Key performance indicators for annual performance reporting for Queensland urban water service providers

Definitions guide

November 2016

Queensland Government

This publication has been compiled by Water Supply Planning and Regulation, Department of Energy and Water Supply

Key performance indicators for Queensland urban water service providers

The following document outlines definitions and reporting information for the Queensland Government key performance indicators (QGKPIs).

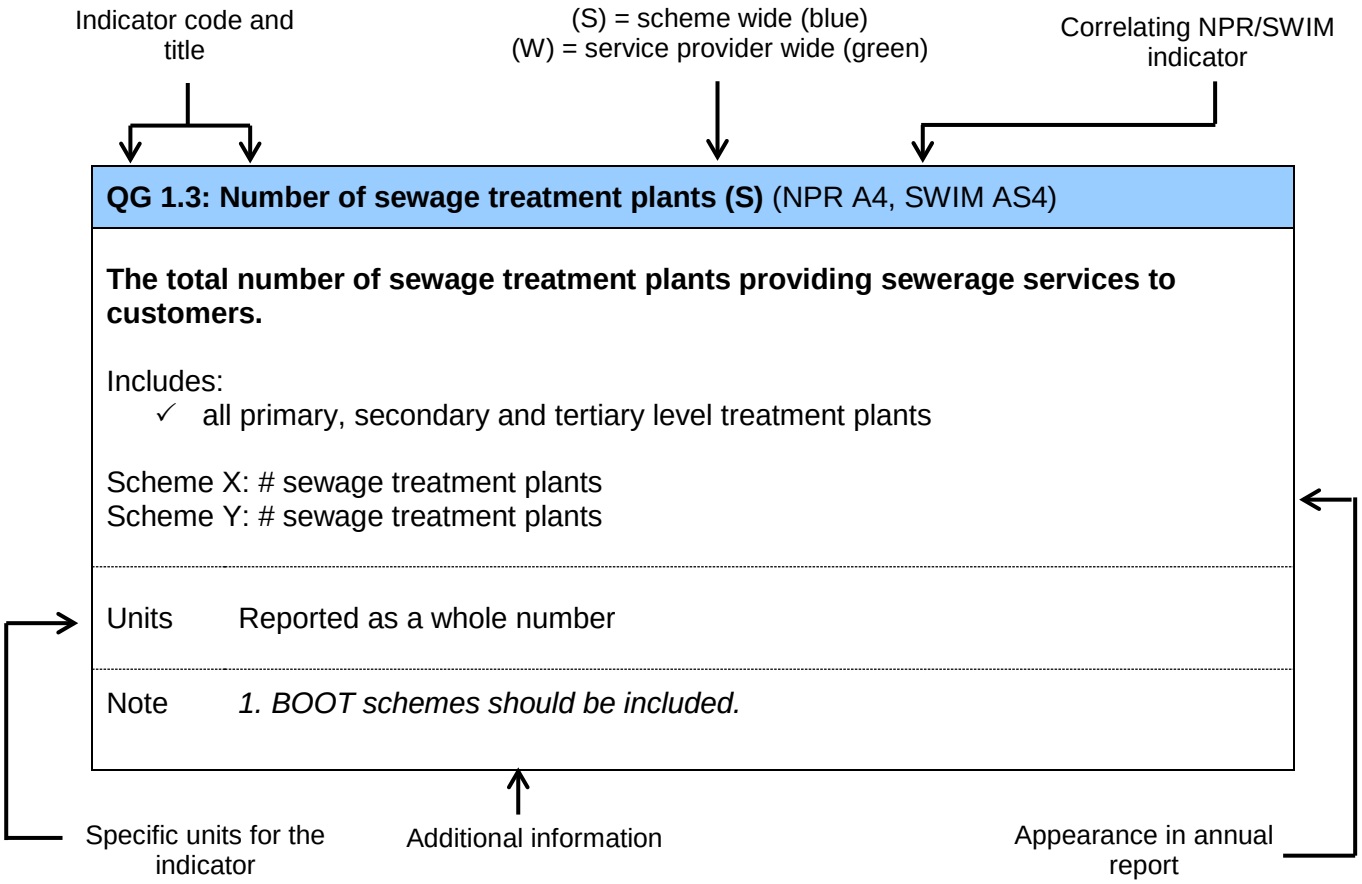
Service providers with greater than 10 000 water connections will also be required to report against the Bureau of Meteorology's National Performance Reporting (NPR) indicators. Notification of applicable QG KPIs and NPR indicators is contained in the 'Performance report requirement notice' issued by Water Supply Regulation, Department of Energy and Water Supply.

Guide to definitions

Indicators are categorised into the following series: general; water security; finance; customer; and distributor-retailers.

Each indicator has a separate table outlining the KPI definition, how it is to be reported, as well as additional information to assist the service provider in collecting and reporting performance data.

Below is a sample of a definition



Commonly used terms

Schemes – the determination of a scheme is left to providers. However, the sum of each scheme must equate to the full service provision area. Where a service provider is having some difficulty establishing schemes, the following advice is offered.

Where possible a single water supply service or sewerage collection and treatment service should be reported as separate schemes as management (and data) should be at this level. So for example, in regional/rural areas where individual towns are distinctly separated then each town with its own water and/or sewerage service should be classed as a scheme. In more urban areas, where areas of service can be less distinct, e.g. two water treatment plants may connect to a single interconnected distribution network then this may become the management unit and thus the scheme.

Urban – any reticulated water and/ or sewerage serviced areas. Includes rural, remote and regional areas and townships.

Non-potable – water that has been removed from the source and is not intended for use as a drinking water supply, whether it is treated or not (also called Raw-partially treated)

Potable Water – water that is intended for use as a drinking water supply, whether it is treated or not. Potable water should materially meet the most current version of the Australian Drinking Water Guidelines (ADWG)

Effluent – wastewater discharged from a sewage treatment facility whether from residential, commercial, industrial connections. Not intended for re-use.

Recycled water – sewage effluent that has been treated for specific re-use purposes and supplements water supply. Includes sewer mining and it may be potable or non-potable. Excludes urban stormwater

Urban stormwater – treated stormwater used by service providers for urban water supply and it may be potable or non-potable.

Desalination water – water sourced from desalination processes and is not confined to marine desalination, unless specifically stated.

Common effluent drainage system – a type of on-site effluent treatment process whereby effluent is piped from individual property septic tanks to a collection point, or into a reticulated sewerage system for further treatment and disposal. The portions of the system owned and operated by the service provider are included in sewerage related KPI reporting.

Water treatment – processes such as filtration, coagulation, pH correction and softening used to remove particulate matter and contaminants. Includes advanced treatment process such as reverse osmosis. Disinfection alone is not considered treatment.

Reporting rules

Not Relevant (NR) – The service provider has never done the activity and did not do it during this reporting year.

Missing Data (MD) - The service provider does the activity but does not know how much and cannot reasonably estimate the data. Previously recorded as No Data (ND)

Zero (0) – The service provider usually does the activity, however, for the reporting year did not do the activity eg. a recycling activity was suspended during the reporting year.

Service providers must use MD for indicators where there is no data available; do not use '0'.

Example - QG 1.10: Volume of water sourced from desalination of marine water (S) (NPR 3.1, SWIM WA61):

- A service provider does not source any water from marine desalination and never has – reported as "NR".
- A service provider does source water from marine desalination but has no meters or other way of estimating the amount sourced – reported as "MD".
- A service provider usually sources water from marine desalination during dry times but due to good rains this reporting period no marine desalination was needed/used – reported as "0".

Missing/estimating data

Service providers should not be entering "MD" (missing data) unless in exceptional circumstances. If a service provider has no data for certain indicators, the service provider must understand why this is the case and use the appropriate reporting rule above.

Service providers should, over time, minimise the number of data estimations that need to be made through the implementation of any necessary measuring devices or alterations to system data collection. It is expected that the number of entries of missing data and estimated data will decrease over time.

Where service providers currently do not have the facilities to collect the data they should put in place a realistic and reproducible way of estimating the values consistently over time. Service providers should enter information into the comments field summarising how the data was estimated and ideally, these established estimation processes should be the same each reporting year to allow across year comparisons of the provider. Where changes to the method of estimation are necessary, this should also be advised through the comments field.

The department will consider how the estimations were determined in undertaking comparisons across service providers.

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Table of tables

Services provided
Please indicate which services you provide. Refer to commonly used terms to assist. Potable Non-potable Recycled Sewerage

Key performance indicator definitions

'1' series - General

QG 1.1: Length of water mains (S) (NPR A2, SWIM AS2)
The total length of water mains delivering potable and non-potable water for urban areas. Includes: ✓ transfer, distribution and reticulation mains ✓ recycled water distribution and reticulation mains Excludes: × mains associated with property water service (mains to meter) connections × mains delivering recycled water for non-urban uses, e.g. agriculture reuse × disused pipe lengths should not be counted, even if they are maintained by the water utility for possible future use × privately owned mains × mains associated with source works, e.g. bore field mains × mains and channels associated with sources that transfer raw water × recycled water mains not supplying water direct to customers × mains associated with facilities, e.g. mains within pump stations, storage facilities or treatment plants Scheme X: # km of water mains Scheme Y: # km of water mains
Units Kilometres (km): one decimal place
Note Ferrule is part of the service connection

1.2: Length of sewerage mains (S) (NPR A5, SWIM AS5)

The total length of mains, including all trunk, pressure and reticulation mains.

