl. GST) that organisations apply for the supply of water services to non-residential customers. If different rates are applied across different schemes, list these in the cells to the right. The median value will populate in the data column. This may be overwritten if a more accurate average exists.

If residential and non-residential charges are the same leave this cell blank.

If the volumetric charge is applied only in certain circumstances include these in the comments field.

2.36 RESIDENTIAL CHARGE

WSS8a, WSS8b, WSS8c

WSS8a Fixed charge: residential water: The fixed charge (inc GST) for the supply of water services to residential customers. If multiple residential charges are applied list them separately. The median value will populate in the data column. This may be overwritten if a more accurate average exists.

If charges are levied based on a proportion of annual or capital values, the median value across the region should be used to determine the charge.

Do not include charges related to properties which could be serviced but are not connected to the network.

Clarification added

“Do not include charges related to properties which could be serviced but are not connected to the network.”

WSS8b Fixed charge type: residential water: The fixed charge type that organisations use for charging for water supply services; general rates, uniform annual general charge, or targeted rates. If other mechanisms are used, specify these in the comments field.

WSS8c Volumetric charge: residential water: The volumetric charge (inc GST) for the supply of water services to residential customers. If not applicable to the organisation leave blank. If multiple residential charges are applied list them separately. The median value will populate in the data column. This may be overwritten if a more accurate average exists.

If the volumetric charge is applied only in certain circumstances include these in the comments field.

2.37 AVERAGE RESIDENTIAL CHARGE BASED ON 200m³/year WSS9

The average residential customer's bill (GST included) based on an annual consumption of 200 m³.

$$\begin{aligned}
 & \text{Average residential charge [WSS10]} \\
 &= \text{Residential Fixed Water Charge [WSS9c]} \\
 & \quad * \text{Residential Volumetric Water Charge [WSS9d]} \times 200
 \end{aligned}$$

Response Times

2.38 WATER FAULT RESPONSE TIMES (hrs)WSS10

The median time taken for the local authority to attend call-outs in response to a fault or unplanned interruption to its networked reticulation system.

Extreme events, such as civil defence events may skew overall trends in council performance. Any such events should be clearly identified in the comments section.

WSS10a Attendance for Urgent Call-outs: from the time when the organisation receives notification to the time that service personnel reach the site in response to a fault or unplanned interruption to the water supply system.

WSS10b Resolution of Urgent Call-Outs: from the time that the local authority receives notification to the time that service personnel confirm resolution in response to a fault or unplanned interruption to the water supply system.

WSS10c Attendance for Non-Urgent Call-outs: from the time that the local authority receives notification to the time that service personnel reach the site in response to a non-urgent fault or unplanned interruption to the water supply system.

WSS10d Resolution of Non-Urgent Call-outs: from the time that the local authority receives notification to the time that service personnel confirm resolution in response to a non-urgent fault or unplanned interruption to the water supply system.

Updated to clarify that response times provided should be median values

Restrictions

2.39 WATER RESTRICTION DAYS (Nu of properties *days)WSS11

The total number of days water restrictions were in place, multiplied by the number of affected properties e.g. water restrictions are applied in two schemes this calendar year. In scheme 1, which services 100 properties, restrictions are applied for 10 days. In Scheme 2, which services 200 properties, restrictions are applied for 20 days. The number of affected property days entered in the box will be 5,000 (= (100*10) + (200*20)).

Fire fighting

2.40 HYDRANT TESTING WSS12a, WSS12b

Percentage of fire hydrants inspected in the previous five years (as defined in Clause G4 of Appendix G SNZ PAS 4509:2008) New Zealand Fire Service Firefighting Water Supplies Code of Practice.

WSS12b Non-compliant hydrants (Nu): The number of key hydrants that do not meet testing requirements (as defined in SNZ PAS 4509:2008) New Zealand Fire Service Firefighting Water Supplies Code of Practice.

Water Quality

2.41 BOILED WATER NOTICES (Nu of properties *days) WSS12

The total number of days boiled water notices were in place, multiplied by the number of affected properties e.g. boiled water notices are applied in two schemes this calendar year. In scheme 1, which services 100 properties, boiled water notices are applied for 10 days. In Scheme 2, which services 200 properties, boiled water notices are applied for 20 days. The number of affected property days entered in the box will be 5,000 (= (100*10) + (200*20)).

2.42 WATER SAFETY PLAN ACTIONS WSS13a

The total number of additional measures that could be put in place to manage risks identified in currently operational water safety plans.

2.43 WATER SAFETY PLAN IMPLEMENTATION WSS13b

The number of additional measures to manage risks identified in currently operational water safety plans that have already been implemented.

2.44 SOURCE WATER ZONE MANAGEMENT WSS14

Indicates if the source water zone for all/some water treatment plants has been determined.

If management plans are in place to manage water quality in these zones this is to be indicated in the comments field.

2.45 SOURCE WATER MONITORING WSS15

The frequency of sampling of treatment plant source water. If the sampling approach varies amongst treatment plants indicate the frequency of sampling most commonly employed.

Contaminants sampled for are to be indicated in the comments field.

Revenue

2.46 REVENUE – OTHER AUTHORITIES, OPERATING, DEVELOPER, TOTAL REVENUE, TOTAL REVENUE PER PROPERTY WSF1, WSF2, WSF3, WSF4, WSF5

WSF1 Revenue from Supply of Water to Other Local Authorities: Revenue generated from bulk water supply to other authorities. If not applicable leave blank.

WSF2 Operating Revenue: Water Supply: Operating revenue (income) for the supply of water to the area within Council's jurisdiction. It includes revenue obtained from fixed charges and volumetric charges, special levies that apply to serviced properties, lease of land or space reserved for assets (e.g. decommissioned pipes as cable ducts, or cell phone towers on reservoirs), revenue from asset sales, and other revenue from operations which would otherwise be included e.g. interest income.

It excludes all developer cash or asset contributions and revenue received from grants.

Where a spike in revenue is caused by a large asset sale or other unusual event please describe this in the 'Comments/Explanation/ Description of Calculation' field

Definition changed so grants revenue is not included

WSF3 Development Contribution Revenue: Water Supply: Developer revenue (income) for the reporting year. This includes all developer cash contributions or infrastructure growth charges. It excludes developer asset contributions.

WSF4 Total Revenue: Water Supply: Total water supply revenue for the reporting year.

$$\begin{aligned} \text{Total Revenue [WSF4]} \\ &= \text{Revenue from Supply of Water to Other Local Authorities [WSF1]} \\ &+ \text{Operating Revenue [WSF2]} + \text{Developer Contribution Revenue [WSF3]} \end{aligned}$$

WSF5 Revenue per Property: Water Supply (\$/property):- Revenue per serviced property.

$$\begin{aligned} \text{Revenue per property [WSF5]} \\ &= \text{Total Revenue [WSF4]} / \text{Total Water Serviced Properties [WSB4]} \end{aligned}$$

Updated to clarify that infrastructure growth charges (received by Watercare who are unable to charge developer contributions) are also included.

2.47 DEBT FUNDING: WATER SUPPLY WSF6

Increase in debt related to water supply.

Expenditure

2.48 OPERATING COSTS WSF12, WSF13

WSF7, WSF8, WSF9, WSF10, WSF11,

WSF7 Energy Costs: Electricity, gas and diesel costs across the public water supply network. Excludes fleet vehicle use.

WSF8 Chemicals and Consumables: Cost of chemicals and consumables used to treat water before supplying to customers. Does not include the cost of fluoride.

WSF9a Routine maintenance costs: All scheduled operational and maintenance works and external consultants and contractors used for such works.

WSF9b Reactive maintenance costs: All external costs associated with operation and maintenance of water supply, not included as routine maintenance, energy, chemicals or consumables.

WSF10 Management Costs: Organisational costs. This includes salary, accommodation, IT, rate payment and insurance costs.

Further detail added to specify that costs included in this field relate to salary, accommodation, IT, rate payment and insurance costs.

WSF11 Council Contract Management Costs: Council's contract management costs where management of the network is carried out by a Council Controlled Organisation or an independent contractor.

Measure descriptor changed from WSF11 Councils Overview Cost: Water Supply and extra text added to clarify the measure relates to contract management costs of independent contractors.

WSF12 Operating Cost: Water Supply: Operating cost for the reporting year associated with water supply, automatically calculated based on the following formula:

$$\begin{aligned} \text{Total Operating Cost} &= \text{Energy [WSF7]} + \text{Chemicals and Consumables [WSF8]} \\ &+ \text{Other External Opex [WSF9]} + \text{Management Costs [WSF10]} \\ &+ \text{Council Overview Costs [WSF11]}. \end{aligned}$$

WSF13 Operating Cost per property: Water Supply Operating Cost per property, automatically calculated based on the following formula:

$$\begin{aligned} \text{Operating Cost per property} &= \text{Total Operating Cost [WSF12]} \\ &/ \text{Total Water Serviced Properties [WSB4]}. \end{aligned}$$

2.49 ANNUAL DEPRECIATION: WATER SUPPLY WSF14

The depreciation cost in the reporting year as reported in the latest replacement cost valuation.

2.50 INTEREST: WATER SUPPLY WSF15a

The interest cost for the reporting year.

