

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

## Definitions Guide

Version 2 (amended July 2020)



This publication has been compiled by Water Supply Regulation of Divisional Support, Department of Natural Resources, Mines and Energy.

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# Key performance indicators for Queensland urban water service providers

The definitions and reporting information for the Queensland Government key performance indicators (QG KPIs) for urban water service providers are outlined in this document.

Under section 142A of the *Water Supply (Safety & Reliability) Act 2008*, relevant water and sewerage service providers in Queensland are required to report on QG KPIs. Service providers are notified of the QG KPIs applicable to their organisation through a 'report requirement notice' issued by Water Supply Regulation (the Regulator), Department of Natural Resources, Mines and Energy. Service providers can submit their report to the department through qldwater's [Statewide Water Information Management \(SWIM\)](#) database or using the performance reporting template, which is available on this department's website at: [www.dnrme.qld.gov.au/water/water\\_industry\\_regulation/reporting\\_requirements](http://www.dnrme.qld.gov.au/water/water_industry_regulation/reporting_requirements). The completed performance reporting template is to be emailed to [drinkingwater.reporting@dnrme.qld.gov.au](mailto:drinkingwater.reporting@dnrme.qld.gov.au).

The Regulator collects the data to develop the water and sewerage service provider comparative report with an aim to benchmark providers to encourage voluntary performance improvement where necessary and provide information to customers across Queensland.

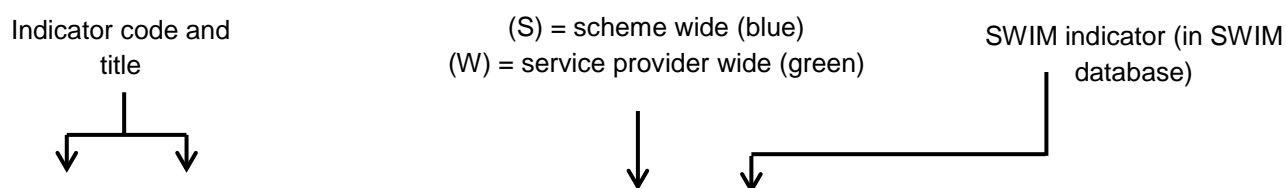
The QG KPIs and related definitions in this document apply to the 2019-20 reporting period, and for subsequent reporting periods until a new version of this document is available.

Service providers with greater than 10 000 water connections are also required to report against the Bureau of Meteorology's National Performance Reporting (NPR) indicators as detailed in the most recent '*National urban water utility performance reporting framework, indicators and definitions handbook*'.

## Guide to definitions

QG KPIs are categorised into the following series: general; water security; finance; customer; distributor-retailers and cyber security. 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 the format of a definition for a QG KPI used throughout this document.



**QG 1.3: Number of sewage treatment plants (S) (SWIM AS4)**

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

Includes:

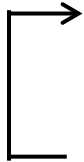
- ✓ all primary, secondary and tertiary level treatment plants

Scheme X: # sewage treatment plants

Scheme Y: # sewage treatment plants

Units      Reported as a whole number

Note      1. *BOOT schemes should be included.*



Specific units for the  
indicator

↑  
Additional information

## Reporting rules

Service providers are required to provide data for each QG KPI listed in the report requirement notice. Below are options where provision of the data is not relevant for the service provider, missing or is zero.

**Not relevant (NR)** – The service provider has never done the activity and did not do it during this reporting financial 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). This must be accompanied by an explanatory comment.

**Zero (0)** – The service provider usually does the activity, however, for the financial year did not do the activity e.g. a recycling activity was suspended during the financial 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) (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' and comment to say there are no meters.
- 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 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, including the need to provide explanatory comments, which should include information of how the provider intends to remedy the monitoring deficiency for future reporting purposes.

## Estimating data

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, found in both the departmental template and SWIM, summarising how the data was estimated. Ideally, these established estimation processes should be the same each financial 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.

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.

## Commonly used terms

The following is a list of terms that are used throughout this guide. These definitions should be referred to when preparing KPIs.

**Available contingency supply** – a contingency supply that will be readily accessible when required. That is, the steps to enable use of the contingency supply are known, and involve no major works, and are able to be undertaken in the necessary timeframes.

**Available water supply** – the volume of water that is readily able to be accessed from all water sources, including available contingency supply. To determine the available supply weather projections, historical behaviour of the supply, forecast demands and operational constraints should be considered.

**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.

**Contingency supply** – a planned response to increase the likelihood that the expected demands of the town will be met when 'usual' supplies are compromised (for example during drought or during infrastructure breakdown). The contingency supply augments the towns' water supply, either temporarily or permanently. Examples include new bore, temporary desalination plant, accessing local waterhole, short-haul / low volume water carting.