Includes:
- ✓ combined sewerage and stormwater mains

Excludes:
- ✓ lengths associated with property connection sewers or conduits carrying treated effluent
- ✓ conduits and pipelines (e.g. feeding paddocks for grass and land filtration)

Scheme X: #km of sewerage mains
Scheme Y: # km of sewerage mains

1.3: Number of sewage treatment plants (S) (NPR A4, SWIM AS4)

The total number of sewage treatment plants providing sewerage services to customers.

Includes:
- ✓ all primary, secondary and tertiary level treatment plants

Scheme X: # sewage treatment plants
Scheme Y: # sewage treatment plants

Unit Reported as a whole number

Note
BOOT schemes should be included

1.4a: Number of water treatment plants (S) (NPRA1)

Number of water treatment plants providing full water treatment.

Excludes
- × disinfection only schemes
- × secondary disinfection even when there is pH correction

Scheme X: # water treatment plants
Scheme Y: # water treatment plants

Units Reported as a whole number

Note
If response is zero (0) water treatment plants, then 1.4b should not be answered

QG 1.4b: Capacity of water treatment plants (S)

Daily reliable production capacity of water treatment plants providing full water treatment and producing potable water.

Excludes
- × disinfection only schemes
- × secondary disinfection even when there is pH correction

Scheme X: Total treatment capacity of # ML per day
Scheme Y: Total treatment capacity of # ML per day

Units Megalitres per day (ML/day): two decimal places

Notes
1. Where applicable capacity is to be expressed based on designed capacity and a 20-hour operational timeframe
2. For schemes operating 24/7 or less than 20 hours per day, capacity should be the best estimate of the reliable daily production capacity

QG 1.5: Maximum daily demand (S)

The greatest daily demand for potable and non-potable water recorded in the reporting year.

Scheme X: Maximum daily demand # ML per day
Scheme Y: Maximum daily demand # ML per day

Units Megalitres per day (ML/day): as a whole number

Notes
1. Maximum daily demand is to represent the maximum volume provided to the network
2. Small service providers should consider excluding days on which main bursts, firefighting or flushing occurred. Service providers may consider using the 90th percentile maximum daily demand
3. May be estimated by using a single average daily demand multiplied by the peaking factor as determined by the service provider or using mean day maximum month values, noting that this is likely to be less than the peaking factor

QG 1.6: Total volume of potable water produced (S) (NPR W11.3, SWIM WA7)

The annual total volume of potable water produced by all water treatment plants in the scheme and /or for schemes where there are no water treatment plants, the annual total volume of water extracted for supply as potable water.

Excludes:

- × recycled water
- × urban stormwater

Scheme X: # ML total volume of potable water produced
Scheme Y: # ML total volume of potable water produced

Units Megalitres (ML): as a whole number

Notes

1. This indicator measures the volume of water produced at the treatment plant or extracted from the source NOT the volume of water supplied, meter errors or other consumption. Refer to Estimating Data for further information on estimating volumes
2. This indicator is used to determine non-revenue water QG1.19

QG 1.7: Total potable water storage (S)

Total available storage capacity for potable water (assuming no further production).

Scheme X: Total treated / drinking water storage of # ML
Scheme Y: Total treated / drinking water storage of # ML

Units Megalitres: one decimal place

Notes

1. If potable water production stopped for any reason, what storage capacity is available to supply to customers (use full capacity of storage infrastructure, not current storage volumes)
2. If there is no treated/drinking water storage refer to Reporting Rules to determine whether NR or 0 is appropriate
3. Does not include pipe capacity

QG 1.8: Volume of water sourced from surface water (S) (NPR W1, SWIM WA1)

The annual total volume of water (potable and non-potable) abstracted by the service provider from surface water sources for a scheme.

Includes:
- ✓ dams
- ✓ rivers or irrigation channels
- ✓ surface water desalination

Scheme X: #ML surface water
Scheme Y: #ML surface water

Units Megalitres (ML): as a whole number

Note
There may be a requirement in some cases for water service providers to aggregate volumes from various surface water sources

QG 1.9a: Volume of water sourced from groundwater (S) (NPR W2, SWIM WA100)

The annual total volume of water (potable and non-potable) extracted from groundwater.

Includes:
- ✓ groundwater desalination

Scheme X: #ML groundwater
Scheme Y: #ML groundwater

Units Megalitres (ML): as a whole number

Note
There may be a requirement in some cases for water service providers to aggregate volumes from various groundwater sources

QG 1.9b: Volume of water received from bulk supplier (S) (NPR W5, SWIM WA45)

The annual total volume of water (potable and non-potable) received from another service provider or entity outside of the providers' area of responsibility.

Includes:

- ✓ water from recycled sewage
- ✓ urban stormwater received
- ✓ water that is subsequently exported to another service provider

Scheme X: #ML bulk water
Scheme Y: #ML bulk water

Units Megalitres (ML): as a whole number

Note
There may be a requirement in some cases for water service providers to aggregate volumes from various bulk suppliers

QG 1.10: Volume of water sourced from desalination of marine water (S) (NPR W3.1, SWIM WA61)

The annual total volume of water (potable and non-potable) sourced from desalination plants for a scheme.

Includes:

- ✓ marine water sources

Excludes:

- × groundwater sources
- × surface water sources

Scheme X: #ML water from desalination
Scheme Y: #ML water from desalination

Units Megalitres (ML): as a whole number

Note
There may be a requirement in some cases for water service providers to aggregate volumes from various sources

QG 1.11: Total recycled water supplied (S) (NPR W26, SWIM WA26)

The sum of all treated effluent that is used by either the service provider itself, a business supplied by the service provider, or supplied through a third-pipe system for urban reuse.

Includes:
- ✓ recycled water provided for on-site reuse, agriculture, irrigation, industry, potable or other use external to the treatment process
- ✓ potable and non-potable water
- ✓ volumes taken by sewer mining

Excludes:
- × evaporation
- × urban stormwater

Scheme X: #ML recycled water
Scheme Y: #ML recycled water

Units Megalitres (ML): as a whole number

Note
There may be a requirement in some cases for water service providers to aggregate volumes from various sources

QG 1.12: Total water sourced (S) (NPR W7, SWIM WA7)

The sum of the annual total volume of water sourced.

Includes water sourced from:
- ✓ surface water (QG 1.8)
- ✓ groundwater (QG 1.9a)
- ✓ bulk supplier (QG1.9b)
- ✓ marine desalination (QG 1.10)
- ✓ recycling (QG 1.11)
- ✓ urban stormwater used
- ✓ any other sources

Scheme X: #ML total water sourced
Scheme Y: #ML total water sourced

Units Megalitres (ML): as a whole number

QG 1.13: Connected residential properties – water supply (S) (NPR C2, SWIM CS2)

Number of residential water properties that are:

- **connected to the service provider's water system**
- **the subject of billing for water supply - fixed and /or consumption based**
- **any property which, at the end of the reporting period, is connected to the water system and is separately billed for the water services - fixed and/or consumption based**

Includes:

- ✓ a connected, rateable residential property
- ✓ a connected, non-rateable residential property
- ✓ a connected but non-metered residential property

Excludes:

- × a rated but unconnected property (e.g. vacant lot)
- × body corporate
- × a non-real property or strata garages (e.g. a master meter for a block of separately metered strata title flats)

Scheme X: # of thousands of connected residential properties (water supply)
Scheme Y: # of thousands of connected residential properties (water supply)

Units Thousands (000s) to 3 decimal places (e.g. 3 675 is reported as 3.675)

Notes

1. Properties are classified according to their main purpose
2. The owner and tenant of a rented property are **not** counted as separate properties
3. Properties with dual reticulation are counted as 1 property
4. Where a service provider has 10% or fewer of its properties as strata title flats, it is acceptable to report each such block of flats as 1 property

QG 1.14: Connected non-residential properties – water supply (S) (NPR C3, SWIM CS3)

Number of non-residential properties that are:

- **connected to the service provider's water system**
- **the subject of billing for water supply - fixed and /or consumption based**
- **any property which, at the end of the reporting period, is connected to the water system and is separately billed for the water services - fixed and/or consumption based**

Includes:

- ✓ a connected, rateable non-residential property
- ✓ a connected, non-rateable non-residential property
- ✓ a connected but non-metered non-residential property
- ✓ standpipes
- ✓ public facilities

Excludes:

- × a rated but unconnected non-residential property (e.g. vacant lot)
- × body corporate
- × a non-real property or strata garages (e.g. a master meter for a block of separately metered strata title flats)