2.51 DEBT AFFORDABILITY: WATER SUPPLY WSF15b

Interest as a proportion of operational revenue, automatically calculated using the following formula:

$$\text{Debt affordability} = \text{Interest [WSF15a]} / \text{Total Revenue [WSF4]}$$

2.52 OPERATIONAL COST COVERAGE: WATER SUPPLY WSF16

Revenue (excluding developer contributions) as a proportion of annual costs (excluding CAPEX), automatically calculated using the following formula:

$$\text{Operational cost coverage} = \frac{\text{Operating revenue [WSF2]} + \text{Revenue from the supply of water to other authorities [WSF1]}}{\text{Interest [WSF15a]} + \text{Annual Depreciation [WSF14]} + \text{Operating Costs [WSF15a]}}$$

2.53 TOTAL COST: WATER SUPPLY WSF17

Total cost for the reporting year associated with water supply to the area under the Council's jurisdiction, automatically calculated using the following formula:

$$\text{Total cost} = \text{Operating cost [WSF12]} + \text{Interest [WSF15a]} + \text{Annual Depreciation [WSF14]} + \text{Actual capital expenditure [WSF20]}$$

2.54 TOTAL COST PER PROPERTY: WATER SUPPLY (\$/property) WSF18

Total Cost per property, automatically calculated using the following formula:

$$\text{Total costs per property} = \frac{\text{Total cost [WSF17]}}{\text{Total water serviced properties [WSB4]}}$$

2.55 BUDGETED CAPITAL EXPENDITURE: WATER SUPPLY WSF19, WSF19a, WSF19b, WSF19c

Budgeted capital expenditure budget for water supply in the reporting year, automatically calculated by summing the values below.

WSF19a budgeted capital to meet additional demand: related to growth including new works and subdivisions.

WSF19b budgeted capital to improve the level of service: expenditure on existing assets that is not driven by asset condition or age.

WSF19c budgeted capital to replace existing assets: expenditure related to renewals or replacements.

2.56 ACTUAL CAPITAL EXPENDITURE: WATER SUPPLY WSF20, WSF20a, WSF20b, WSF20c, WSF20

Capital expenditure on water supply for the reporting year, , automatically calculated by summing the values below.

WSF20a actual capital to meet additional demand: related to growth including new works subdivided developments.

WSF20b actual capital to improve the level of service: expenditure on existing assets that is not driven by asset condition or age.

WSF20c actual capital to replace existing assets: expenditure related to renewals or replacements.

WSF21 Actual Capital Expenditure per Property: Water Supply: Actual Capital Expenditure per serviced property in the reporting year, automatically calculated using the following formula:

$$\text{Actual capital expenditure per property} = \frac{\text{Actual capital expenditure [WSF20]}}{\text{Total Water Serviced Properties [WSB4]}}$$

Asset Value

2.57 DEVELOPMENT CONTRIBUTIONS: WATER SUPPLY WSF22

Value of assets vested in the council during the reporting year as part of development contributions.

2.58 WATER TREATMENT FACILITY VALUE AT END OF REPORTING YEAR WSF23a

The closing book value of water supply treatment plants and facilities.

2.59 OTHER WATER SUPPLY ASSET VALUE WSF23b

The closing book value of other assets (such as reticulation systems).

2.60 DECLINE IN SERVICE POTENTIAL: WATER SUPPLY WSF24

Ratio of Capital Expenditure to replace existing assets (Actual) to Annual Depreciation.

$$\begin{aligned} & \text{Decline in service potential} \\ &= \frac{\text{Actual capital expenditure to replace existing assets [WSF20c]}}{\text{Depreciation [WSF14]}} \end{aligned}$$

Grants

2.61 EXTERNAL GRANTS: WATER SUPPLY WSF25

Any external grants received (not awarded) during the financial year for capital or operational costs related to the water supply scheme.

3 Wastewater

Background

3.1 WASTEWATER SERVICED POPULATION WWB1a

Total residential population served by a reticulated wastewater system. This is a built in calculation in the spreadsheet determined using the total wastewater serviced residential properties [WWB1a] and the household occupancy rate [CB6].

$$\begin{aligned} \text{Wastewater Serviced Population [WWB1a]} \\ &= \text{Household Occupancy Rate [CB6]} \\ &\times \text{Wastewater Serviced Properties: Residential [WWB2]} \end{aligned}$$

If a more accurate population estimate is available the default calculation may be overwritten. In these circumstances the “Comments” column should be used to outline the approach used to derive the population estimate.

3.2 WASTEWATER SERVICE COVERAGE WWB1b

The percentage of the population serviced by the public reticulated wastewater network.

This is a built in calculation in the spreadsheet determined using the following formula:

$$\text{Wastewater Service Coverage [WSB1b]} = \frac{\text{Wastewater Serviced Population [WSB1a]}}{\text{Total Population [CB2]}}$$

If a more accurate population estimate is available the default calculation may be overwritten. In these circumstances the “Comments” column should be used to outline the approach used to derive the population estimate.

3.3 WASTEWATER SERVICED PROPERTIES: RESIDENTIAL WWB2

Total number of residential properties served by a reticulated wastewater system. Include method for determining number of serviced properties in multi-unit complexes in the comments field.

A wastewater serviced property is:

- connected to the organisations public reticulated wastewater network
- the subject of billing for wastewater services (fixed and/or consumption)

It does include:

- a tenanted property which is separately metered and in respect of which the tenant is liable for water usage counts as 1 property (i.e. the owner and tenant of a rented property are not counted as separate properties).
- a connected but non-rateable property, and
- a connected but non-metered property

It does not include rated but unconnected properties.

Multi-unit dwellings should be counted based on the number of separately occupied dwellings. The approach used to determine this figure is to be specified in the comments field. This may be determined based on the number of dwellings that are separately billed/rated e.g. a body corporate with only one supply connection but with 100 apartments, each receiving a separate

water bill will be counted as 100. If a multi-unit dwelling (e.g. retirement village) received a single bill, but consists of multiple dwellings these should be included, where information is available to do so.

3.4 WASTEWATER SERVICED PROPERTIES: NON-RESIDENTIAL WWB3

The total number of non-residential properties served by the reticulated wastewater network. Non-residential properties are any property which is not identified as a residential connection.

Where a single non-residential connection services multiple tenancies, but multiple accounts are issued, the number of accounts (not the number of connections) should be recorded.

3.5 TOTAL WASTEWATER SERVICED PROPERTIES WWB4

Total number of all properties served by a reticulated wastewater system, automatically calculated using the following formula:

$$\begin{aligned} \text{Total Wastewater Serviced Properties [WWB4]} &= \\ &\text{Wastewater Serviced Properties: Residential [WWB2]} + \\ &\text{Wastewater Serviced Properties: Non – residential [WWB3]} \end{aligned}$$

3.6 WASTEWATER 'EXPORTED' FOR TREATMENT (m³/year) WWB5

Volume of wastewater produced in area under the organisations jurisdiction that is piped to an adjacent Council's WWTP (if any). Does not include tankered waste.

3.7 WASTEWATER 'IMPORTED' FOR TREATMENT (m³/year) WWB6

Volume of wastewater produced outside the organisations jurisdiction that is piped in for treatment at the Council's WWTPs (if any). Does not include tankered waste.

3.8 TOTAL WASTEWATER PRODUCED (m³/year) WWB7

Volume of wastewater produced within the area under the Council's jurisdiction and reticulated to a public wastewater treatment plant. (Excludes any on-site treatment of wastewater). Automatically calculated using the following formula:

$$\begin{aligned} \text{Total wastewater produced} &= \text{Volume of wastewater treated at treatment plant (s) [WWA7d]} \\ &- \text{Wastewater imported for treatment [WWB6]} \\ &+ \text{Wastewater exported for treatment [WWB5]} \end{aligned}$$

Pipelines

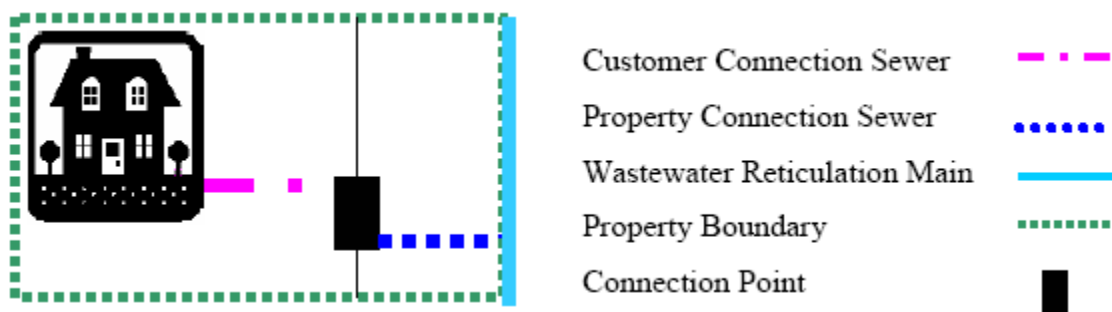
3.9 TOTAL LENGTH OF PUBLIC WASTEWATER NETWORK (km) WWA1a, WWA1b, WWA1c

Total length of public wastewater piped reticulation (gravity and pressure) servicing all properties in the total Wastewater Serviced Area. This includes all trunks, reticulation mains and service leads up to the point of supply but does not include customers private laterals (as indicated in the figure below) or pipes carrying treated effluent.