**Control and associated systems** – any collection of data, information, devices or equipment, which support a service provider to perform its water and sewerage functions.

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

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

**Emergency supply** – planned response that is temporary and is required to provide sufficient supply to meet highly restricted demand. It is implemented when there is a low likelihood that 'usual' supplies will be able to meet expected demands or when there are inadequate supplies to meet demands. Examples include long distance / high volume carting water, low quality feed water sources (e.g. local waterhole) with high treatment costs, temporary desalination plant that has capacity to supply only highly restricted demand. Typically requires significant expenditure of resources.

**Exported water** – Water from a scheme that is delivered to another scheme, which may or may not be operated by the same service provider. Water from the scheme that is exported may have been taken directly from a source using the service provider's infrastructure, produced in the scheme (including desalinated marine water) or imported into the scheme. Exported water may be raw water, treated water or partially treated water that is potable or non-potable.

**Imported water** – Water that has been exported from another water scheme, which may or may not be operated by the same service provider. Imported water may be potable or non-potable. It includes water that may be used within the scheme or exported to a subsequent scheme.

Water sourced from a regulated recycled water scheme and used for indirect potable reuse is considered imported (for example purified recycled water that is used to augment a surface water source that supplies a potable water scheme).

For water accounting purposes, if imported raw water is added to a storage (e.g. surface water source), it is assumed that this imported water is used first.

**Marine desalination** – The process of treating surface water sourced from marine or brackish environments to remove the salt and other impurities. May be treated to potable or non-potable standards dependent on planned purpose.

**Municipal** – related to a town or district or its governing bodies. Water for municipal use includes for parks, gardens, sporting fields and associated amenities. Excludes operational water used as part of any water or wastewater treatment processes, or network maintenance activities.

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Department of Natural Resources, Mines and Energy, 2020

**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).

**Non-potable water scheme** – the infrastructure owned by a service provider for single or multiple combinations of the individual components of treatment, transmission, or reticulation of the supply of non-potable water (i.e. not for drinking).

**Permanent water conservation measures (PWCM)** – on-going measures in place to ensure best practice for the efficient use of outdoor water use.

**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).

**Potable water scheme** – also referred to as a drinking water scheme. The infrastructure owned by a provider for single or multiple combinations of the individual components of treatment, transmission, or reticulation of drinking water supply.

**Raw water** - Untreated surface and/or groundwater either used to directly supply customers of a non-potable water supply scheme or used as a source for a treatment process that supplies customers of a potable water supply scheme. Sewerage or stormwater used as a source for recycled water schemes are not considered raw water.

**Recycled water** – water sourced from sewage or effluent, or urban stormwater, or wastewater from industrial, commercial or manufacturing activities, including animal husbandry activities that has been treated for specific re-use purposes and supplements water supply.

**Recycled water scheme** – The infrastructure owned by a provider for storage, treatment, transmission, or reticulation of recycled water.

**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, each town with its own water and/or sewerage service should be classed as a scheme. In metropolitan 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.

**Urban stormwater** – stormwater collected from built up urban areas. Stormwater is not regulated under the *Water Supply (Safety and Reliability) Act 2008*.

**Water supply** – includes all of the water sources from which water is taken to supply the water supply scheme, including available contingency supply.

**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.

**Water treatment plant** – facility that houses a combination of processes such as filtration, coagulation, pH correction, disinfection and softening used to make the water fit for purpose. Includes advanced treatment process such as reverse osmosis.

The infrastructure and facilities operated in isolation are not considered water treatment plants i.e. disinfection dosing equipment; pH correction equipment and water-cooling equipment.

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## Key performance indicator definitions

The QG KPIs are organised into six series: general; water security; finance; customer; distributor retailer; and, cyber security. The definition for each QG KPI and associated information is provided within each series. Examples are provided for the majority of QG KPIs for the reader's information and/or consideration, only and are not meant to be exhaustive or prescriptive. Services covered in the reporting includes:

- Potable water
- Non-potable water
- Recycled water
- Sewerage

### **'1' series – General**

Series 1 'General' QG KPIs relate to water and sewerage infrastructure in place as well as water sourced and supplied for the reporting financial year.

The QG KPIs relating to water supply and sewerage infrastructure include the number of treatment plants, capacity, length of mains and connections, i.e. the infrastructure in place to deliver the service in each scheme. The QG KPIs relating to water sourced and supplied provide overall water balance information for each scheme.