Scheme X: # of thousands of connected non-residential properties (water supply)
Scheme Y: # of thousands of connected non-residential properties (water supply)

Units Thousands (000s) to 3 decimal places (e.g. 3 675 is reported as 3.675)

Notes

1. Properties are classified according to their main purpose
2. The owner and tenant of a rented property are **not** counted as separate properties
3. Properties with dual reticulation are counted as 1 property
4. Where a service provider has 10% or fewer of its properties as strata title flats, it is acceptable to report each such block of flats as 1 property

QG 1.15: Connected residential properties – sewerage (S) (NPR C6, SWIM CS6)

Number of residential water properties that are:

- **connected to the service provider's sewerage system**
- **the subject of billing for sewerage services - fixed and /or usage based**
- **any property which, at the end of the reporting period, is connected to the sewerage system and is separately billed for the sewerage services - fixed and/or usage based**

Includes:

- ✓ a connected, rateable residential property
- ✓ a connected, non-rateable residential property
- ✓ a connected but non-metered residential property

Excludes:

- × a rated but unconnected property (e.g. vacant lot)
- × body corporate
- × a non-real property or strata garages (e.g. a master meter for a block of separately metered strata title flats)

Scheme X: # of thousands of connected residential properties (sewerage)
Scheme Y: # of thousands of connected residential properties (sewerage)

Units Thousands (000s) to 3 decimal places (e.g. 3 675 is reported as 3.675)

Notes

1. Properties are classified according to their main purpose
2. The owner and tenant of a rented property are **not** counted as separate properties
3. Where a service provider has 10% or fewer of its properties as strata title flats, it is acceptable to report each such block of flats as 1 property

QG 1.16: Connected non-residential properties – sewerage (S) (NPR C7, SWIM CS7)

Number of non-residential properties that are:

- **connected to the service provider's sewerage system**
- **the subject of billing for sewerage services - fixed and /or usage based**
- **any property which, at the end of the reporting period, is connected to the sewerage system and is separately billed for the sewerage services - fixed and/or usage based**

Includes:

- ✓ a connected, rateable non-residential property
- ✓ a connected, non-rateable non-residential property
- ✓ a connected but non-metered non-residential property
- ✓ public facilities

Excludes:

- × a body corporate
- × a rated but unconnected non-residential property (e.g. vacant lot)
- × a non-real property or strata garages (e.g. a master meter for a block of separately metered strata title flats)

Scheme X: # of thousands of connected non-residential properties (sewerage)
Scheme Y: # of thousands of connected non-residential properties (sewerage)

Units Thousands (000s) to 3 decimal places (e.g. 3 675 is reported as 3.675)

Notes

1. Properties are classified according to their main purpose
2. The owner and tenant of a rented property are **not** counted as separate properties
3. A sewerage property which is also a trade sewerage property counts as one non-residential connected property
4. Where a service provider has 10% or fewer of its properties as strata title flats, it is acceptable to report each such block of flats as 1 property

QG 1.17a: Volume of potable water supplied – residential (S) (NPR W8, SWIM WA8)

Total metered and estimated non-metered potable water supplied to residential properties from the water supply scheme for the reporting period.

Includes:

- ✓ potable water supplied to residential connections whether it is treated or not
- ✓ recycled water and stormwater for potable use

Scheme X: #ML of potable water supplied to residential properties
Scheme Y: #ML of potable water supplied to residential properties

Units Megalitres (ML): as a whole number

Note

This indicator is used to determine non-revenue water (QG1.19)

QG 1.17b: Volume of non-potable water supplied – residential (S) (NPR W8, SWIM WA8)

Total metered and estimated non-metered non-potable water supplied to residential properties from the water supply scheme for the reporting period.

Includes:

- ✓ non-potable water supplied to residential connections whether it is treated or not
- ✓ recycled water and stormwater for non-potable use

Scheme X: #ML of non-potable water supplied to residential properties
Scheme Y: #ML of non-potable water supplied to residential properties

Units Megalitres (ML): as a whole number

QG 1.18a: Volume of potable water supplied – commercial, municipal and industrial (S) (NPR W9, SWIM WA9)

Total metered and estimated non-metered potable water supplied to commercial, municipal and industrial properties for the reporting period.

Includes:

- ✓ potable water supplied to a commercial, municipal and industrial connections whether it is treated or not
- ✓ recycled water and stormwater for potable use

Scheme X: #ML of water supplied to commercial, municipal and industrial properties
Scheme Y: #ML of water supplied to commercial, municipal and industrial properties

Units Megalitres (ML): as a whole number

Note

This indicator is used to determine non-revenue water (QG1.19)

QG 1.18b: Volume of non-potable water supplied – commercial, municipal and industrial (S) (NPR W9, SWIM WA9)

Total metered and estimated non-metered non-potable water supplied to commercial, municipal and industrial properties for the reporting period.

Includes:

- ✓ non-potable water supplied to a commercial, municipal and industrial connections whether it is treated or not
- ✓ recycled water and stormwater for non-potable use

Scheme X: #ML of water supplied to commercial, municipal and industrial properties
Scheme Y: #ML of water supplied to commercial, municipal and industrial properties

Units Megalitres (ML): as a whole number

QG 1.19: Volume of potable non-revenue water (S) (based on NPR W10 and W10.1, SWIM WA36)

The volume of potable water consumed that does not generate revenue for the service provider.

Calculated using the volume of potable water produced (QG 1.6) less the volume of potable water supplied to residential (QG 1.17a) and the volume of potable water supplied to commercial, municipal and industrial (QG 1.18a).

Includes:

- ✓ unbilled authorised potable water consumption (e.g. fire-fighting, water treatment process water, flushing)
- ✓ unauthorised potable water consumption (e.g. illegal theft)
- ✓ customer metering errors
- ✓ leakage and overflow of potable water from, service reservoirs, bursts from mains and service connections up to customer meters

Excludes:

- × volume of residential potable water supplied
- × volume of commercial, municipal and industrial potable water supplied
- × volume of recycled water potable water supplied
- × volume of stormwater potable water supplied

Scheme X: # ML volume of non-revenue water
Scheme Y: # ML volume of non-revenue water

Units Megalitres (ML): as a whole number

Example
The total volume of potable water produced indicated at (QG 1.6) is 12,000 ML. The sum of the residential potable water supplied and the commercial, municipal and industrial potable water supplied (QG 1.17a and QG 1.18a) is 10,200 ML. The volume of non-revenue water would be (12,000 – 10,200) = 1,800 ML.

The service provider reports 1,800 ML

QG 1.20: Total full-time equivalent water and sewerage services employees (W)

The total number of personnel involved in delivering water and sewerage services at the end of the reporting period including administrative and maintenance services, whether direct employees or indirect employees e.g. contractor staff.

Includes:

- ✓ operational employees
- ✓ administrative employees
- ✓ maintenance employees
- ✓ laboratory employees
- ✓ contractors employed in these areas

Excludes:

- × contractors employed in constructing or upgrading a plant or network as a one off

full-time equivalent water and sewerage services employees

Units Full-time equivalent: one decimal place

Example

A small service provider has 4 FTEs employed in operations and maintenance for its water and sewerage systems and 2 administrative FTEs employed across the local government who spend about a quarter of their time dealing with water and sewerage business.

Total number of FTE water and sewerage services employees is 4 + (0.25 x 2) = 4.5

The service provider reports 4.5 FTEs.

If a provider has a discrete business unit which provides commercial water services to other providers and customers. Then proportion of staff undertaking work for the provider should be included, but not those working for other customers. This would be calculated on the proportion of external and internal effort.

Note

Local government finance and other staff who partially support water service activities should also be included based on an estimate of the proportion of their time spent supporting the water business

‘2’ series – Water security

Series 2 (Water Security) KPIs collectively are aimed at enabling a service provider to outline the water supply security situation of the water supply system over the coming reporting period and out to 5 years.

The examples shown for each KPI are provided for service providers’ information/consideration only. They are often simplified and are not meant to be exhaustive/prescriptive. The methodology and approach used by each service provider should be determined by the service provider based on a range of issues including the characteristics of the supply systems, the available information and available tools. Generally, the service provider could consider that “normal/average” conditions apply when developing a response (e.g. rainfall, evaporation, streamflow and groundwater recharge and so on).

Service providers are encouraged to provide information regarding details of the supply system, assumptions and methodology in the comments field to assist understanding. Where a text response is mandated for a KPI (e.g. If NOT OK, insert a text response), the absence of an accompanying text explanation will be considered to be a non-compliant response.

QG 2.1: Months of supply remaining at end of reporting period (30 June) (S)

The number of months of (potable and non-potable) supply remaining based on total anticipated water demand (QG 2.4) and excluding contingency supplies (QG 2.3).