Do not count disused pipe lengths, even if they are maintained for possible future use.

WWA1b Length of wastewater mains renewed using internal CAPEX

WWA1c Length of wastewater mains constructed using internal CAPEX (NOT vested to the organisation by developers)



3.10 CONDITION GRADE WWA2a, WWA2b, WWA2c, WWA2d, WWA2e, WWA2f, WWA2g

WWA2a Percentage of wastewater pipelines that have received a condition grading of 1.

WWA2b Percentage of wastewater pipelines that have received a condition grading of 2.

WWA2c Percentage of wastewater pipelines that have received a condition grading of 3.

WWA2d Percentage of wastewater pipelines that have received a condition grading of 4.

WWA2e Percentage of wastewater pipelines that have received a condition grading of 5.

WWA2f Percentage of wastewater pipelines that have not had their condition graded.

WWA2g Pipeline Condition Assessment Approach (text): The condition grading approached used for WWA2.

3.11 AVERAGE AGE OF WASTEWATER PIPELINES (years) WWA3

Weighted Average Age of All Pipelines within the total wastewater serviced area.

This should be calculated by taking into account the length and age of pipelines as follows.

$$\frac{\sum(\text{length of pipeline} \times \text{age of pipeline})}{\sum \text{length of pipeline}}$$

3.12 WASTEWATER CCTV INSPECTION (%) WWA4

Percent of network that has had CCTV completed in the last 5 years.

Include CCTV inspections conducted following the inspection of new pipes, as well as any inspections conducted as part of maintenance or renewal works.

Clarification added:

“Include CCTV inspections conducted following the inspection of new pipes, as well as any inspections conducted as part of maintenance or renewal works.”

Other assets

3.13 WASTEWATER PUMP STATIONS WWA5, WWA5a

Total number of wastewater pump stations (before the first stage of wastewater treatment processes) transporting sewage, regardless of whether the station is off or actually on the treatment plant site. Pump stations thereafter should be excluded as they are considered a component of the treatment plant.

WWA5a The number of wastewater pump stations with backup generators. If a pump station has more than one back-up generator to meet the total power needs list this only as one.

3.14 CONDITION ASSESSMENT OF ABOVE GROUND ASSETS WWA6, WWA6a, WWA6b

WWA6 A yes or no response to clarify if you have a regular condition assessment programme for above ground wastewater assets.

WWA6a The protocol used for above ground condition assessments.

WWA6b The percentage of above ground assets assessed within 3 years.

Treatment Plants

3.15 WASTEWATER TREATMENT PLANT DETAILS WWA7, WWA7a, WW7d, WWA7f, WWA7g, WWA7h, WWA7i, WW7j, WW7k, WW7l, WW7m

WWA7a Treatment Plant Name

WWA7d Volume of Wastewater treated at treatment plant in the year (m³/year)

WWA7f Estimated proportion of total wastewater entering the plant that can be classified as trade waste (%).

Trade waste is the liquid waste, with or without matters in suspension or in solution, which may be generated and discharged from any industry, business, trade or manufacturing process. It does not include domestic sewage.

Trade waste properties are included when there is an identified charge (e.g. Uniform Annual Charge, volume or strength based, or some other specific charge) for the service. It excludes

properties which may be ‘consented’ or ‘permitted’ as Trade Waste but no identified charge is made.

WWA7g Number of consents at each treatment plant. If only an effluent consent discharge is held the number will be one. If there are additional consents for treatment plants discharges of sludge or discharge to air count these also.

WWA7h Treatment Plant Resource consents expiry date.

WWA7i Treatment Plant Effluent consent status

WWA7j Treatment Plant Sludge Production (tDS/year)

Total quantity of sludge produced.

This is the total mass of dry solids produced each year by wastewater treatment after, and on-site, processing e.g. after digestion and dewatering, and before subsequent storage or discharge off site. If sludge solids are retained in on-site lagoons or oxidation ponds without regular measurements then estimate quantities and explain these in the “Comments/Explanation/Description of Calculation” column.

WWA7k Sludge Disposal

Provide information on sludge disposal routes.

If sludge is reused, please advise how and where in the “Comments” column. Landfill capping is considered to be a form of reuse (WWA7k-3). Sludge reduction mechanisms and stockpiling are not.

WWA7k-5 Desludging: For oxidation ponds that have not been de-sludged in the financial year enter the last year that the pond was de-sludged. Otherwise leave blank.

WSA7l Treatment Plant Backup Generator (Nu): The number of standby generators at the treatment plant

WWA7m Peak wet to dry weather flow ratio (Nu): The peak wet weather flow (during the reporting year) as a ratio of dry weather flow i.e.

$$\text{Peak wet weather flow} / \text{Average dry weather flow}$$

Peak wet weather flow is the highest instantaneous peak flow recorded coming into the plant.

Average dry weather flow is the average instantaneous flow on days without precipitation.

The following clarifications were added to the definition:

Peak wet weather flow is the highest instantaneous peak flow recorded coming into the plant.

Average dry weather flow is the average instantaneous flow on days without precipitation.

Combined networks

3.16 TOTAL LENGTH OF COMBINED WASTEWATER AND STORMWATER PIPELINES (km) WWA8

Total length of the piped reticulation network that has been designed to receive both stormwater and wastewater. These pipelines should also be accounted for in field WWA1 Total Length of Public Wastewater network.

Overflows

3.17 DRY WEATHER WASTEWATER OVERFLOWS WWE1b

WWE1, WWE1a,

An overflow is when untreated sewage spills, surcharges, discharges or otherwise escapes from the wastewater network under the organisation's control to the external environment. Dry weather overflows may occur at pump stations, manholes, etc.

Do not include overflows resulting from stormwater inflow and infiltration into the sewer, or those caused by blockages in sewer service connections (property to mains connections), however do include overflows that occur in the public system and surcharge into private property.

Dry weather overflows should be recorded from actual (and verified) incidents.

WWE1a Overflows caused by blockages e.g. fat oil and grease build up, tree route intrusion

WWE1b Overflows caused by plant failures e.g. pump station ragging, power outages (including those from the electricity supplier's network), pump mechanical value

Description changed so that the word "plant" replaces word mechanical to clarify that the definition of this measure includes failures that include power outages.

Clarification added that overflows caused by power outages also include those from the electricity supplier's network.

3.18 WET WEATHER WASTEWATER OVERFLOWS

WWE2

An overflow is when untreated sewage spills, surcharges, discharges or otherwise escapes from the wastewater network to the external environment.

A monitored site which has overflowed within the previous 24 hr period is considered as one event.

An event needs to be at least 3min in duration to be classed as an event. This criteria is used to eliminate sensor 'noise'.

It includes overflows (both contained and uncontained) from pump stations, pipes, manholes and designed overflow structures as a result of wet weather events.

It does not include those caused by blockages in public or private sewers, pump station failures during dry weather or engineered spills to designed storage facilities where no pollution of the environment occurs e.g. an emergency storage tunnel.

Wet weather wastewater overflows may be determined from either monitoring, field observation or modelling data (e.g. SCADA alarms or hydraulic models).

A new overflow starts after a continuous 24 hour period without an overflow. An overflow that continues for longer than 24 hours will be counted as a separate overflow event for each 24 hour period.

Wet weather overflows typically result from excessive stormwater inflow and infiltration, and may be permitted by network discharge consents. Such events should still be included.

WWE2a Wet weather overflows from the wastewater network Any wet weather overflow not counted as part of WW2b.

WWE2b Wet weather overflows from combined stormwater and wastewater network Any overflow from the piped reticulation network that receives combines stormwater and wastewater flows.

Additional clarification “An event needs to be at least 3min in duration to be classed as an event. This criteria is used to eliminate sensor 'noise'.”

Additional clarification that Wet weather wastewater overflows may be determined from “either monitoring, field observation” or modelling data (e.g. SCADA alarms or hydraulic models).

Definition changed from: “Where overflows occur at multiple locations arising from a particular event or period of rainfall (or there are multiple reported overflows relating to what is effectively a continuous discharge) this is defined as a single overflow.”

To

“A new overflow starts after a continuous 24 hour period without an overflow. An overflow that continues for longer than 24 hours will be counted as a separate overflow event for each 24 hour period.”

3.19 TOTAL WASTEWATER OVERFLOWS WWE3

Total overflows are automatically calculated using the following formula:

$$\begin{aligned} \text{Total Wastewater Overflows [WWE3]} \\ &= \text{Dry Weather Wastewater Overflow [WWE1]} \\ &+ \text{Wet Weather Wastewater Overflows [WWE2]} \end{aligned}$$

If the split between dry weather and wet weather overflows is not available, total wastewater overflow data may be overwritten.

3.20 WASTEWATER OVERFLOWS ON PRIVATE PROPERTIES WWE3a

Overflows included in WWE3 that occurred on private property as a result of issues within the public wastewater network (as defined in measure WWA1).

Do not include overflow events due to problems within private property boundaries.

3.21 SEWAGE CONTAINMENT DESIGN STANDARDS WWE8a

The capacity of diluted sewage new sections of the network are designed to contain during wet weather events. If design is based on the frequency of overflows provide the Annual Exceedance Probability (%), otherwise specify the average dry weather flow and associated peaking factor used to determine peak wet weather flows.