**QG 1.1: Length of water mains (S) (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

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Units    Kilometres (km): one decimal place

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Note

1. Ferrule is part of the service connection.

**QG 1.2: Length of sewerage mains (S) (SWIM AS5)**

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

Includes:

- ✓ combined sewerage and stormwater mains

Excludes:

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

Scheme X: # km of sewerage mains

Scheme Y: # km of sewerage mains

Units Kilometres (km): one decimal place

**QG 1.3: Number of sewage treatment plants (S) (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

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**Unit** Reported as a whole number

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**Note**

1. BOOT schemes should be included.

QG 1.4a: Number of water treatment plants (S) (SWIM AS1)	
<b>Number of water treatment plants providing full water treatment.</b>	
Excludes	
<ul style="list-style-type: none"> <li>x disinfection only schemes</li> <li>x secondary disinfection even when there is pH correction</li> <li>x cooling down bore water through heat exchange process</li> </ul>	
Scheme X: # water treatment plants	
Scheme Y: # water treatment plants	
Units	Reported as a whole number
Note	
<ol style="list-style-type: none"> <li>1. If response is zero (0) water treatment plants, then 1.4b and 1.6a should reported as 'NR' (Not Relevant).</li> </ol>	

**QG 1.4b: Capacity of water treatment plants (S) (SWIM AS47)**

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

Excludes

- x disinfection only schemes
- x secondary disinfection even when there is pH correction
- x cooling down bore water through heat exchange process

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.
3. Only required if response to 1.4a is 1 or more.



**QG 1.5: Maximum daily demand (S) (SWIM WA201)**

**The greatest daily demand for potable and non-potable water recorded in the financial 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 1.6a: Volume of potable water produced at a water treatment plant (SWIM WA225)**

**The volume of potable water produced at a water treatment plant in the scheme.**

The reported volume includes all potable water produced at a water treatment plant including:

- ✓ water that is subsequently exported
- ✓ water produced to potable standards but used for non-potable applications
- ✓ imported non-potable water that is treated at a water treatment plant within the scheme to potable standards

Excludes:

- × recycled water
- × potable water (treated or untreated that meet the drinking standard requirements) that has not passed the scheme water treatment plant(s) (e.g. some bore water or imported potable water)

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. The reported volume is measured at the outflow of treatment plants.
2. If there is not water treatment plant within the scheme, 'NR' should be reported.
3. This volume reported under this KPI includes all potable water that is produced, including volumes that might be subsequently reported as real or apparent losses in the system.
4. This indicator is NOT the volume of water supplied to end users.
5. Refer to Estimating Data for further information on estimating volumes.

**QG 1.7: Total potable water storage (S) (SWIM AS48)**

**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 (ML): three decimal places

**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) (SWIM WA1)**

**The volume of raw water taken by the service provider from surface water sources.**

**Includes:**

- ✓ dams, weirs and barrages
- ✓ rivers, creeks and streams
- ✓ irrigation channels
- ✓ overland flow
- ✓ pumping pools
- ✓ river wells

**The reporting volume includes:**

- ✓ water for which the service provider holds an entitlement or contract (including sale, lease or temporary trade arrangements) or for which the raw water source is not regulated
- ✓ water taken by others operating on behalf of the service provider
- ✓ water that is subsequently exported to other water schemes

**Excludes:**

- × water that is imported from other water schemes, including recycled water that is regulated for indirect potable reuse
- × seawater or brackish water used as feed water to marine desalination

Scheme X: #ML surface water

Scheme Y: #ML surface water

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**Units** Megalitres (ML): as a whole number

**Notes**

1. The reported volume can be based on metered extraction of raw water or on the metered inflow of raw water to treatment plants.
2. Refer to Estimating Data for further information on estimating volumes.
3. The aggregate volume should be reported if water is taken from various surface water sources.
4. Other schemes may be operated by same or different service provider.
5. Volume of imported water should be reported at QG1.21. Refer to the 'commonly used terms' for the definition of imported water.

**QG 1.9a: Volume of water sourced from groundwater (S) (SWIM WA2)**

**The volume of raw water taken from groundwater sources by the service provider.**

Groundwater sources includes:

- ✓ aquifers, at all depths
- ✓ water sources from groundwater that is subsequently treated by desalination

The reported volume includes:

- ✓ water for which the service provider holds an entitlement or contract (including sale, lease or temporary trade arrangements, dewatering licence or permit) or for which the raw water source is not regulated
- ✓ water taken by others operating on behalf of the service provider
- ✓ water that is subsequently exported

Excludes

- × water that is imported from other schemes, including recycled water that is regulated for indirect potable reuse

Scheme X: #ML groundwater

Scheme Y: #ML groundwater

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Units    Megalitres (ML): as a whole number

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Notes

1. The reported volume can be based on metered extraction of raw water or on the metered inflow of raw water to treatment plants.
2. Refer to Estimating Data for further information on estimating volumes.
3. The aggregate volume should be reported if water is taken from a number of groundwater sources.
4. Imported water includes water that has been transported or stored in association with natural occurring groundwater. For example, coal seam gas stored in an aquifer or managed aquifer recharge.