Scheme X: # months of supply remaining
Scheme Y: # months of supply remaining

Units Months

Example

WSP A holds a water allocation of 5,000 ML/annum of ‘High Priority’ (HP) water in a dam, and services a current demand of around 4,000 ML/annum. Based on the current announced allocation, the current level in the dam, the historical performance of the dam, average assumed inflows, assumption regarding water use by other users and understanding the projected town water demand, WSP A undertakes an indicative water balance and considers that 30 to 32 months of supply remain.

- WSP A reports ‘30’.

WSP B relies on bores that have met town water supply requirements under most conditions. However, some periods of falling bore levels due to poor recharge events have led to the need to augment supply and/or apply restrictions. When graphed and examined, the historical information on bore level and demand exhibit a trend in the rate of declining bore levels across the various events. Through extrapolation and historical experience in previous events, this declining trend can be used to estimate the time to supply shortfall. In accordance with their trend extrapolation and without any further significant recharge events, WSP B estimates 10 months to supply shortfall.

- WSP B reports ‘10’ and a response to QG 2.2 is triggered.

WSP C has access to 8,600 kL of water stored in an in-stream storage/pumping pool. The river has in the past had periods of low flow and there have been negligible inflows to the pumping pool over the past six months. Anticipated demand is 1,750 kL per month. At forecast rates of demand and storage loss, and without access to new run of river flows, the WSP expects that around 18 weeks’ supply remain.

- WSP C reports ‘4’, submits quarterly information reports to the regulator, and responses to QG2.2 and QG2.3 are triggered.

Notes

1. If response <12 months, then triggers (*QG 2.2*).
2. If response <6 months, then responses to both (*QG 2.2*) *and* (*QG 2.3*) are triggered. Service providers may also be requested to submit information on supply to meet demand by the Queensland Water Supply Regulator on quarterly basis
3. Providers using run-of-river or groundwater based supply systems including on the Great Artesian Basin should report based on best estimates considering recent performance of these systems

QG 2.2: Anticipated water supply availability to meet demand for next reporting year (at QG 2.4) (S)

The service provider's statement on water supply availability to meet demand for next reporting year

Reported as ok/not ok. If not ok the service provider to provide a text response outlining the anticipated threat.

Scheme X: ok/not ok. If not ok, please add a text response.
Scheme Y: ok/not ok. If not ok, please add a text response.

Units ok/not ok

Example

WSP B reported 10 months' available supply at (QG 2.1), triggering a response to QG2.2. The WSP relies on bores that have met town water supply requirements under most conditions. However, some periods of falling bore levels due to poor recharge events have led to the need to augment supply and/or apply restrictions. With the historical information on bore level and demand graphed and examined, the WSP estimated the time to supply shortfall without any further significant recharge events.

- WSP B reports 'NOT OK' and inserts a text response explaining the situation. No response to QG2.3 is required.

WSP C reported 4 months' available supply at (QG 2.1), triggering a response to QG2.2. WSP C can access 8,600 kL of water stored in an in-stream storage/pumping pool. There have been negligible inflows to the pumping pool over the past six months. Anticipated monthly demand is 1,750 kL. At forecast levels of demand and storage loss, and without access to new run of river flows, WSP C expects that around 18 weeks' supply remain.

- WSP C reports 'NOT OK', inserts a text response explaining the situation, and a response to QG2.3 is required based on answer to QG 2.1.

WSP D relies on run-of-river flows and, due to very limited in-stream storage, reported 2 months' available supply at (QG 2.1). Because of its supply arrangements, WSP D usually has only a few months' stored supply. However, the river is continually replenished by run of river flows. WSP D determines (based on best estimates and past experience) that continuity of supply is unlikely to be threatened in most years.

- WSP D reports 'OK' and inserts a comment explaining the reasons that the supply is considered secure and a response to QG2.3 is required based on answer to QG 2.1.

Notes

1. Only required if response to (*QG 2.1*) < 12 Months
2. A comment (inserted in the separate comment field) may be appropriate if the Service Provider is using experience/judgement as with the WSP D example

QG 2.3: Available contingency supplies (S)

The service provider's statement describing the available contingency supplies.

Includes:

- ✓ the nature of the contingency supply source/s
- ✓ the absolute capacity (ML/a) of the contingency supply source/s
- ✓ the expected time taken to implement the contingency supply
- ✓ any other information

Scheme X: yes/no. Please add a text response.
Scheme Y: yes/no. Please add a text response.

Units yes/no

Example

WSP C reported 4 months' supply remaining at (QG 2.1), triggering a response at (QG 2.3). The service provider's supply occasionally drops below 6 months' prior to the wet season and this has already prompted the Council to commence construction of an emergency supply pipeline to a nearby town with a more secure supply source.

- WSP C reports 'YES' and adds a text response explaining the pipeline project will be completed before local supplies are exhausted and that the pipeline is able to provide sufficient contingency supply on a seasonal basis.

WSP E reported less than 6 months' supply remaining at (QG 2.1), triggering a response at (QG 2.3). There are no viable identified local alternative supply sources, so WSP E has an arrangement to cart water from a neighbouring provider in the event of a water supply threat. Short term and long term supply solutions should be included where appropriate.

- WSP E reports 'YES' and adds the text response: 'Carting from neighbouring provider to provide for drinking water requirements. This should provide sufficient volume for a restricted contingency supply and, by agreement, is able to commence at 7 days' notice. A total outdoor water usage ban will apply on commencement of carting.'

WSP F reported less than 6 months' supply remaining at (QG 2.1). However, it does not have a current drought management strategy and has not identified suitable emergency supplies.

- WSP F reports 'NO' and adds a text response explaining the current situation and the actions that the WSP intends to remedy the situation.

Notes

1. Only required if response to (QG 2.1)< 6 Months
2. A supporting text response is required for both **YES** and **NO** responses
3. The examples provided at (QG2.7) may also be helpful to developing a response here

QG 2.4: Total anticipated water demand for next reporting year (S)

The total anticipated (potable and non-potable) water demand for the next reporting year.

Scheme X: #ML anticipated water demand (for the next reporting year)
Scheme Y: #ML anticipated water demand (for the next reporting year)

Units Megalitres (ML): as a whole number

Example
Based on the total volume of raw water that WSP G sourced in the previous water year of 15,250 ML, plus a small anticipated increase in the serviced population over the coming year that was identified in Council's population forecasts, trends in development applications received by Council and new connections and confirmed by the Queensland Government Statistician's Office (QGSO) population forecasts.

- WSP G reports '16,800 ML'.

WSP H sourced an average of 130,000 ML of raw water in the past few water years and has recently introduced tariff reform that it believes will reduce overall demand. Additionally, it anticipates a decrease in water demand due to the closure of significant industry or mines over the coming year which is confirmed by various sources.

Notes

1. Anticipated annual water demand to be guided by available information including:
   - water demand trends (including effects of water restrictions and tariff changes)
   - development approvals and applications
   - town planning documents
   - local and regional growth reports and documents
   - growth projections
   - inclusion of treatment losses, distribution losses and other non-revenue water in the demand assessment (i.e. WSP response represents the total volume of raw water sourced for the scheme)

QG 2.5: Total anticipated annual water demand in five years' time (S)

The total anticipated annual water demand for the year five years after the reporting year.

Scheme X: # ML total anticipated annual water demand (for the year 5 years ahead)
Scheme Y: # ML total anticipated annual water demand (for the year 5 years ahead

Units Megalitres (ML): as a whole number

Example
The Queensland Government Statistician's Office (QGSO) in Queensland Treasury projects a town's population to increase by 15% over the next five years. WSP I examines its historical growth in connections and considers that this estimated rate of future growth is consistent with historical growth in new connections. WSP I forecasts changes to residential demand by calculating this proportional increase when projecting the annual demand in 5 years' time. From the current annual demand of 20,000 ML, WSP I assumes that per capita demand remains constant, anticipated annual demand in five years is calculated as 20,000 ML x 115% = 23,000 ML.

- WSP I reports '23,000 ML'. The WSP uses the comment field to outline the methodology.

The QGSO projects a town's population to increase by 15% over the next five years due to the opening of a new processing facility in the area. WSP J also considers the planned water efficiency program could cut 10% from the anticipated future demand increase and 5% from existing demand. WSP J forecasts changes to residential demand by considering these proportional changes from water demand in the current year. Anticipated annual demand in five years is calculated as (20,000 ML x 95%) + (20,000 ML x 15% x 90%) = 21,700 ML/a.

- WSP J reports '22,600 ML'. The WSP uses the comment field to outline the methodology.

WSP K has a detailed lot-based demand forecasting model that is linked to Council's population forecasting and identifies upcoming growth in various sectors in the serviced area. Taking into account the significant growth forecast in the residential and industrial sectors associated with recent increase in mining activity in the region the WSP uses the model to estimate the anticipated demand for the next reporting year.

- WSP K reports '14,500 ML'. The WSP uses the comment field to outline the methodology.