Include detail of the approach and relevant units in the comments field.

Measure name changed from “WWE8a: Sewage containment design standards”

Defintion changed from: “The capacity of sewage the network has been designed to contain”

To “The capacity of diluted sewage the network has been designed to contain during wet weather events”

To more accurately articulate what the measure represents.

3.22 AVERAGE CALCULATED WET WEATHER OVERFLOW FREQUENCY WWE8b

The average recurrence interval of the modal (most commonly occurring average) event that the existing sewerage network is able to contain. Specify the approach to calculating this in the comments field.

Units field changed from AEP (annual exceedance probability) to ARI (annual recurrence interval).

Definition changed from:

“The median wet weather overflow frequency determined by recent hydraulic models or original design (if recent modelling doesn’t exist).”

To

“The average recurrence interval of the modal (most commonly occurring average) event that the existing sewerage network is able to contain.”

3.23 OVERFLOW RECORDING WWE9a, WWE9b, WWE9c, WWE9d

Approach used for recording wastewater overflows

WWE9a Overflows recorded through verbal reports, either by staff or contractors

WWE9b Overflows recorded through SCADA monitoring

WWE9c Overflows calculated through hydraulic models

WWE9d Overflows calculated through calibrated hydraulic models

Updated to clarify this could be verbal reports either by staff or contractors

Compliance

3.24 WASTEWATER RESOURCE CONSENTS BREACHES WWE4, WWE4a, WWE4b, WWE4c, WWE4d

The number of;

WWE4a abatement notices

WWE4b infringement notices

WWE4c enforcement orders

WWE4d successful prosecutions

received by the organisation in relation to wastewater discharge consents.

3.25 WASTEWATER TREATMENT PLANT NON-CONFORMANCE WWE4e

The number of breaches of wastewater treatment plant consent conditions. Non-conformances related to sludge and odour consents at treatment plants should also be included in this measure.

The number entered is to be based on the number of non-conformances. Technical non-conformances (e.g. late reports) as well as performance breaches are to be included. Include an outline of the nature of non-conformances in the comments field.

The measure is to include too all non-conformances that occurred throughout the year regardless of whether they have been resolved at the time of reporting.

3.26 WASTEWATER NETWORK DISCHARGE CONSENT NON-CONFORMANCE WWE4f

The number of breaches of wastewater network discharge consent conditions. This measure principally relates to wastewater overflows from engineered overflow however if non-conformances with other discharges exist (e.g. discharge to air) specify these in the comments field.

Technical non-conformances (e.g. late reports) as well as performance breaches are to be included. Include an outline of the nature of non-conformances in the comments field.

The measure is to include too all non-conformances that occurred throughout the year regardless of whether they have been resolved at the time of reporting.

3.27 WASTEWATER NETWORK DISCHARGE CONSENTS WWE4g

The number of consents held for discharges from the wastewater network (do not include consents related to treatment plants). This measure principally relates to wastewater overflows from engineered overflow points however if consents are held for other aspects of network discharges (e.g. odour) list these in the comments field.

Energy

3.28 ENERGY USE WWE5a, WWE5b

WWE5a is the total energy consumed by the wastewater pumps and wastewater treatment plants in Gigajoules. Do not include energy use related to fleet vehicles or offices.

Joules of energy provided by all energy sources including electricity, diesel, gas and biogas should be included.

WWE5b Energy use per cubic meter of wastewater collected (GJ/m³).

$$\text{Energy Intensity [WWE5b]} = \frac{\text{Energy Consumption [WWE5a]}}{\text{Total Wastewater Produced [WWB7]}}$$

Trade waste

3.29 TRADE WASTE MANAGEMENT WWS6

The organisations approach to management of trade waste.

Charges

3.30 NON-RESIDENTIAL WASTEWATER CHARGE WWS1a, WWS1b, WWS1c, WWS1d

WWS1a Fixed charge: Non-residential wastewater (inc GST).

If multiple fixed charges exist provide the median and provide detail in the comments field. If all customers in the district are billed at the same rate leave the field blank.

Do not include charges related to properties which could be serviced but are not connected to the network.

WWS1 Fixed charge type: Non-residential wastewater

The manner in which the fixed charge for non-residential wastewater services is levied. If all customers in the district are billed at the same rate leave the field blank.

WWS1c Volumetric charge: Non-residential wastewater (inc GST)

Do not include contaminant based charges in the volumetric rate. If all customers in the district are billed at the same rate as residential properties leave the field blank.

WWS1d Contaminant based charging if trade waste customers are charged for individual contaminants e.g. suspended solids, biological oxygen demand, metals etc. Individual charges can be included in the comments field.

3.31 RESIDENTIAL WASTEWATER CHARGE WWS2a, WWS2b, WWS2c

WWS2a Fixed charge: Residential wastewater (inc GST)

If multiple fixed charges exist provide the median and provide detail in the comments. If charges are levied based on a proportion of annual or capital values, the median value across the region should be used to determine the charge.

Do not include charges related to properties which could be serviced but are not connected to the network.

WWS2b Fixed charge type: Residential wastewater

The manner in which the fixed charge for non-residential wastewater services is levied.

WWS2c Volumetric charge: Residential water (inc GST)

3.32 AVERAGE ANNUAL RESIDENTIAL WASTEWATER CHARGE FOR 200m³/yr WWS3

The average residential customer's bill (GST included) for wastewater based on an annual water consumption of 200 m³. Automatically calculated based on the following formula:

$$\begin{aligned} \text{Average residential charge [WWS3]} \\ = \text{Fixed charge [WWS2a]} + (\text{Volumetric charge [WWS2c]} \times 200) \end{aligned}$$

Complaints

3.33 WASTEWATER COMPLAINTS WWS4, WWS4a, WWS4b, WWS4c, WWS4d, WWS4e

Total number of complaints received by the organisation in the reporting year. Where water supply complaints related to each of the following categories are available these should be recorded separately:

WWS4a Sewage odour includes all odour related complaints including at wastewater treatment plants

WWS4b Sewerage system faults includes faults with pump stations as well as the reticulation network

WWS4c Sewerage system blockages includes blockages at pump stations as well as the reticulation network

Total wastewater complaints are determined by summing complaints listed in the categories above. Where a breakdown of total complaints is not available the calculation in WWS4 should be overwritten and a total complaints value entered. Where wastewater complaints have been received that do not fall within the above categories this value should be overwritten and total complaints listed.

Complaints should be recorded using the definition of a complaint provided in the ASNZ10002-2014 Complaints management standard:

“Expression of dissatisfaction made to or about an organisation, related to its products, services, staff or the handling of a complaint, where a response or resolution is explicitly or implicitly expected or legally required”.

Accordingly, if a request for service is required, but the customer does not express dissatisfaction this is not defined as a complaint.

Where there is more than one complaint per event, each individual complainant is counted separately, not each event or occurrence. Where there are multiple complaints made by a single complainant in relation to one event, these may be counted as a single complaint.

Complaints related to council policies and procedures in relation to wastewater service delivery but not assets or operations should not be included. This may include complaints related to pricing. Complaints related to issues on customers private laterals should not be included.

3.34 WASTEWATER COMPLAINTS FREQUENCY(Nu/1000 prop) WWS5

"Wastewater Complaints" per 1000 serviced properties.

The number of wastewater complaints per 1000 properties calculated as follows:

$$\begin{aligned} \text{Wastewater Complaints Frequency [WWS5]} \\ = \frac{\text{Total Wastewater Complaints [WWS4]} \times 1000}{\text{Total Wastewater Serviced Properties [WWB4]}} \end{aligned}$$

Response times

3.35 WASTEWATER FAULT RESPONSE TIME WWS6, WWS6a, WWS6b

The median time taken for the local authority to attend call-outs in response to sewerage overflows resulting from a blockage or other fault in the local authority's sewerage system.

Extreme events, such as declared civil defence events will skew overall trends in council performance. Any such events should be clearly identified in the comments column.

WWS6a Attendance time (hrs): From the time that the local authority receives notification of a fault in the sewerage system to the time that service personnel reach the site.

WWS6b Resolution Time (hrs): From the time that the local authority receives notification of a fault in the sewerage system to the time that service personnel confirm resolution of the fault.

Updated to clarify that response times provided should be median values

Outages

3.36 UNPLANNED TOTAL INTERRUPTIONS: WASTEWATER WWS7a

The number of unplanned total interruptions to service experienced by properties excluding interruptions caused by third party damage.

An unplanned wastewater interruption is any event causing a total inability of customers being able to flush or otherwise dispose of items to sewer due to an asset failure in the public reticulated network.

An interruption can affect just one customer or it can affect many customers but it is only counted once e.g. 1 break affects 30 dwellings in a street but only 1 interruption is recorded.

It includes situations where the duration of a planned interruption exceeds that which was originally notified (e.g. the organisation advises customers that an interruption to service will occur and will last for three hours. If the interruption actually lasts five hours this counts as one unplanned interruption). If a property experiences more than one interruption each event should be counted.

It excludes interruptions caused by issues in the customer wastewater service connection, within private property boundaries. It also excludes interruptions caused by third parties.

Measures replaces previous question, WWS7a: Failure of wastewater pipes (to align with equivalent questions on water outages)

3.37 THIRD PARTY INCIDENTS: WASTEWATER WWS7b

The number of unplanned interruptions to service caused by third parties.