**QG 1.10: Volume of water produced by desalination of marine water (S) (SWIM WA61)**

**The volume of water produced by the desalination of marine water by the service provider.**

Includes:

- ✓ desalinated marine water sources
- ✓ desalinated marine water that is subsequently exported
- ✓ desalinated marine water taken by others operating on behalf of the service provider

Excludes:

- × water sourced from groundwater
- × water sourced from surface water
- × water that is imported

Scheme X: #ML water from desalination

Scheme Y: #ML water from desalination

Units Megalitres (ML): as a whole number

Notes

1. Marine water sources may be considered as including sources from estuarine areas.
2. Refer to Estimating Data for further information on estimating volumes.
3. The aggregate volume should be reported if water is sourced from a number of desalinated marine water sources.

**QG 1.11: Volume of recycled water produced (S) (SWIM WA26)**

**The volume of recycled water produced in the scheme.**

The reported volume includes all recycled water produced including:

- ✓ produced to either potable or non-potable standard for on-site reuse, agriculture, irrigation industry, or any other use external to the treatment process
- ✓ produced from treated sewage effluent associated with local sewage treatment schemes
- ✓ produced from treated effluent imported from sewage treatment schemes outside the local area
- ✓ water that is subsequently exported

Excludes:

- × imported treated recycled water
- × urban stormwater or recycled water produced from urban stormwater

Scheme X: #ML recycled water

Scheme Y: #ML recycled water

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Units    Megalitres (ML): as a whole number

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Notes

1. Recycled water schemes are regulated under the Water Supply (Safety and Reliability) Act 2008.
2. The recycled water produced could be used by either the service provider itself, a business supplied by the service provider, or supplied through a third pipe system for urban reuse.

**QG 1.12: Volume of water sourced (S) (SWIM WA7)**

**The volume of water taken by the service provider from all sources.**

The reported volume includes:

- ✓ volume of water sourced from surface water (QG 1.8)
- ✓ volume of water sourced from groundwater (QG 1.9a)
- ✓ volume of imported water (QG 1.21)
- ✓ volume of water produced by marine desalination (QG 1.10)
- ✓ for recycled water schemes only – volume of recycled water (QG 1.11)
- ✓ water that is subsequently exported

Excludes:

- × for schemes that are not recycled water schemes – do not include recycled water

Scheme X: #ML total water sourced

Scheme Y: #ML total water sourced

Units Megalitres (ML): as a whole number

Note

1. Refer to Estimating Data for further information on estimating volumes.



**QG 1.13: Connected residential properties – water supply (S) (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) (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) (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) (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) (SWIM WA32)**

**The volume of potable water supplied to residential properties by the service provider.**

The reported volume includes:

- ✓ metered and non-metered potable water supplied to residential properties
- ✓ potable water that has been imported from another scheme and subsequently supplied

Excludes:

- × real and apparent losses for the system
- × unbilled authorised consumption
- × recycled water

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

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

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Units    Megalitres (ML): as a whole number

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Notes

1. Refer to Estimating Data for further information on estimating volumes.
2. The reported volume includes all potable water supplied to residential customers.
3. Another scheme may be operated by the same or different service provider.

**QG 1.17b: Volume of non-potable water supplied – residential (S) (SWIM WA91)**

**The volume of non-potable water supplied to residential properties by the service provider.**

The reported volume may include:

- ✓ metered and non-metered non-potable water (including raw water) supplied to residential properties
- ✓ water that has been imported from another scheme and subsequently supplied

Excludes:

- × real and apparent losses for the system
- × unbilled authorised consumption
- × recycled water

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

Notes

1. Refer to Estimating Data for further information on estimating volumes.
2. The reported volume includes all non-potable water supplied for residential uses: metered and unmetered.
3. Volume of recycled water supplied is reported in recycled water schemes only.
4. Another scheme may be operated by the same or different service provider.

**QG 1.18a: Volume of potable water supplied – non-residential (S) (SWIM WA34)**

**The potable volume of water supplied to non-residential properties by the service provider.**

The reported volume includes:

- ✓ metered and non-metered potable water supplied to non-residential (e.g. commercial, municipal, agricultural and industrial) connections
- ✓ potable water that has been imported from another scheme and subsequently supplied

Excludes:

- × unbilled authorised consumption
- × real and apparent losses for the system
- × recycled water

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

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

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Units    Megalitres (ML): as a whole number

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Notes

1. Refer to Estimating Data for further information on estimating volumes.
2. The reported volume includes all potable water supplied for non-residential uses: metered and unmetered. (It does not include any unbilled or unauthorised use or losses).
3. Volume of recycled water supplied is reported in recycled water schemes only.
4. Another scheme may be operated by the same or different service provider.