Note
Anticipated annual water demand to be guided by available information including:

- water demand trends (including effects of water restrictions and tariff changes)
- development approvals and applications
- town planning documents
- local and regional growth reports and documents
- growth projections

QG 2.6: Anticipated capacity to meet demand in five years' time (at QG 2.5) (S)

The service provider's statement on capacity to meet annual demand in the year five years after the reporting year (QG 2.5).

Reported as ok/not ok. If not ok the service provider to provide a text response describes the anticipated threat

Scheme X: ok/not ok. If not ok, insert text response
Scheme Y: ok/not ok. If not ok, insert text response

Units ok/not ok

Examples
WSP L is anticipating a significant increase in demand for a particular scheme. The service provider's forecasting suggests that while current town water demand can be met from existing sources, a recent hydrological assessment of the existing supply sources suggests there may be insufficient yield from existing supply sources to meet water demand in 5 years' time. The WSP is currently investigating alternative supply sources.

- WSP L reports 'not ok' and provides a summary of the anticipated supply shortfall, including forecasting when a shortfall may arise. A response to QG 2.7 is triggered.

WSP M anticipates growth in a major population centre to occur in line with the QGSO population forecast. While current water demand can be met from existing sources, it is nearing the capacity of the WSP's existing water allocations. High and medium priority allocations are available for sale in existing supply sources. The WSP is assessing options for securing additional water allocations.

- WSP M reports 'NOT OK' and provides a summary of the anticipated supply shortfall, including forecasting when a shortfall may arise, and outline that the WSP is investigating the purchase of additional allocations to remedy this situation. A response to QG 2.7 is triggered.

Note
Response 'not ok' requires a text response and triggers (QG 2.7)

QG 2.7 - Planned supply system response (S)

A text response describing the planned system supply response actions.

Includes, but not limited to:

- ✓ demand management
- ✓ leakage management
- ✓ source substitution
- ✓ efficiency programs
- ✓ supply system augmentation
- ✓ savings / contribution of the actions in absolute volume (ML/a)
- ✓ changes to tariff structure
- ✓ and any other information

Scheme X: yes/no. Please add a text response
Scheme Y: yes/no. Please add a text response

Units yes/no

Examples

WSP N reported 'not ok' at (QG 2.6), which triggered the requirement for a response at (QG 2.7). WSP N is anticipating a significant increase in demand for a particular scheme. The WSP's forecasting suggests there may be insufficient water allocation to meet water demand in 5 years' time. The WSP is currently investigating alternative supply sources and has developed an interim supply system response to the shortfall.

- WSP N reports 'YES' and in the required text response, provides details of its short-term response including the capacity of its demand management, leakage management and efficiency programs to reduce demand. WSP N also provides its long-term response to the anticipated shortfall, including details of a planned pipeline to an existing storage, timing for construction and the potential timing of when the impoundment could reach minimum operating level.

WSP O reported 'not ok' at (QG 2.6), which triggered the requirement for a response at (QG 2.7). The WSP services a town that has experienced higher than expected growth in the past few years and the WSP is currently meeting the increased demand with water sourced under a contract with a bulk supplier. The contract is due to expire in 2 years. WSP O considers the new population to have stabilised and has decided to seek a permanent water allocation. The WSP is currently investigating options to secure a permanent water allocation to meet their needs.

- WSP O reports 'YES' and in the required text response, provides details of its plan to proceed with the permanent water trade, effect a permitted change of use under the ROP and register Council as the owner of the new allocation.

WSP P reported 'not ok' at (QG 2.6), which triggered the requirement for a response at (QG 2.7). The WSP has identified several areas with unusually high leakage/losses. Before commencing an expensive investigation into new supply sources, the WSP proposes a local infrastructure renewal program to minimise existing losses because preliminary assessment indicates that the possible savings have the potential to meaningfully address the potential shortfall identified under QG 2.6.

- WSP P reports 'yes' and in the required text response, provides details of its local infrastructure renewal program to minimise existing losses.

Note

Only required if response to (QG 2.6) is reported as not ok

QG 2.8: Water restrictions (duration) (S)

The number of days in the reporting year where water restrictions (of any level) were applied.

Scheme X: # days of water restrictions in place
Scheme Y: # days of water restrictions in place

Units Days: as a whole number

Example
WSP R implements water restrictions for about 13 weeks in the reporting year, and can check the start and end dates by reference to Council notices. WSP R has a Permanent Water Conservation Measures which are in place year-round and these are not considered nor reported as water restrictions.

- WSP R reports '94' and a response to QG 2.9 is triggered.

WSP S has not implemented water restrictions. WSP S has a Permanent Water Conservation Measures which are in place year-round and these are not considered nor reported as water restrictions.

- WSP S reports '0'.

Notes

1. For the purpose of this calculation permanent water conservation measures are not to be considered as water restrictions
2. A response > 0 triggers (QG 2.9)

QG 2.9: Water restrictions (severity) (S)

Demand reductions achieved for the most severe restriction implemented in the current reporting year.

INCLUDES:

- ✓ restrictions for planned maintenance purposes

EXCLUDES:

- × restrictions on recycled water

Scheme X: % demand reductions under the most severe restriction

Scheme Y: % demand reductions under the most severe restriction

Units Percentage: as a whole number

Formula

Calculated as (1-(R/U))*100 where:

R = average monthly volume of water supplied during the most severely restricted period.

U = average monthly volume of water supplied during the most recent comparable unrestricted period.

Example

In (QG 2.8) WSP R reported 94 days of water restrictions, triggering a required response for (QG 2.9). WSP R applied two levels of water restrictions over the 94 days, with Level 2 (the more restrictive) running all November. With restrictions in place, November's demand was 1,360 ML. Demand in November in the previous year was also restricted (so it isn't a comparable period of unrestricted use), but October and November usually record about the same demand. Therefore, WSP J decided "the most recent comparable period of unrestricted use" was October in the previous year (October's demand was 1,570 ML). To calculate the demand reduction attributable to Level 2 water restrictions, use the formula: (1-(R/U))*100.

R = 1360 ML
U = 1570 ML
Demand reduction = ((1 - ((1570/1360) x 100
= 15.44%

- WSP R reports '15%'.

WSP T reported 310 days of water restrictions. WSP T applied four levels of water restrictions, with Level 4 (the most restrictive) running from June to November. With the Level 4 water restriction in place, total demand from June to November was 6,000 ML. With restrictions used so frequently in recent years, WSP T decided "the most recent comparable period of unrestricted use" was the June to November period back in 2009 (7,500 ML). To adjust for population growth since 2009, WSP S considers its own 'Number of connections' data and historical population data available from the Queensland Government Statistician's Office. WSP T decides to apply a 15% coefficient to 2009 demand data to reflect population growth since "the most recent comparable period of unrestricted use". To calculate the demand reduction attributable to Level 4 water restrictions, use the formula: (1-(R/U))*100.

R = 6,000 ML
U = 7,500 ML x 115%
Demand reduction = ((1 - ((6,000/8,625) x 100
= 27.27%

- WSP T reports '27%'.

Notes
1. Only required if response to QG 2.8 > 0
2. Water supplied is to represent the volume of water provided into the distribution network for use
3. For the purpose of this calculation permanent water conservation measures are not to be considered as water restrictions. See example.

'3' series – Finance

QG 3.1: Total water supply capital expenditure (W) (NPR F14, SWIM FN14)

The actual capital expenditure on water supply for the reporting year.

Includes:
- ✓ new works
- ✓ renewals or replacements
- ✓ other expenditure that would otherwise be referred to as capital
- ✓ recycling water assets (see definition of recycled water)
- ✓ plant and equipment

water supply capital expenditure ($'000s)

Units Thousands of dollars ($'000s): to nearest $'000

Example
Service provider spent $32,420 on water supply capital expenditure

The service provider reports 32

QG 3.2: Total sewerage capital expenditure (W) (NPR F15, SWIM FN15)

The actual capital expenditure on sewerage services for the reporting year.

Includes:
- ✓ new works
- ✓ renewals or replacements
- ✓ other expenditure that would otherwise be referred to as capital
- ✓ plant and equipment

Excludes:
- × recycling water assets (see definition of recycled water)

sewerage capital expenditure ($'000s)

Units Thousands of dollars ($'000s): to nearest $'000

Example
Service provider spent $32,420 on sewerage capital expenditure

The service provider reports 32

QG 3.3: Capital works grants - water (W) (NPR F26, SWIM FN26)

Total capital works grants funds received within the reported financial year from governments for water specific capital works.

Includes:

- ✓ grants for water recycling

capital works grants – water ($'000s)

Units Thousands of dollars ($'000s): to nearest $'000

Example
A service provider receives a grant of $1 million for a water treatment plant upgrade.

The service provider reports 1,000.

QG 3.4: Capital works grants - sewerage (W) (NPR F27, SWIM FN27)

Total capital works grants funds received within the reported financial year from governments for sewerage specific capital works.