An 'incident' can affect just one customer or it can affect many customers but it is only counted once e.g. 1 break affects 30 dwellings in a street but only 1 incident is recorded. 1 break affects 1 dwelling, 1 incident is recorded.

Third Party Incidents are the number of incidents where one or more customers experience a complete inability to flush or otherwise dispose of objectives to sewer caused by third party (i.e. not the water organisation or its contractor(s)) disruptions to the network.

It excludes interruptions caused by issues in the customer wastewater service connection, within private property boundaries.

3.38 PLANNED INTERRUPTIONS: WASTEWATER WWS7c

Total number of planned interruptions to the wastewater service for maintenance or renewal works. A wastewater supply interruption is any event causing a total loss of the customers ability to flush or otherwise dispose of products to sewer.

An interruption can affect just one customer or it can affect many customers but it is only counted once e.g. 1 break affects 30 dwellings in a street but only 1 interruption is recorded.

It excludes interruptions caused by issues in the customer wastewater service connection, within private property boundaries.

Descriptor of indicator has changed from WWS7b: Third party disruptions to the wastewater system, and definition been provided with additional clarifications

3.39 UNPLANNED INTERRUPTION FREQUENCY: WASTEWATER (Nu/1000 prop) WWS7d

This field is automatically calculated based on the following formula:

$$\begin{aligned} & \text{Unplanned Interruption Frequency [WWS7d]} \\ &= \frac{\text{Unplanned Total Interruptions [WWS7a]}}{\text{Total Wastewater Serviced Properties [WWB4]}} \times 1000 \end{aligned}$$

Revenue

3.40 REVENUE (WW) – OPERATING, DEVELOPER, TOTAL REVENUE, TOTAL REVENUE PER PROPERTY WWF1, WWF2, WWF3, WWF4, WWF5

WWF1 Revenue from the Provision of Wastewater Treatment Services to Another Local

Authority: Revenue generated by providing wastewater treatment services to adjacent authorities. If not applicable leave blank.

WWF2 Operating revenue: Wastewater: Operating revenue (income) associated with reticulation and treatment of wastewater.

Includes revenue obtained from minimum or fixed charges and volumetric charges, special levies that apply to serviced properties, lease of land or space reserved for assets (e.g. decommissioned pipes as cable ducts) revenue from asset sales, other revenue from operations which would otherwise be included e.g. interest income.

It excludes all developer cash or asset contributions and grants.

Where a spike in revenue is caused by a large asset sale or other unusual event describe this in the 'Comments' column.

Definition changed so grants revenue is not included

WWF3 Development contributions: Wastewater: Developer revenue (income) for the reporting year. This includes all developer cash contributions and infrastructure growth charges. It excludes developer asset contributions.

Updated to clarify that infrastructure growth charges (received by Watercare who are unable to charge developer contributions) are also included.

WWF4 Total revenue: Wastewater Total wastewater revenue for the reporting year related to the area under the Council's jurisdiction, automatically calculated based on the following formula:

$$\begin{aligned} \text{Total revenue [WWF4]} \\ &= \text{Revenue from the provision of wastewater services to another authority [WWF1]} \\ &+ \text{Operating revenue [WWF2]} + \text{Developer contribution revenue [WWF3]} \end{aligned}$$

WWF5 Revenue per property: Wastewater automatically calculated based on the following formula:

$$\text{Revenue per property} = \frac{\text{Total revenue: wastewater [WWF13]}}{\text{Total wastewater serviced properties [WWB4]}}$$

3.41 DEBT FUNDING: WASTEWATER WWF6

Increase in debt related to wastewater.

Expenditure

3.42 OPERATING COSTS WWF7, WWF8, WWF9, WWF10, WWF11, WWF12, WWF13, WWF14

WWF7 Energy Costs: Wastewater: Electricity/gas/fuel costs associated with wastewater reticulation and treatment.

WWF8 Sludge Disposal Costs: Wastewater: Net Cost of Sludge Disposal (i.e. less any revenue from sale of biosolids).

WWF9 Routine Maintenance: Wastewater: The cost of all scheduled operational and maintenance works and external consultants and contractors used for such works.

WWF10 Reactive Maintenance: Wastewater: All external costs associated with operation and maintenance of wastewater, not included as routine maintenance, energy or sludge disposal.

WWF11 Management Costs: Organisation costs. This includes salary, accommodation, IT, rate payment and insurance costs.

Further detail added to specify that costs included in this field relate to salary, accommodation, IT, rate payment and insurance costs.

WWF12 Council's Contract Management Costs: Council's costs where management of the network is carried out by a Council Controlled Organisation or independent contractor.

Measure descriptor changed from WWF12 Councils Overview Cost: Wastewater and extra text added to clarify the measure also includes contract management costs of independent contractors.

WWF13 Operating Cost: Wastewater: Operating cost for the reporting year associated with providing wastewater services, automatically calculated based on the following formula:

$$\begin{aligned} \text{Operating Cost: Wastewater} &= \text{Energy Costs [WWF7]} + \text{Sludge Disposal Costs [WWF8]} \\ &+ \text{Routine Maintenance [WWF9]} + \text{Reactive Maintenance [WWF10]} \\ &+ \text{Management Costs [WWF11]} + \text{Councils Overview Costs [WWF12]} \end{aligned}$$

WWF14 Operating Cost per Property: Wastewater: Operating Cost per property, automatically calculated based on the following formula:

$$\text{Operating Cost per property} = \frac{\text{Operating cost [WWF13]}}{\text{Total water serviced properties [WSB4]}}$$

3.43 ANNUAL DEPRECIATION WWF15

The depreciation cost in the reporting year as reported in the latest replacement cost valuation.

3.44 INTEREST: WASTEWATER WWF16a

The interest cost for the reporting year.

3.45 DEBT AFFORDABILITY: WASTEWATER WWF16b

Interest as a proportion of operational revenue, automatically calculated using the following formula:

$$\text{Debt affordability} = \frac{\text{Interest [WWF16a]}}{\text{Total Revenue: Wastewater [WWF4]}}$$

3.46 OPERATIONAL COST COVERAGE: WASTEWATER WWF17

Revenue (excluding developer contributions) as a proportion of annual costs (excluding CAPEX) automatically calculated using the following formula:

$$\text{Operational cost coverage} = \frac{\text{Operating revenue [WWF2]} + \text{Revenue from provision of wastewater treatment services to other authorities [WWF1]}}{\text{Interest [WWF16a] + Annual depreciation [WWF15] + Operating cost [WWF13]}}$$

3.47 TOTAL COST: WASTEWATER WWF18

Total cost for the reporting year associated with wastewater services to the area under the Council's jurisdiction, automatically calculated using the following formula:

$$\text{Total cost} = \text{Operating cost [WWF13]} + \text{Interest [WWF16a]} + \text{Annual Depreciation [WWF15]} + \text{Actual capital expenditure [WWF21]}$$

3.48 TOTAL COST PER PROPERTY: WASTEWATER WWF19

Total Cost per property, automatically calculated using the following formula:

$$\text{Total costs per property} = \frac{\text{Total cost: Wastewater [WWF18]}}{\text{Total Wastewater Serviced Properties [WWB4]}}$$

3.49 BUDGETED CAPITAL EXPENDITURE: WASTEWATER WWF20, WWF20a, WWF20b, WWF20c

Capital expenditure budget for wastewater in the reporting year, automatically calculated by summing the values below.

WWF20a budgeted capital to meet additional demand: Capital expenditure on wastewater assets related to growth including new works subdivided developments.

WWF20b budgeted capital to improve level of service: Capital expenditure on existing wastewater assets that is not driven by asset condition or age.

WWF20c budgeted capital to replace existing assets: Capital expenditure related to wastewater renewals or replacements or other expenditure.

3.50 ACTUAL CAPITAL EXPENDITURE: WASTEWATER WWF21, WWF21a, WWF21b, WWF21c

Capital expenditure on wastewater in the reporting year, automatically calculated by summing the values below.

WWF21a actual capital to meet additional demand: Capital expenditure on wastewater assets related to growth including new works subdivided developments.

WWF21b actual capital to improve level of service: Capital expenditure on wastewater assets related to growth including new works subdivided developments.

WWF21c actual capital to replace existing assets: Capital expenditure related to wastewater renewals or replacements or other expenditure.

3.51 ACTUAL CAPITAL EXPENDITURE PER PROPERTY: WASTEWATER WWF22

Actual Capital Expenditure per serviced property in the reporting year, automatically calculated using the formula below:

$$\begin{aligned} & \text{Actual capital expenditure per property} \\ &= \frac{\text{Actual capital expenditure [WWF21]}}{\text{Total Wastewater Serviced Properties [WWB4]}} \end{aligned}$$

3.52 DEVELOPMENT CONTRIBUTIONS: WASTEWATER WWF23

Value of assets vested in the council as part of development contributions (excludes cash payments).

Asset value

3.53 ASSET VALUE AT THE END OF THE REPORTING YEAR WWF24a, WWF24b

WSF24a Wastewater facility value at end of reporting year: The closing book value of wastewater treatment plants and facilities.

WSF24b Other wastewater assets value: The closing book value of other wastewater assets (such as reticulation systems).