**QG 1.18b: Volume of non-potable water supplied – non-residential (S) (SWIM WA92)**

**The non-potable volume of water supplied to non-residential properties by the service provider.**

Includes:

- ✓ metered and non-metered non-potable water (including raw water) water supplied to non-residential (e.g. commercial, municipal, agricultural and industrial) connections
- ✓ water that has been imported from another scheme and subsequently supplied

Excludes:

- × real and apparent losses for the system
- × unbilled authorised consumption
- × recycled water

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

Notes

1. Refer to Estimating Data for further information on estimating volumes.
2. The reported volume includes all non-potable water supplied for non-residential uses: metered and unmetered. (It does not include any unbilled or unauthorised use or losses.)
3. Volume of recycled water supplied is reported in recycled water schemes only.
4. Another scheme may be operated by the same or different service provider.



**QG 1.20: Total full-time equivalent water and sewerage services employees (W)  
(SWIM WF1)**

**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  $4 + (0.25 \times 2) = 4.5$

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.

Notes

1. 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.

**QG 1.21: Volume of water imported from other schemes (S) (SWIM WA223)**

**The volume of water imported from another scheme/s (that may be operated by the same or different service provider).**

The reported volume includes:

- ✓ Raw or treated water that has been imported
- ✓ Recycled water (including recycled water produced from urban stormwater) that has been imported into recycled water schemes
- ✓ Recycled water that has been regulated for import as a direct potable reuse into a potable water supply scheme or non-potable water supply scheme
- ✓ Water that is subsequently exported to another scheme
- ✓ Transfers not associated with a financial transaction
- ✓ Unmetered volumes

Scheme X: #ML water imported

Scheme Y: #ML water imported

Include qualifying text to describe:

- The type and volume of water i.e. raw, treated (potable or non-potable)
- The scheme that the water was imported from

Units Megalitres (ML): as a whole number

Notes

1. Refer to Estimating Data for further information on estimating volumes.
2. The aggregate volume should be reported if a scheme receives water from multiple other schemes.
3. There is no equivalent indicator under the national urban water utility performance reporting framework.
4. Another scheme may be operated by the same or different service provider.

**QG 1.22: Volume of water exported to other schemes (S) (SWIM WA224)**

**The volume of water exported to another scheme/s (that may be operated by the same or different service provider).**

The reported volume includes:

- ✓ Raw or treated water that is subsequently exported to another scheme
- ✓ For recycled water schemes that is exported to another recycled water scheme
- ✓ Water that has been imported from another scheme and then is subsequently exported to another scheme
- ✓ Water exported that was not associated with a financial transaction
- ✓ Unmetered volumes

Scheme X: #ML water exported.

Scheme Y: #ML water exported

Provide comments text to describe:

- The type and volume of water i.e. raw, treated (potable or non-potable)
- The scheme that the water was exported to

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Units    Megalitres (ML): as a whole number

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Notes

1. Refer to Estimating Data for further information on estimating volumes.
2. The aggregate volume should be reported if water is exported to multiple other schemes.
3. There is no equivalent indicator under the national urban water utility performance reporting framework.
4. Another scheme may be operated by the same or different service provider.

**QG 1.23: Volume of real and apparent water losses (S) (SWIM AS56)**

**The volume of real and apparent losses in the potable scheme.**

Includes:

- ✓ Leakages, bursts and overflows from mains, service reservoirs and service connections prior to customer meters
- ✓ Unauthorised potable water consumption (e.g. illegal theft, illegal water connections and illegal water use)
- ✓ Customer metering errors

Excludes:

- × Unbilled authorised water consumption (e.g. fire-fighting)

Scheme X: # ML volume of water losses

Scheme Y: # ML volume of water losses

Please add a text response, which should include a brief description of how the volume of water losses was estimated or determined.

Units Megalitres (ML): as a whole number

Example 1

WSP B has only one meter at the outflow of the water treatment plant, which produced 1000ML for the financial year. Based on knowledge of its system (e.g. pipe types and age, maintenance records, customer mix, etc.), WSP B estimates that of the water produced (QG1.6a), 60% is for residential use (QG1.17a), 30% is for non-residential use (QG1.18a) and 10% is losses.

WSP B reports a volume of 100ML and comments 'Losses estimated based on 10% of the volume produced (QG1.6a)'.

Example 2

WSP A has an extensive metering network in the scheme, therefore has records of the volume of water sourced, produced (QG1.6a) and supplied (QG1.17a + QG1.18a). WSP A also has a process to reliably estimate the volume associated with real losses.

WSP A determines the volume of water losses to be 310ML and provides a comment 'Based on meter data'.

Notes

1. Service providers should use the actual values, or estimates, (all losses, including real and apparent) determined for their own operations.
2. This is the sum of the SWIM indicators AS55 (apparent losses) and AS52 (real losses).