Excludes:

- × grants for water recycling (included in QG 3.3)

capital works grants – sewerage ($'000s)

Units Thousands of dollars ($'000s): to nearest $'000

QG 3.5: Nominal written-down replacement cost of fixed water supply assets (W) (based on NPR F9, SWIM FN9)

The current cost of replacing fixed water supply assets with modern equivalent assets that would deliver the same service potential (capacity), written down by the accumulated depreciation since the asset was installed plus any residual value.

Includes:

- ✓ fixed recycled water assets

nominal written-down replacement cost of fixed water supply assets ($'000s)

Units Thousands of dollars ($'000s): to nearest $'000

Notes

1. Nominal written-down replacement costs of fixed water supply assets should be estimated for 30 June i.e. the last day of the year for the annual financial reporting period
2. Local council service providers should use the figure reported in their Annual Financial Report, whether or not it is audited data

QG 3.6: Nominal written-down replacement costs of fixed sewerage assets (W) (based on NPR F10, SWIM FN10)

The current cost of replacing of fixed sewerage assets with the modern equivalent assets that would deliver the same service potential (capacity), written down by the accumulated depreciation since the asset was installed plus any residual value.

Excludes:

× fixed recycled water assets

nominal written-down replacement cost of fixed sewerage assets ($'000s)

Units Thousands of dollars ($'000s): to nearest $'000

Note
Nominal written-down replacement costs of fixed sewerage assets should be estimated for 30 June i.e. the last day of the year for the annual financial reporting period

QG 3.7: Current replacement costs of fixed water supply assets (W)

The lowest it would cost to replace the existing water assets with new (i.e. not second hand), modern equivalent assets.

Includes:

✓ replacement of water recycling assets

current replacement costs of fixed water supply assets ($'000s)

Units Thousands of dollars ($'000s): to nearest $'000

Note
Current replacement costs of fixed water supply assets should be estimated for 30 June i.e. the last day of the year for the annual report

QG 3.8: Current replacement costs of fixed sewerage assets (W)

The lowest it would cost to replace the existing sewerage assets with new (i.e. not second hand), modern equivalent assets.

Excludes:

× replacement of water recycling assets

current replacement costs of fixed sewerage assets ($'000s)

Units Thousands of dollars ($'000s): to nearest $'000

Note
Current replacement costs of fixed sewerage assets should be estimated for 30 June i.e. the last day of the year for the annual report

QG 3.9: Total revenue – water (W) (NPR F1, SWIM FN1)

Total revenue from water services.

Includes (but not limited to):

- ✓ revenue from pay-for-use and base-rate charges for provision of water (including recycled water) to residential and non-residential customers
- ✓ special levies
- ✓ all contributed cash and assets (otherwise known as gifted assets, developer charges or headworks contributions)
- ✓ receipts from governments for specific agreed services (e.g. community service obligations)
- ✓ other revenue from operations which would otherwise be included
- ✓ revenue from bulk water sales (for those businesses that supply bulk water)

Excludes:

- × funds received for specific capital works from governments or other parties
- × equity contributions from governments
- × investment activities
- × non-core service provider activities (e.g. consulting, agriculture, property leases)
- × income from net asset sales

total revenue – water ($'000s)

Units Thousands of dollars ($'000s): to nearest $'000

Note
Exclusions include possible and material revenues. In assessing materiality, refer to AASB1031

QG 3.10: Total revenue – sewerage (W) (NPR F2, SWIM FN2)

Total revenue from sewerage services.

Includes (but not limited to):

- ✓ revenue from pay-for-use and base-rate charges for provision of sewerage services to residential and non-residential customers
- ✓ special levies
- ✓ all contributed cash and assets (otherwise known as gifted assets, developer charges or headworks contributions)
- ✓ receipts from governments for specific agreed services (e.g. community service obligations)
- ✓ other revenue from operations which would otherwise be included

Excludes:

- × funds received for specific capital works from governments or other parties
- × equity contributions from governments
- × investment activities
- × non-core service provider activities (e.g. consulting, agriculture, property leases)
- × income from net asset sales

total revenue – sewerage ($'000s)

Units Thousands of dollars ($'000s): to nearest $'000

Note
Exclusions include possible and material revenues. In assessing materiality, refer to AASB1031

QG 3.11: Operating cost - water (W) (NPR F11; F11.1 (bulk providers), SWIM FN11)

The operating costs (operation, maintenance, administration) of a service provider.

Includes:

- ✓ water resource access charge or resource rent tax
- ✓ purchases of raw, treated or recycled water
- ✓ salaries and wages including proportion of salaries and wages for FTEs shared across local governments as detailed in QG 1.20.
- ✓ overheads on salaries and wages including proportion of overheads on salaries and wages for FTEs shared across local governments as detailed in QG 1.20
- ✓ materials, chemicals and energy used
- ✓ contracts
- ✓ accommodation
- ✓ all other operating costs that would normally be reported
- ✓ items expensed from work in progress (capitalised expense items) and pensioner remission expenses (CSOs) (CSOs are likely to have an equivalent inclusion in revenue)
- ✓ competitive neutrality adjustments, which include but are not limited to land tax, debits tax, stamp duties and council rates
- ✓ indirect costs should be apportioned to water and sewerage services

EXCLUDES:

- × depreciation
- × any write-downs of assets to recoverable amounts
- × write-offs, retired or scrapped assets
- × the written-down value of assets sold
- × interest

operating cost – water ($ / property)

operating cost – water ($ / ML) * bulk providers only

Units Cost per property ($ / property – see QG 1.13 and QG 1.14): as a whole number

Cost per ML ($ / ML): as a whole number * bulk providers only

Notes

1. Possible or material operating costs are to be included. Materiality as per accounting standards
2. The write-offs could be equated to accelerated depreciation and therefore should be included within current cost depreciation
3. Costs associated with BOOT schemes should be reported according to accounting standards. All infrastructure should be treated as if owned and operated by the service provider. For more information on BOOT schemes, please refer to the NPR handbook, indicator F11 and F11.1

QG 3.12: Operating cost - sewerage (W) (NPR F12, SWIM FN12)

The operating costs (operation, maintenance, administration) of a service provider.

Includes:

- ✓ charges for bulk treatment/transfer of sewage
- ✓ salaries and wages including proportion of salaries and wages for FTEs shared across local governments as detailed in QG 1.20
- ✓ overheads on salaries and wages including proportion of overheads on salaries and wages for FTEs shared across local governments as detailed in QG 1.20
- ✓ materials, chemicals and energy used
- ✓ contracts
- ✓ accommodation
- ✓ all other operating costs that would normally be reported
- ✓ items expensed from work in progress (capitalised expense items) and pensioner remission expenses (CSOs) (CSOs are likely to have an equivalent inclusion in revenue.)
- ✓ competitive neutrality adjustments, which include but are not limited to land tax, debits tax, stamp duties and council rates
- ✓ indirect costs should be apportioned to water and sewerage services

Excludes:

- × depreciation
- × any write-downs of assets to recoverable amounts
- × write-offs, retired or scrapped assets
- × the written-down value of assets sold
- × interest

operating cost – sewerage ($ / property)

Units Cost per property ($ / property – see QG 1.15 and QG 1.16): as a whole number

Notes

1. Possible or material operating costs are to be included. Materiality as per accounting standards
2. The write-offs could be equated to accelerated depreciation and therefore should be included within current cost depreciation
3. Costs associated with BOOT schemes should be reported according to accounting standards. All infrastructure should be treated as if owned and operated by the service provider

QG 3.13: Annual maintenance costs – water (W) (Component of NPR F11/SWIM FN11)

As a component of (QG 3.11), report on the maintenance costs only.

Includes:

- ✓ all costs as specified in QG 3.11 relating to routine, operational and preventative maintenance

annual maintenance costs – water ($'000s)

Units Thousands of dollars ($'000s): to nearest $'000

QG 3.14: Annual maintenance costs - sewerage (W) (Component of NPR F12/SWIM FN12)

As a component of (QG 3.12), report on the maintenance costs only.

Includes:

- ✓ all costs as specified in QG 3.12 relating to routine, operational and preventative maintenance

annual maintenance costs – sewerage ($'000s)

Units Thousands of dollars ($'000s): to nearest $'000

QG 3.15: Current cost depreciation – water (W)

Expenses incurred relating to change in value of the fixed water supply assets, plant and equipment during the reporting period.

Current cost depreciation relates to the current value (as opposed to original purchase price) of the fixed assets, plant and equipment during the reporting period

current cost depreciation – water ($'000s)

Units Thousands of dollars ($'000s): to nearest $'000

QG 3.16: Current cost depreciation – sewerage (W)

Expenses incurred relating to change in value of the fixed sewerage services assets, plant and equipment during the reporting period.

Current cost depreciation relates to the current value (as opposed to original purchase price) of the fixed assets, plant and equipment during the reporting period.

current cost depreciation – sewerage ($'000s)

Units Thousands of dollars ($'000s): to nearest $'000

QG 3.17: Previous 5 year average annual renewals expenditure – water (W)

The average of the annual renewals expenditures for the last 5 years (i.e. the reporting year and the 4 years previous) in nominal year dollars for water services.