3.54 DECLINE IN SERVICE POTENTIAL: WASTEWATER WWF25

Ratio of Capital Expenditure to replace existing assets to Annual Depreciation, automatically calculated using the following formula:

$$\text{Decline in service potential} = \frac{\text{Actual capital expenditure to replace existing assets [WWF21c]}}{\text{Depreciation [WWF15]}}$$

Grants

3.55 EXTERNAL GRANTS: WASTEWATER WWF26

Any external grants received (not awarded) during the financial year for capital or operational costs related to the wastewater scheme.

4 Stormwater

Background

4.1 STORMWATER SERVICED POPULATION SWB1

Total population serviced by a reticulated stormwater system. This is a built in calculation in the spreadsheet determined using the total stormwater serviced residential properties [SWB2] and the household occupancy rate [CB6].

$$\begin{aligned} \text{Stormwater Serviced Population [SWB1]} \\ &= \text{Household Occupancy Rate [CB6]} \\ &\times \text{Stormwater Serviced Properties: Residential [SWB2]} \end{aligned}$$

If a more accurate population estimate is available the default calculation may be overwritten. In these circumstances the “Comments” column should be used to outline the approach used to derive the population estimate.

4.2 STORMWATER SERVICED PROPERTIES: RESIDENTIAL SWB2

Stormwater serviced properties which at the end of the reporting period are billed for stormwater services. This includes properties that do not have an explicit stormwater charge but are billed through other means to fund stormwater infrastructure (e.g. where stormwater charges are included in a roading rate).

4.3 STORMWATER SERVICED PROPERTIES: NON-RESIDENTIAL SWB3

Non-residential is defined as any business or other property that is not identified as a residential connection. Service is defined as any property, which at the end of the reporting period is billed for stormwater services. This includes properties that do not have an explicit stormwater charge but are billed through other means to fund stormwater infrastructure (e.g. where stormwater charges are included in a roading rate).

4.4 TOTAL STORMWATER SERVICED SWB4

Total number of all properties served by a reticulated stormwater system. Calculated using the following formula;

$$\begin{aligned} \text{Total Stormwater Serviced Properties[SWB4]} \\ &= \text{Stormwater Serviced Properties: Residential [SWB2]} \\ &+ \text{Stormwater Serviced Properties: Non – residential [SWB3]} \end{aligned}$$

Pipelines

4.5 TOTAL LENGTH OF PUBLIC STORMWATER NETWORK (km) SWA1a, SWA1b, SWA1c

Total length of public stormwater mains This includes all pipes, culverts and lined channels that form part of the primary stormwater reticulation network.

It does not include pipes associated with house branch connections and ditches, swales and streams (which in the past have proven difficult to consistently quantify).

SWA1b Length of new stormwater mains constructed using internal CAPEX

SWA1c Lengths of stormwater mains constructed using internal CAPEX (NOT vested to the organisation by developers).

Previously unlined channels were to be included in the length, but swales were not. Unlined channels are no longer included to remove ambiguity.

4.6 CONDITION OF STORMWATER PIPELINES (%) SWA2, SWA2a, SWA2b, SWA2c, SWA2d, SWA2e, SWA2f, SWA2g

SWA2a: Percentage of stormwater pipes that have received a condition grading of 1.

SWA2b: Percentage of stormwater pipelines that have received a condition grading of 2.

SWA2c: Percentage of stormwater pipelines that have received a condition grading of 3.

SWA2d: Percentage of stormwater pipelines that have received a condition grading of 4.

SWA2e: Percentage of stormwater pipelines that have received a condition grading of 5.

SWA2f: Percentage of stormwater pipelines that have not had their condition graded

SWA2g: The condition grading approached used for SWA2

4.7 AVERAGE AGE OF STORMWATER PIPELINES (years) SWA3

Weighted Average Age of All Pipelines within the total stormwater serviced area.

This should be calculated by taking into account the length and age of pipelines as follows.

$$\frac{\sum(\text{length of pipeline} \times \text{age of pipeline})}{\sum \text{length of pipeline}}$$

Other assets

4.8 CONDITION ASSESSMENT OF ABOVE GROUND ASSETS SWA5a, SWA5b, SWA5c

SWA5a: A yes or no response to clarify if a regular conditions assessment programme is in place for above ground stormwater assets.

SWA5b: The protocol used for above ground condition assessments.

SWA5c: The percentage of above ground assets assessed within 3 years.

4.9 STORMWATER CCTV INSPECTION SWA6

Percent of network that has had CCTV completed in the last 5 years.

Include CCTV inspections conducted following the inspection of new pipes, as well as any inspections conducted as part of maintenance or renewal works.

Clarification added:

“Include CCTV inspections conducted following the inspection of new pipes, as well as any inspections conducted as part of maintenance or renewal works.”

4.10 STORMWATER PUMP STATIONS SWA7

The number of stormwater pump stations.

Discharges

4.11 NUMBER OF STORMWATER DISCHARGES FROM THE PIPED NETWORK SWE1a

The number of direct discharges from the public piped network controlled by the organisation which discharge directly to open watercourses, drains, rivers, coastal areas. This may also include discharge to soakage in rural and / or urban areas where the quality and / or the volume of stormwater discharged may result in an environmental impact.

This does not include individual or small groups of road cesspits which may discharge to soakage.

Expanded definition to provide further clarity on what is included.

Changed from “The number of outfalls from stormwater systems controlled by the organisation where stormwater is discharged into receiving water bodies, or to land.”

To

“The number of direct discharges from the public piped network controlled by the organisation which discharge directly to open watercourses, drains, rivers, coastal areas. This may also include discharge to soakage in rural and / or urban areas where the quality and / or the volume of stormwater discharged may result in an environmental impact.

This does not include individual or small groups of road cesspits which may discharge to soakage.”

4.12 NUMBER OF STORMWATER DISCHARGES WITH RESOURCE CONSENTS SWE1b

The number of stormwater discharges covered by resource consents. If multiple discharges are covered by a smaller number of consents, provide details in the comments field.

Compliance

4.13 STORMWATER RESOURCE CONSENT BREACHES SWE2d

SWE2a –

The number of;

SWE2a abatement notices

SWE2b infringement notices

SWE2c enforcement orders

SWE2d successful prosecutions

Received by the organisation in relation to stormwater discharge consents.

4.14 STORMWATER NON-CONFORMANCE SWE2e

The number of breaches of stormwater discharge consent conditions.

Technical non-conformances (e.g. late reports) as well as performance breaches are to be included. Include an outline of the nature of non-conformances in the comments field.

The measure is to include too all non-conformances that occurred throughout the year regardless of whether they have been resolved at the time of reporting.

4.15 STORMWATER QUALITY MONITORING SWE3

A yes or no indicating if stormwater quality is regularly monitored. If so, details are to be included in the comments field.

4.16 STORMWATER CATCHMENT MANAGEMENT PLANS SWE4

A yes or no indicating if the organisation has a plan (or similar document) to manage stormwater quality. If so, details are to be included in the comments field.

Charges

4.17 STORMWATER CHARGE SWS1

Average annual targeted stormwater charge (GST included) for a residential property. If no specific stormwater charge applies, detail how customers contribute to costs in the comments field (e.g. stormwater included in roading rate or wastewater rate).

4.18 STORMWATER CHARGE TYPE SWS2

The manner in which the fixed charge for stormwater services is levied.

Complaints

4.19 STORMWATER COMPLAINTS SWS3, SWS3a, SWS3b

Number of complaints about the performance of the stormwater network, excluding complaints lodged during extreme events, e.g. a civil defence emergency. Where stormwater quality complaints relate to the following categories these should be recorded separately;

SWS3a: Stormwater blockage complaints

SWS3b: Stormwater fault complaints

Complaints should be recorded using the definition of a complaint provided in the ASNZ10002-2014 Complaints management standard:

“Expression of dissatisfaction made to or about an organisation, related to its products, services, staff or the handling of a complaint, where a response or resolution is explicitly or implicitly expected or legally required”.

Accordingly, if a request for service is required, but the customer does not express dissatisfaction this is not defined as a complaint. For example a customer may require a stormwater grate to be cleaned, but not be dissatisfied with the system.

Where there is more than one complaint per event, each individual complainant is counted separately, not each event or occurrence. Where there are multiple complaints made by a single complainant in relation to one event, these may be counted as a single complaint.

Complaints related to council policies and procedures in relation to stormwater service delivery but not assets, operation or water quality should not be included. This may include complaints related to stormwater rates and charging regimes.

4.20 STORMWATER COMPLAINTS FREQUENCY SWS4

Stormwater complaints per 1000 stormwater serviced properties. Calculated using the following formula;

$$\frac{\text{Total Stormwater Complaints}}{\text{Total Stormwater Serviced Properties}} \times 1000$$

Flooding

4.21 FLOODING EVENTS RESULTING FROM STORMS EXCEEDING STORMWATER CAPACITY SWS5, SWS5a, SWS5b

Number of flooding events that occur in a local authority's district as a result of the capacity of the stormwater network (either primary or secondary flow paths) being exceeded.

Only events that have led to the flooding of habitable floors should be counted.

Floods related to tidal inundation or rivers bursting flood banks should not be included.

Floods that occur in areas outside of the stormwater serviced district should not be included.