## **'2' series – Water security**

Series 2 'Water Security' QG KPIs collectively are aimed at enabling a service provider to outline the water supply security situation of the water supply system over the next 18 months and out to 5 years. These KPIs provide information about the water security, resilience and level of water planning undertaken for the scheme.

The examples shown for each QG KPI are provided for service providers' information and/or consideration only. They are often simplified and are not meant to be exhaustive or 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 (including historical conditions and system behaviour) and available tools.

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 QG KPI, the absence of an accompanying text explanation will be considered to be a non-compliant response.

**QG 2.3: Contingency supplies (S) (SWIM WS3)**

**Description of the available and/or planned contingency supplies.**

The description should include, but not be limited to:

- ✓ the nature of the contingency supply source/s
- ✓ the capacity 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

If yes, a comment is required to provide details about the contingency supply/supplies, which should include the expected capacity of the contingency supply and the expected time that it will take to make the contingency supply available, including consideration of planning and necessary approvals.

**Example 1**

WSP B has not identified suitable contingency supplies.

WSP B reports 'no' and comments 'none identified'.

**Example 2**

WSP C's supply occasionally drops below 6 months prior to the wet season and this has already prompted the Council to commence construction of a 50kL/day pipeline to a nearby town with a more secure supply source.

WSP C reports 'yes' and comments 'Pipeline project to be completed in next 12 months, with sufficient capacity (50kL/day) for contingency supplies. Have purchased additional water allocation'.

**Example 3**

WSP E has not identified any viable 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.

WSP E reports 'yes' and comments 'Cart water every 3 days from Town X to supply restricted demand. Carting can be commenced within 2 days.'

**Note**

1. If a contingency supply has not been identified 'no' should be reported.
2. Refer to definitions of contingency supply and emergency supply provided in the 'commonly used terms' section.

**QG 2.10 (a to f): Water restrictions (S) (SWIM WS11 to WS16)**

**The number of days in the year when water restrictions were applied for each level of restrictions, including permanent water conservation measures (PWCM) within each scheme.**

Scheme X: PWCM – ## days; L1 - ## days; L2 – ## days; L3 – ## days; L4 – ## days; L5 – ## days;

Scheme Y: PWCM – ## days; L1 - ## days; L2 – ## days; L3 – ## days; L4 – ## days; L5 – ## days;

Units Days: as a whole number

**Example 1**

WSP C has five levels of water restrictions, including Permanent Water Conservation Measures (which are Level 1) and levels 2 to 5 are increasing in severity. Level 2 water restrictions were in place from February for three months and Level 3 were in place from May.

WSP C reports:

QG2.10a - PWCM: 215

QG2.10b - Level 1: NR

QG2.10c - Level 2: 89

QG2.10d - Level 3: 61

QG2.10e - Level 4: 0

QG2.10f - Level 5: 0

WSP C provides comments against QG2.10b 'PWCM is termed Level 1'.

**Example 2**

WSP E has four levels of water restrictions (no PWCM or level 5). Level 2 restrictions were in place for 4 months and level 3 restrictions were in place for 2 months during the previous financial year.

WSP E reports:

QG2.10a - PWCM: NR

QG2.10b - Level 1: 0

QG2.10c - Level 2: 122

QG2.10d - Level 3: 61

QG2.10e - Level 4: 0

QG2.10f - Level 5: NR

**Example 3**

WSP F had no restriction regime in place during the reporting period.

WSP F reports:

QG2.10a - PWCM: NR

QG2.10b - Level 1: NR

QG2.10c - Level 2: NR

QG2.10d - Level 3: NR

QG2.10e - Level 4: NR

QG2.10f - Level 5: NR

**Note**

1. If you have a water restriction level but no water restrictions were implemented at that level during the reporting financial year, report '0' for that scheme.
2. If you do not have a particular water restriction level (e.g. no level 5 restriction category), report 'NR' for that level.

## QG 2.11 (a to e): Water supply planning (S) (SWIM WS17 to WS21)

### Provide an overview of the status of water supply planning for the scheme.

Response to these indicators outlines the extent of water supply planning undertaken by the service provider for a scheme. It should be reported as yes/no for each sub-question. If reported 'no', a comment is required (and is mandatory) explaining why this is justified or when it is intended to complete the planning.

2.11a: Has asset management planning been undertaken in the last 10 years?

2.11b: Has drought management planning been undertaken in the last 10 years?

2.11c: Has water demand forecasts for the scheme been developed or reviewed in the last five (5) years?

2.11d: Has an assessment of key capacity constraints of the water infrastructure (e.g. in the source, treatment and/or distribution) been undertaken in last 10 years?