Renewals expenditure is defined as expenditure on asset replacement, refurbishment or rehabilitation works which returns the asset to its original size, capacity or condition. It does not increase the size or capacity of the asset (as adapted from the AIFMG).

Previous 5 year average annual renewals expenditure – water ($'000s)

Units Thousands of dollars ($'000s): to nearest $'000

Example
A service provider's renewals expenditure in the reporting year was $180,000. In the four years before the reporting year, a service provider's annual renewals expenditure (nominal dollars) was $160, 000, $162,000, $600,000 and $180,000.

The previous 5 year average annual renewals expenditure was then ($160,000 + $162,000 + $600,000 + $180,000+$180,000) / 5 = $256,400.

The service provider reports 256.

Notes
1. Renewals expenditure should be reported irrespective of the source of the funding.
2. Where renewals expenditure is irregular, detail in the comments field of the data template
3. Expenditure that increases the size or capacity of the asset should be reported as capital expenditure (QG 3.1)

QG 3.18: Previous 5 year average annual renewals expenditure – sewerage (W)

The average of the annual renewals expenditures for the last 5 years (i.e. the reporting year and the 4 years previous) in nominal year dollars for sewerage services.

Renewals expenditure is defined as expenditure on asset replacement, refurbishment or rehabilitation works which returns the asset to its original size, capacity or condition. It does not increase the size or capacity of the asset (as adapted from the AIFMG)

previous 5 year average annual renewals expenditure – sewerage ($'000s)

Units Thousands of dollars ($'000s): to nearest $'000

Example
A service provider's renewals expenditure in the reporting year was $180,000. In the four years before the reporting year, a service provider's annual renewals expenditure (nominal dollars) was $160, 000, $162,000, $600,000 and $180,000.

The previous 5 year average annual renewals expenditure was then ($160,000 + $162,000 + $600,000 + $180,000+$180,000) / 5 = $256,400.

The service provider reports 256.

Notes
1. Renewals expenditure should be reported irrespective of the source of the funding.
2. If renewals expenditure is irregular, detail in the comments field of the data template.
3. Expenditure that increases the size or capacity of the asset should be reported as capital expenditure (OG 3.2)

QG 3.19: Forecast 5 year average annual renewals expenditure – water (W)

The average annual renewals expenditures planned for 5 years after the reporting year for water services.

Renewals expenditure is defined as expenditure on asset replacement, refurbishment or rehabilitation works which returns the asset to its original size, capacity or condition. It does not increase the size or capacity of the asset. The expenditure is at current year dollars (as adapted from the AIFMG)

forecast 5 year average annual renewals expenditure – water ($'000s)

Units Thousands of dollars ($'000s): to nearest $'000

Example
A service provider's planned renewals expenditure for the next 5 years (in current year dollars) is $140,000, $160,000, $380,000, $60,000 and $90,000.

The forecast 5 year average annual renewals expenditure is: ($140,000 + $160,000 + $380,000 + $60,000 +$90,000) / 5 = $166,000.

The service provider reports 166

Notes
1. Renewals expenditure should be reported irrespective of the source of the funding.
2. If renewals expenditure is irregular, detail in the comments field of the data template.
3. Expenditure that increases the size or capacity of the asset should be reported as capital expenditure (QG 3.1).

QG 3.20: Forecast 5 year average annual renewals expenditure – sewerage (W)

The average annual renewals expenditures planned for 5 years after the reporting year for sewerage services.

Renewals expenditure is defined as expenditure on asset replacement, refurbishment or rehabilitation works which returns the asset to its original size, capacity or condition. It does not increase the size or capacity of the asset. The expenditure is at current year dollars (as adapted from the AIFMG).

forecast 5 year average annual renewals expenditure – sewerage ($'000s)

Units Thousands of dollars ($'000s): to nearest $'000

Example
A service provider's planned renewals expenditure for the next 5 years (in current year dollars) is $140,000, $160,000, $380,000, $60,000 and $90,000.

The forecast 5 year average annual renewals expenditure is: ($140,000 + $160,000 + $380,000 + $60,000 + $90,000) / 5 = $166,000.

The service provider reports 166

Notes
1. Renewals expenditure should be reported irrespective of the source of the funding.
2. If renewals expenditure is irregular, detail in the comments field of the data template.
3. Expenditure that increases the size or capacity of the asset should be reported as capital expenditure (QG 3.2).

‘4’ series – Customer

QG 4.1: Fixed charge – water (S) (NPR P1.2, SWIM PR3)

The fixed amount the business levies on a residential property per year for water services.

This is the component of each residential property’s bill that does not vary with the amount of water used. The basis for the fixed charge is to be provided (e.g. percentage of property value, meter sizes)

Scheme X: # fixed charge – water ($/residential property/annum). Text response on fixed charge basis

Scheme Y: # fixed charge – water ($/residential property/annum). Text response on fixed charge basis

Units	Cost per residential property per year ($/residential property/annum): as a whole number

QG 4.2: Fixed charge – sewerage (S) (NPR P4.1, SWIM PR31)

The fixed amount the business levies on a residential property per year for sewerage services.

This is the component of each residential property’s bill that does not vary with the amount of sewage produced. The basis for the fixed charge is to be provided (e.g. percentage of property value, number of pedestals or meter sizes).

Scheme X: # fixed charge – sewerage ($/residential property/annum). Text response on fixed charge basis

Scheme Y: # fixed charge – sewerage ($/residential property/annum). Text response on fixed charge basis

Units	Cost per residential property per year ($/residential property/annum): as a whole number

QG 4.3: Annual bill based on 200 kL/annum (W) (NPR P7, SWIM PR47)

Average annual residential bill based on 200kL of water per annum.

$ # annual bill (based on 200kL/annum water)

Units Annual costs ($): as a whole number

Formula QG 4.3 = Residential sewerage charge + residential water fixed charge + special levies + residential water usage charge for 200kL consumption

Example

Annual average residential bill water and sewerage based on 200 kL consumption, where:

- Sewerage fixed charge = $100/year (no usage charge)
- Water fixed charge = $50/year
- Special levy = $30/year
- Water pay-for-use charge = $1/kL = $1 x 200 kL = $200

Therefore, the annual residential bill for 200 kL = $100 + $50 + $200 + $30= $380

The service provider reports $380.

Note
This indicator is to be reported for the service provider's scheme with highest number of connections

QG 4.4: Typical residential bill (W) (NPR P8, SWIM PR48)

The dollar amount of the typical residential annual water and sewerage bill for the financial year.

This information is premised on the average annual residential consumption for a full-paying customer.

$ # typical residential bill

Units Annual cost ($): as a whole number

Formula QG 4.4 = Residential sewerage charge + residential water fixed charge + special levies + residential water usage charge for the average residential consumption

Example
Typical residential bill water and sewerage, where:

- Sewerage fixed charge = $100/year (no usage charge)
- Water fixed charge = $50/year
- Special levy = $30/year
- Average residential water consumption per property = 300 kL (calculated from 'Average annual residential water supplied per property',)
- Water pay-for-use charge = $1/kL = $1 x 300 kL = $300

Therefore, the typical residential bill water and sewerage = $100 + $50 + $300 + $30 = $480

The service provider reports $480.

Note
This indicator is to be reported for the service provider's scheme with highest number of connections

QG 4.5: Total water main breaks (S) (based on NPR A8, SWIM AS8)

The total number of main breaks, bursts and leaks in all diameter water distribution and reticulation mains for potable and non-potable services for the reporting period, irrespective of whether the break, burst or leak resulted in an interruption

Includes:

- ✓ breaks caused by third parties

Excludes:

- × those in the property service (i.e. mains to meter connection)

Scheme X: # of breaks / 100km of water main
Scheme Y: # of breaks / 100km of water main

Units Water main breaks per 100km of water main: one decimal place

Formula (Total number of water main breaks / Total length of water mains (QG 1.1) x 100

Notes

1. This indicator is a measure of both asset condition and customer service, therefore, breaks, bursts or leaks should be reported irrespective of whether there was an interruption to the service
2. The 'property service' includes any water infrastructure between the water main and the meter connection or other connection assembly and the internal plumbing of the property. It may be owned by the service provider, and it is often referred to as the 'mains to meter' service or connection. All water plumbing downstream of the meter is usually the property owner's asset
3. Where a component of total water main breaks has been caused by third-parties (parties other than those directly employed by or contracted to the service provider), this may be detailed in the comments field of the data template

QG 4.6: Total sewerage main breaks and chokes (S) (based on NPR A14, SWIM AS39)

The total number of sewerage mains breaks and chokes, irrespective of whether the break or choke resulted in an interruption to the sewerage service, for the reporting period.