Extreme events, such as civil defence emergencies skew long-term trends in council performance. Any such events should be clearly identified in the comments section.

Previous measure "SWS5: Flooding events" split into two measures to distinguish between flooding events related to stormwater capacity and flooding events related to other causes.

SEW5a Number of habitable floors affected by storms exceeding stormwater capacity

It may be that one event results in multiple floors being flooded, each floor must be counted in this measure. "Habitable floor" refers to a floor of a building (including a basement) but does not include ancillary structures such as stand-alone garden sheds or garages.

SW5b Number of habitable floors affected per 1000 stormwater serviced properties

$$= \frac{\text{Number of habitable floors affected per 1000 properties}}{\text{Number of habitable floors affected by storms exceeding stormwater capacity [SWS5a]}} \div \frac{\text{Total Stormwater Serviced Properties [SWB4]}}{\text{Total Stormwater Serviced Properties [SWB4]}}$$

4.22 FLOODING EVENTS RESULTING FROM OTHER CAUSES SWS5c, SWS5d

Number of flooding events that occur in a local authority's district that are not a result of the capacity of the stormwater network (either primary or secondary flow paths) being exceeded. This may include floods related to tidal inundation or rivers bursting flood banks.

Only events that have led to the flooding of habitable floors should be counted.

Extreme events, such as civil defence emergencies skew long-term trends in council performance. Any such events should be clearly identified in the comments section.

SEW5a Number of habitable floors affected by flooding from other causes

It may be that one event results in multiple floors being flooded, each floor must be counted in this measure. "Habitable floor" refers to a floor of a building (including a basement) but does not include ancillary structures such as stand-alone garden sheds or garages.

4.23 FLOODING RESPONSE TIME (hrs) SWS6

Median time taken for the local authority to attend call-outs in response to a flooding event, measured from the time that the territorial authority receives notification to the time that service personnel reach the site.

4.24 STORMWATER NETWORK CAPACITY (%) SWS7a, SWS7b

This is the level of service targeted during the design of primary and secondary network performance. It may differ from delivered performance.

If different levels of service exist across a participant's jurisdiction the value used across the largest proportion of the catchment should be applied.

Units applied should be the annual exceedance probability (AEP) value; the chance or probability of a flooding event occurring annually and should be expressed as a percentage.

If a recurrence interval is used to specify the level of service this should be converted to an AEP. If other engineering standards are applied, list these in the comments section.

SWS7a Primary stormwater network capacity: Engineering design standard AEP for the primary (typically piped) stormwater network.

SWS7b Secondary stormwater network capacity: Engineering design standard AEP for the secondary stormwater network.

The secondary network refers to the path when the primary stormwater system is overloaded, and typically includes drains and other overland flow paths through private property and along roadways, designed to convey excess stormwater with a minimum of damage.

Revenue

4.25 REVENUE (SW) - OPERATING, DEVELOPER, TOTAL REVENUE, TOTAL REVENUE PER PROPERTY SWF1, SWF2, SWF3, SWF4

SWF1 Operating revenue: Stormwater: Operating revenue (income) for the reporting year relating to the total stormwater serviced area.

It includes revenue allocated to the organisation's stormwater department from Council's rates, plus the following where applicable: external contracting income, lease of land or space reserved for assets (e.g. decommissioned pipes as cable ducts), interest income, any other income accrued to the stormwater department or unit.

It excludes all developer cash or asset contributions and grants.

Where a spike in revenue is caused by a large asset sale or other unusual event please describe this in the Comments column.

Definition changed so grants revenue is not included

SWF2 Development Contribution Revenue: Stormwater: Developer revenue (income) for the reporting year. This includes all developer cash contributions. It excludes developer asset contributions.

SWF3 Total revenue: Stormwater: Total stormwater revenue for the reporting year, automatically calculated based on the following formula:

$$\text{Total Revenue} = \text{Operating revenue [SWF1]} + \text{Developer contribution revenue [SWF2]}$$

SWF4 Revenue per serviced property: Stormwater automatically calculated based on the following formula:

$$\text{Revenue per property} = \frac{\text{Total revenue [SWF3]}}{\text{Total stormwater serviced properties [SWB4]}}$$

4.26 DEBT FUNDING SWF5

Increase in debt related to stormwater.

Expenditure

4.27 OPERATING COSTS (SW) – EXTERNAL OPEX, MANAGEMENT, COUNCIL CONTRACT MANAGEMENT, TOTAL OPERATING COST, TOTAL OPERATING COST PER PROPERTY SWF6, SWF7, SWF8, SWF9, SWF10

SWF6a Routine maintenance: Stormwater: The costs (including consultant and contractor costs) associated with scheduled operation and maintenance of the stormwater network.

SWF6a Reactive maintenance: Stormwater: The costs (including consultant and contractor costs) associated with operation and maintenance of the stormwater network, not included as routine maintenance.

SWF7: Management Costs: Organisation costs. This includes salary, accommodation, IT, rate payment and insurance costs.

Further detail added to specify that costs included in this field relate to salary, accommodation, IT, rate payment and insurance costs.

SWF8: Council Contract Management Costs: Council's contract management costs where management of the network is carried out by a Council Controlled Organisation or independent contractor.

Measure descriptor changed from 'SF8 Councils Overview Cost: Stormwater' and extra text added to clarify the measure also includes contract management costs of independent contractors.

SWF9: Operating Cost: Stormwater: Operating cost for the reporting year associated with providing stormwater services, automatically calculated based on the following formula:

$$\begin{aligned} \text{Operating Cost: Stormwater} \\ &= \text{Routine maintenance (SWF6a)} + \text{Reactive maintenance (SWF6b)} \\ &+ \text{Management costs [SWF7]} + \text{Council Overview Costs (SWF8)} \end{aligned}$$

SWF10: Operating Cost per property: Stormwater: automatically calculated based on the following formula:

$$\text{Operating Cost per property} = \frac{\text{Operating cost [SWF9]}}{\text{Total stormwater serviced properties [SWB4]}}$$

4.28 ANNUAL DEPRECIATION SWF11

The depreciation cost in the reporting year as reported in the latest replacement cost valuation.

4.29 INTEREST SWF12a

The interest cost for the reporting year.

4.30 DEBT AFFORDABILITY SWF12b

Interest as a proportion of operational revenue, automatically calculated using the following formula:

$$\text{Debt affordability} = \frac{\text{Interest [SWF12a]}}{\text{Total Revenue: Stormwater [SWF3]}}$$

4.31 OPERATIONAL COST COVERAGE SWF13

Revenue (excluding developer contributions) as a proportion of annual costs (excluding CAPEX), automatically calculated using the following formula:

$$\begin{aligned} \text{Operational Cost Coverage} \\ &= \frac{\text{Stormwater Revenue [SWF1]}}{\text{Operating Cost [SWF9] + Annual Depreciation [SWF11] + Interest [SWF12a]}} \end{aligned}$$

4.32 TOTAL COST SWF14

Total cost for the reporting year associated with stormwater services, automatically calculated using the following formula:

$$\text{Total cost} = \text{Operating cost [SWF9]} + \text{Annual depreciation [SWF11]} \\ + \text{Interest [SWF12a]} + \text{Actual Capital Expenditure [SWF17]}$$

4.33 TOTAL COST PER PROPERTY SWF15

Total Cost per property, automatically calculated using the following formula:

$$\text{Total cost per property} = \frac{\text{Total cost: Stormwater [SWF14]}}{\text{Total Stormwater Serviced Properties [SWB4]}}$$

4.34 BUDGETED CAPITAL EXPENDITURE SWF16, SWF16a, SWF16b, SWF16c

Capital expenditure budget for stormwater in the reporting year, automatically calculated by summing the values below.

SWF16a budgeted capital to meet additional demand: budgeted capital expenditure related to growth in the stormwater system including new works subdivided developments.

SWF16b budgeted capital to improve the level of service: budgeted capital expenditure on existing stormwater assets that is not driven by asset condition or age.

SWF16c budgeted capital to replace existing assets: budgeted capital expenditure related to renewals or replacements or other expenditure.

4.35 ACTUAL CAPITAL EXPENDITURE SWF17, SWF17a, SWF17b, SWF17c

Capital expenditure for stormwater in the reporting year, automatically calculated by summing the values below.

SWF17a actual capital to meet additional demand: Capital expenditure related to growth in the stormwater system including new works subdivided developments.

SWF17b actual capital to improve level of service: Capital expenditure on existing stormwater assets that is not driven by asset condition or age.

SWF17c actual capital to replace existing assets: Capital expenditure related to renewals or replacements or other expenditure on stormwater assets that would otherwise be referred to as capital.

4.36 DEVELOPMENT CONTRIBUTIONS SWF19

Value of assets vested in the council during the reporting year as part of development contributions (excludes cash payments).

Asset value

4.37 STROWMATER ASSET VALUE AT THE END OF THE REPORTING YEAR SWF20

The closing book value of stormwater assets.

4.38 DECLINE IN SERVICE POTENTIAL: STORMWATER SWF21

Ratio of Capital Expenditure to Replace Existing Assets to Annual Depreciation, automatically calculated using the following formula:

$$\begin{aligned} \text{Decline in service potential} \\ &= \text{Actual capital expenditure to replace existing assets [SWF17b]} \\ &\quad / \text{Depreciation [SWF11]} \end{aligned}$$

Grants

4.39 EXTERNAL GRANTS SWF22

Any external grants received (not awarded) during the financial year for capital or operational costs related to the wastewater scheme.