2.11e: Has the timing for potential future supply augmentation been assessed in the last 10 years?

Scheme X: yes/no. If reported no, please add a text response

Scheme Y: yes/no If reported no, please add a text response

Units    yes/no

#### Example 1

WSP B has a simple asset management plan and a drought management plan that were both developed 4 years ago. At the time of development, a simple demand projection was made based on the average water use and the Queensland Government Statistician Office population projections.

The drought management plan identifies possible contingency options when water levels drop to critical levels in the main storage. However, WSP B has not fully investigated the contingency supplies. WSP B is about to commence a test drilling program to verify and assess additional groundwater sources as contingency supplies. It is also investigating alternative water supply options for both 'usual' and contingency use. WSP B is currently conducting a 'pinch point' assessment to find the bottlenecks in its infrastructure.

WSP B reports:

2.11a: yes

2.11b: yes

2.11c: yes

2.11d: no and comments 'Process underway. Expected completion in 6 months'

2.11e: no and comments 'Will be undertaken following completion of pinch point assessments'

#### Example 2

WSP C has asset management plans that are reviewed every 5 years. No planning activities relating to water infrastructure capacity and no supply planning have been undertaken in the last 10 years (a drought management plan was prepared 12 years ago, which included a restrictions framework). Recent demand management has not been as successful as anticipated and so WSP C is currently reviewing the restriction framework and the drought management plan. The community that WSP C provides water to has had little to no growth (<1% p.a.) population growth over the last 10 years; this population trend is expected to continue in the future.

WSP C reports:

2.11a: yes



#### QG 2.11 (a to e): Water supply planning (S) (SWIM WS17 to WS21)

2.11b: no (as it was reviewed more than 10 years ago) and comments: 'We are currently updating the drought response plan'

2.11c: no and comments: 'Population relatively stable, so little change in water demand expected'.

2.11d: no and comments: 'Current asset capability is being maintained, and is adequate to meet demand, there is no need to understand bottlenecks in detail'

2.11e: no and comments: 'This will be revisited when population starts to grow'

#### Notes

1. Asset management planning describes the approach to monitoring asset condition and maintaining the capability of assets to provide water services to the agreed customer service standards.
2. Drought management planning identifies supply and/or demand options to respond to drought in order to reduce the risk of a water supply shortfall. It includes, but is not limited to, consideration of demand management measures (e.g. a restrictions schedule), contingency and/or emergency water supply options and triggers for initiating these. Drought management planning may involve the development of new, or review of existing, documentation.
3. Water demand forecasting includes, but is not limited to, consideration of population growth, historical water consumption on a per capita basis and potential changes to non-residential water demand. The forecast period should be for a minimum of 10 years.
4. Key capacity constraints in water infrastructure are the identified limitations or 'bottlenecks' in the source, treatment and transport (distribution) infrastructure. These will physically limit the ability to deliver increased volumes of water in the future without additional expenditure or changes in operating practice.
5. Assessment of likely timing for supply augmentations includes, but is not limited to, consideration of the water supply and demand balance. A water supply and demand balance compare reliable water supply source availability and critical infrastructure capacity constraints with projected water demands.
6. All these planning activities are expected to include some form of documentation.
7. Refer to the definition of 'commonly used terms' at the start of this guide, as required.

**QG 2.12: Months of available supply as at 30 June (S) (SWIM WS22)**

**An estimation of the months of accessible supply based on the volume that is available to be supplied to the water supply scheme as at 30 June for the reporting period**

Response to this indicator should include consideration of:

- ✓ the volume of water that is available from all sources
- ✓ available contingency supply
- ✓ anticipated demands including planned demand management measures, such as water restrictions that are likely to be implemented
- ✓ historical behaviour of the supply
- ✓ assumed inflow/streamflow/recharge based on Bureau of Meteorology (BOM) climate projections
- ✓ any relevant operational constraints (limitations of any infrastructure that is needed to access, treat and deliver the water)
- ✓ other water users of the resource

Response to this indicator is chosen from 6 timeframes.

Scheme X: # choice from 6 timeframes

Scheme Y: # choice from 6 timeframes

Units: choice from 6 timeframes:

1. 0-3 months of available supply
2. 4-6 months of available supply
3. 7-12 months of available supply
4. 13-18 months of available supply
5. 19-59 months of available supply
6. 60 months or greater of available supply

Where available contingency supply is combined to estimate months of available supply, comments must be included to state that the estimate is based on available contingency supply.

**Example 1**

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. WSP A also has a bore for use as a contingency, but the associated infrastructure requires repairs. The bore is therefore not considered 'available' and not accounted for to estimate the months of available supply.

Based on the current useable volume in storage, projected inflows based on climate projections, the historical performance of the dam, assumed storage losses, the current announced allocation and projected urban water demand (including water restrictions assumed to be implemented as storage levels further decline), WSP A estimate there is around 30 months of available supply as at 30 June.