Includes:

- ✓ all gravity sewer mains
- ✓ all pressure mains (including common effluent pipelines, rising mains, etc.)
- ✓ all vacuum system mains of any diameter
- ✓ breaks caused by third parties
- ✓ chokes in pumps

Excludes:

- × property connection sewers
- × pipelines carrying treated effluent
- × recycled water distribution and reticulation mains delivering water for urban areas; such mains are to be reported as water mains (QG 1.1)

Scheme X: # of breaks and chokes / 100km of sewerage main
Scheme Y: # of breaks and chokes / 100km of sewerage main

Units Sewerage main breaks per 100km of sewerage main: one decimal place

Formula (Total number of sewerage main breaks / Total length of sewerage mains (QG 1.2) x 100

Notes

1. Sewerage breaks and chokes are affected by factors including sewer configuration, soil composition, climate, tree planting, age of the infrastructure, sewer depth, materials and diameter. These factors are indicators of the condition of the sewer network and customer service
2. Where a component of total sewerage main breaks has been caused by third-parties (parties other than those directly employed by or contracted to the service provider, e.g.: customers), this may be detailed in the comments field of the data template

QG 4.7: Incidence of unplanned interruptions – water (S) (based on NPR C17, SWIM CS17)

This is the number of unplanned interruptions (when the customer has total loss of water supply and has NOT received at least 24 hours notification or as otherwise prescribed by regulatory requirements) per 1000 properties

Includes:

- ✓ situations where the duration of a planned interruption exceeds that which was originally notified
- ✓ all un-notified interruptions caused by third parties (include text response on proportion of third-party caused interruptions if desired)

Excludes:

- × property service connection interruptions, unless the burst or leak requires the water main to be shut down for repair and therefore affects multiple customers
- × interruptions that cause some reduction to the level of service but where normal activities (shower, washing machine, toilet flushing etc.) are still possible
- × breaks in house connection branches
- × planned interruptions

Scheme X: # incidence of unplanned interruptions – water (per 1000 properties)
Scheme Y: # incidence of unplanned interruptions – water (per 1000 properties)

Units Unplanned interruptions per 1000 properties: as a whole number

Notes

1. The terms property, connection and customer can be used interchangeably
2. The duration of an unplanned interruption commences once the water provider is aware that water is no longer available and ceases when normal service is restored
3. Where legislation prescribes a minimum notification time for unplanned interruptions, this timeframe should be used

QG 4.8: Average response time for water incidents (bursts and leaks) (S) (SWIM CS37)

This indicator will be measured as the percentage of water incidents responded to within the average response time target/s indicated in customer service standard.

Scheme X: % of water incidents responded to within customer service target for response time as compared to the total number of water incidents

Scheme Y: % of water incidents responded to within customer service target for response time / total number of water incidents X 100

Units Percentage: 1 decimal place

Formula number of water incidents responded to within customer service target for response time / total number of water incidents X 100

Note
Customer service standards or service performance standards must set targets for response time for water incidents. This indicator aims to demonstrate how well the provider meets those targets

QG 4.9 Average response time for sewerage incidents (including mains breaks and chokes) (S) (SWIM CS33)

This indicator will be measured as the percentage of sewerage incidents responded to within the average response time target/s indicated in customer service standard

Scheme X: % of sewerage incidents responded to within customer service target for response time as compared to the total number of sewerage incidents

Scheme Y: % of sewerage incidents responded to within customer service target for response time as compared to the total number of sewerage incidents

Units Percentage: one decimal place

Formula number of sewerage incidents responded to within customer service target for response time / total number of sewerage incidents X 100

Note
Customer service standards or service performance standards must set targets for response time for sewerage incidents. This indicator aims to demonstrate how well the provider meets those targets

QG 4.10: Water quality complaints (S) (NPR C9, SWIM CS9)

The total number of complaints received by the service provider that relate to water quality from any type of water provided. A complaint can be a written or verbal expression of dissatisfaction about an action, proposed action or failure to act by the water utility, its employees or contractors. Includes complaints received either in person, by mail, fax, phone, email or text messaging.

Includes complaints regarding:

- ✓ discolouration
- ✓ taste
- ✓ odour
- ✓ stained washing
- ✓ illness
- ✓ cloudy water (e.g. caused by oxygenation)

Excludes complaints regarding:

- × service interruption
- × adequacy of service
- × restrictions
- × billing and accounts
- × water pressure

Scheme X: # water quality complaints (per 1,000 properties)
Scheme Y: # water quality complaints (per 1,000 properties)

Units Water quality complaints (per 1,000 properties): as a whole number

Formula Total number of water quality complaints / Total water connected properties ('000s) (QG 1.13 + QG 1.14)

Example

Complaint

If a customer calls to complain about the government's or service provider's media comments on water quality because they have suffered poor water quality, this is counted as a complaint

Not a complaint

If a customer calls to ask about the health standards that apply for water quality, this is counted as a query, not a complaint.

Notes

1. Do not include a customer query
2. Include only complaints about third parties where the water utility has control (i.e. contractors)
3. Complaints from separate customers regarding the same issue, and multiple complaints from one customer are counted as separate complaints
4. Australian Standards define a complaint as an 'expression of dissatisfaction made to an organisation, related to its products or the complaints handling process itself, where a response or resolution is explicitly or implicitly implied' (AS ISO 100002-2006)

QG 4.11: Total water and sewerage complaints (S) (NPR C13, SWIM CS13)

The total number of complaints received by the water business that relate to water or sewerage services. A complaint can be a written or verbal expression of dissatisfaction about an action, proposed action or failure to act by the water utility, its employees or contractors. Includes complaints received by the water utility in person, by mail, fax, phone, email or text messaging.

Includes complaints regarding:

- ✓ bursts
- ✓ leaks
- ✓ service interruptions
- ✓ adequacy of service
- ✓ water pressure
- ✓ water quality or reliability
- ✓ sewerage service complaints
- ✓ sewage odours
- ✓ affordability
- ✓ billings and accounts
- ✓ behaviour of staff or agents

Excludes complaints regarding:

- × government pricing policy
- × tariff structures

Scheme X: # water and sewerage complaints (per 1000 properties)
Scheme Y: # water and sewerage complaints (per 1000 properties)

Units Complaints (per 1,000 properties): as a whole number

Formula Total number of water and sewerage complaints / Total number of water connected properties ('000s) (QG 1.13 + QG 1.14)

Notes

1. Do not include a customer query
2. Include only complaints about third parties where the water utility has control (i.e. contractors)
3. Complaints from separate customers regarding the same issue, and multiple complaints from one customer are counted as separate complaints
4. When a customer reports a service interruption, this is not counted as a complaint unless the customer expresses dissatisfaction about the interruption
5. Australian Standards define a complaint as an 'expression of dissatisfaction made to an organisation, related to its products or the complaints handling process itself, where a response or resolution is explicitly or implicitly implied' (AS ISO 100002-2006)

‘5’ series – Distributor retailers

QG 5.1: Operating ratio (W) (NPR F5; F6; F11; F12, SWIM FN5; FN6; FN11; FN12)
Net operating result before tax divided by total operating revenue. # operating ratio (%)
Units percentage
Formula net operating ratio (before tax) / total operating revenue
Note Refer to Queensland Audit Office, Results of Audit: Water sector entities 2012-13, p. 39 for more details

QG 5.2: Capital replenishment ratio (W) (new indicator)
Purchases of non-current assets divided by depreciation expense. # capital replenishment ratio
Units expressed as a number
Formula purchases of non-current assets / depreciation expense
Note Refer to Queensland Audit Office, Results of Audit: Water sector entities 2012-13’, p. 39 for more details.

QG 5.3: Debt to revenue ratio (W) (NPR F5; F6, SWIM FN5; FN6)
Total loans and borrowings divided by total operating revenue. # debt to revenue ratio (% or number)
Units expressed as a percentage or number
Formula total loans and borrowings / total operating revenue
Note QAO accepts either percent or number with the footnote that a high debt to revenue number or percentage generally indicates a higher risk. Refer to Queensland Audit Office, Results of Audit: Water sector entities 2012-13’, p. 39 for more details.

Commonly used acronyms

Australian Accounting Standards Board (AASB): Indicators may reference an AASB code. The relating AASB standard is to be adhered to e.g. AASB12.

Australian Infrastructure Financial Management Guidelines (AIFMG): The AIFMG are published by the Institute of Public Works Engineering Australia. They provide consistent terminology and best practice approaches.

Build – Own – Operate – Transfer (BOOT): a form of project financing, wherein a private entity receives a concession from the private or public sector to finance, design, construct, and operate a facility stated in the concession contract.

National Performance Report (NPR): The NPR is the Commonwealth performance reporting and benchmarking framework. Matching indicators are referenced with their NPR code.

Queensland Government (QG): Indicators which are collected by the Queensland Government, currently reported through the Department of Energy and Water Supply.

Statewide Water Information Management (SWIM): SWIM is an online system for collecting, storing and reporting water service provider data. Matching indicators are referenced by their SWIM code.

Telephone enquiries 13 QGOV (13 74 68) business hours

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