5 Data Confidence Definitions

RATING	DESCRIPTION	PROCESSES	ASSET DATA
5	Highly reliable/ Audited	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.
4	Reliable/ Verified	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.
3	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% to 20% accurate. Some data extrapolation has been applied based on <u>supported</u> assumptions. Occasional data audits verify reasonable level of confidence.
2	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.
1	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.

6 Changes made to the 2017/18 definitions

Measure updated	Description of change
CB10: Internal staff	Clarification added by listing the types of supporting roles which may need to be included in this measure.
CB10b: Retiring staff	New measure
CB11: Contracted staff	Clarification added by listing the functions which may need to be included in this measure.
CB14: Staff training	New measure
CB15, CB15a-CB15d: Qualifications	New measure
CB16: Continuing professional development enrolments	New measure
WSS13a: Water safety plan actions	New measure
WSS13b: Water safety plan implementation	New measure
WSS14: Source water zone management	New measure
WSS15: Source water monitoring	New measure
WWS7a: Unplanned Total Interruptions: Wastewater WWS7a: Unplanned Interruptions Frequency: Wastewater WWS7c: Planed Interruptions: Wastewater	Measures replaces previous question, WWS7a: Failure of wastewater pipes (to align with equivalent questions on water outages)
WWS7b: Third party incidence: Wastewater	Descriptor of indicator has changed from WWS7b: Third party disruptions to the wastewater system, and definition been provided with additional clarifications
WSB9: Water Demand Forecasting	New measure
WWA7k-5: Last year de-sludged	New measure
WWE3a: Wastewater overflows on private	New measure

properties	
WWE2: Wet Weather Wastewater Overflows	<p>Additional clarification “An event needs to be at least 3min in duration to be classed as an event. This criteria is used to eliminate sensor 'noise'.”</p> <p>Additional clarification that Wet weather wastewater overflows may be determined from “either monitoring, field observation” or modelling data (e.g. SCADA alarms or hydraulic models).</p> <p>Definition changed from: “Where overflows occur at multiple locations arising from a particular event or period of rainfall (or there are multiple reported overflows relating to what is effectively a continuous discharge) this is defined as a single overflow.”</p> <p>To</p> <p>“A new overflow starts after a continuous 24 hour period without an overflow. An overflow that continues for longer than 24 hours will be counted as a separate overflow event for each 24 hour period.”</p>
WWA7m: Treatment plant peak wet to average dry weather flow ratio	<p>The following clarifications were added to the definition:</p> <p>Peak wet weather flow is the highest instantaneous peak flow recorded coming into the plant.</p> <p>Average dry weather flow is the average instantaneous flow on days without precipitation.</p>
WWA4: Wastewater CCTV inspection	<p>Clarification added:</p> <p>“Include CCTV inspections conducted following the inspection of new pipes, as well as any inspections conducted as part of maintenance or renewal works.”</p>
SWA6: Stormwater CCTV inspection	<p>Clarification added:</p> <p>“Include CCTV inspections conducted following the inspection of new pipes, as well as any inspections conducted as part of maintenance or renewal works.”</p>
WWE8a Sewage design standards	<p>Measure name changed from “WWE8a: Sewage containment design standards”</p> <p>Defintion changed from: “The capacity of sewage the network has been designed to contain”</p> <p>To “The capacity of diluted sewage the network has been designed to contain during wet weather events”</p> <p>To more accurately articulate what the measure represents.</p>
WWB8: Average daily residential wastewater production (litres/ person/day)	<p>Measure removed as non-residential wastewater figures are unable to be correctly determined (previously the measure had been based on calculations that used trade waste volumes as a proxy).</p>

WSA6: Water supply reservoirs	Clarification added: “If one site or location has more than one tank/reservoir, then count each tank/reservoir separately.”
WSS10: Water response times	Updated to clarify that response times provided should be median values
WWS6: Wastewater response times	Updated to clarify that response times provided should be median values
WWE1b Overflows caused by plant failures	Description changed so that the word “plant” replaces word mechanical to clarify that the definition of this measure includes failures that include power outages. Clarification added that overflows caused by power outages also include those from the electricity supplier’s network.
WSF3 Development Contribution Revenue: Water Supply	Updated to clarify that infrastructure growth charges (received by Watercare who are unable to charge developer contributions) are also included.
WWF3 Development contributions: Wastewater	Updated to clarify that infrastructure growth charges (received by Watercare who are unable to charge developer contributions) are also included.
WSB5a Water imported from other authorities	New measure
WSB5b Water exported to other authorities	New measure
WSF2 Operating revenue: Water supply	Definition changed so grants revenue is not included
WWF2 Operating revenue: Wastewater	Definition changed so grants revenue is not included
SWF1 Operating revenue Stormwater	Definition changed so grants revenue is not included
WSS7: Number of different water charging regimes	Definition added to clarify what is meant by a charging regime.
WSS7a: Fixed Charge: Non-residential water	Clarification added “Do not include charges related to properties which could be serviced but are not connected to the network.”
WSS8a: Fixed Charge: Residential water	Clarification added “Do not include charges related to properties which could be serviced but are not connected to the network.”
WSS7c: Volumetric Charge: Non-residential water	Reporting suggestion added If the volumetric charge is applied only in certain circumstances include these in the comments field.
WSS8c: Volumetric Charge: Residential water	Reporting suggestion added If the volumetric charge is applied only in certain circumstances

	include these in the comments field.
SWE1a: Number of stormwater discharges from the piped network	<p>Expanded definition to provide further clarity on what is included.</p> <p>Changed from “The number of outfalls from stormwater systems controlled by the organisation where stormwater is discharged into receiving water bodies, or to land.”</p> <p>To</p> <p>“The number of direct discharges from the public piped network controlled by the organisation which discharge directly to open watercourses, drains, rivers, coastal areas. This may also include discharge to soakage in rural and / or urban areas where the quality and / or the volume of stormwater discharged may result in an environmental impact.</p> <p>This does not include individual or small groups of road cesspits which may discharge to soakage.”</p>
WWE9a Overflows recorded through verbal reports	Updated to clarify this could be verbal reports either by staff or contractors
CB19c SCADA Controls	<p>Definition changed from “The approximate proportion of your network that can be controlled using your SCADA system.”</p> <p>To</p> <p>“The approximate proportion of pump stations and treatment plants that have elements which can be controlled using SCADA.”</p>
CB19d SCADA Monitoring	<p>Definition changed from “The approximate proportion of monitoring points in the network connected to the SCADA system.”</p> <p>To</p> <p>Definition changed from “The approximate proportion of pump stations and treatment plants that have elements which can be monitored by SCADA”.</p>
WWA7g: Number of consents at each treatment plant	New measure
WWE4e: Wastewater treatment plant consent non-conformance	New measure
WWE4f: Wastewater network discharge non-conformance	New measure
WWE4g: Wastewater network discharge consents	New measure

SWE2e: Stormwater consent non-conformance	New measure
SWS5 Flooding events resulting from storms exceeding stormwater capacity	Previous measure “SWS5: Flooding events” split into two measures to distinguish between flooding events related to stormwater capacity and flooding events related to other causes.
SWS5c Flooding events resulting from other causes	
SWS5a Habitable floors affected by flooding	Previous measure “SWS5a: Number of habitable floors affected” split into two measures to distinguish between habitable flooding related to stormwater capacity and habitable flooding related to other causes.
SWS5d Flooding events resulting from other causes	
WSF10 Management Costs	Further detail added to specify that costs included in this field relate to salary, accommodation, IT, rate payment and insurance costs.
WWF11 Management Costs	Further detail added to specify that costs included in this field relate to salary, accommodation, IT, rate payment and insurance costs.
SWF7 Management Costs	Further detail added to specify that costs included in this field relate to salary, accommodation, IT, rate payment and insurance costs.
WSF11 Councils Contract Management Costs: Water Supply	Measure descriptor changed from WSF11 Councils Overview Cost: Water Supply and extra text added to clarify the measure relates to contract management costs of independent contractors.
WWF12 Council's Contract Management Costs: Wastewater	Measure descriptor changed from WWF12 Councils Overview Cost: Wastewater and extra text added to clarify the measure also includes contract management costs of independent contractors.
SWF8: Council Contract Management Costs: Stormwater	Measure descriptor changed from SF8 Councils Overview Cost: Stormwater and extra text added to clarify the measure also includes contract management costs of independent contractors.
WWE8b Average calculated wet weather overflow frequency	<p>Units field changed from AEP (annual exceedance probability) to ARI (annual recurrence interval).</p> <p>Definition changed from:</p> <p>“The median wet weather overflow frequency determined by recent hydraulic models or original design (if recent modelling doesn’t exist).”</p> <p>To</p> <p>“The average recurrence interval of the modal (most commonly occurring average) event that the existing sewerage network is able to contain.”</p>
SWA1a Total length of public stormwater network	Previously unlined channels were to be included in the length, but swales were not. Unlined channels are no longer included to remove ambiguity.

CB3 Residential properties

Previously this measure had been automatically populated based on census data. It is now required to be entered by participants.