WSP A reports '5' (19-59 months of available supply).

**Example 2**

WSP B relies on bores that have met town water supply requirements under most conditions. However, in the past few years falling bore levels due to poor recharge events have been recorded.

Based on the current bore level, the historical performance of the supply, the Bureau of Meteorology climate projections and estimated restricted demands, WSP B estimates 10 months to supply shortfall.

WSP B reports '3' (7-12 months of available supply).

**QG 2.12: Months of available supply as at 30 June (S) (SWIM WS22)**

**Example 3**

WSP C has access to 8,600 kL of water stored in an in-stream storage/pumping pool. Anticipated demand is 1,750 kL per month.

Based on this rate of demand, current volume of water in the storage, the historical performance of the supply, assumed storage losses and the Bureau of Meteorology climate projections, WSP C estimates there is around 18 weeks of available supply.

WSP C reports '2' (4-6 months of available supply).

**Example 4**

WSP D sources water from a small bore and desalinated marine water. The water sourced from the bore is estimated to meet the community's current unrestricted demand for 3 months. The marine desalination plant is sized sufficiently to meet the community's projected restricted water demands over the next 5 years.

When reporting WSP D considers both sources of water and reports '6' (60 months or greater of available supply) and adds comment 'Based on assumed contingency desalination supply'.

**Example 5**

WSP E sources water from run of river flows (i.e. no storage), has inline treatment, to then provide water supplies to its community.

Based on the current water levels at the intake, the historical performance of the supply, the Bureau of Meteorology climate projections and continued low water use, WSP E consider they will be able to meet demand over the next few years.

WSP E reports '5' (19-59 months available supply).

**Notes**

1. Available contingency supply is contingency supply that will be accessible when required.
2. Where water is solely supplied from the Great Artesian Basin, then '6', i.e. 60 months or greater, should be reported unless there are other known constraints.
3. Where water is solely supplied from groundwater then the best estimate of months of available supply should be reported based on the bore level and consideration of the safe yield.
4. Where seawater or brackish water is sourced from a marine environment, then '6', i.e. 60 months or greater, should be reported unless there are infrastructure constraints that may limit the meeting of water demand.

Service providers may be requested to submit further information on available supply to meet demand by the Water Supply Regulation.

**QG 2.13: Confidence that water demands will be met over the next 18 months (S) (SWIM WS23)**

**A service provider’s level of confidence that the water demand for the scheme can be reliably met over the next 18 months.**

Response to this indicator should include consideration of:

- ✓ assumed inflow/streamflow/recharge based on Bureau of Meteorology (BOM) climate projections
- ✓ anticipated demand, including planned demand management measures such as water restrictions
- ✓ available contingency

Scheme X: Confidence level descriptor

Scheme Y: Confidence level descriptor

Where there is uncertainty or a low or very low level of confidence, comments must be provided summarising actions being/to be taken.

Response choice:

Confidence level that water supply will reliably meet the water demands of the scheme for the next 18 months.

<b>Confidence level</b>	<b>Definition</b>	<b>Guidance</b>
High	There is a high level of confidence that the community’s water demands can be reliably met over the next 18 months.	There is a good understanding of the reliability of the water supply (including historical performance) and of the community’s likely water demands. There is considered to be adequate available supply, including reliable contingency supply, to meet the community’s water demands.
Fair	There is a fair level of confidence that the community’s water demands can be reliably met over the next 18 months.	There is a sound understanding of the reliability of the water supply (including historical performance) and of the community’s likely water demands. There is considered to be adequate available supply, including identified contingency supply, to meet the community’s water demands.
Unsure	There is uncertainty that the community’s water demand can be reliably met for the next 18 months.	There is uncertainty in either the future water demand or supply reliability (including the reliability and/or availability of the contingency supply). This may be due to a lack of reliable data, a lack of analyses and planning or other reasons.
Low	There is a low level of confidence that the community’s water demand can be reliably met over the next 18 months.	There may be a supply shortfall over the next 18 months, based on demand management options and contingency supply options i.e. there is a low level of confidence in the supply reliability. OR Supply augmentation has commenced, but construction may not be completed in time. OR There is a lack of reliable data on historical performance or high degree of uncertainty in the volume of inflows/recharge/stream flow.

**QG 2.13: Confidence that water demands will be met over the next 18 months (S) (SWIM WS23)**

Very low	There is a very low level of confidence that the community's water demand can be reliably met over the next 18 months.	Planning shows that a supply shortfall is likely over the next 18 months, considering demand management options and contingency supply options, i.e. very low confidence in supply reliability or there is insufficient supply to meet projected demands.  OR Adequate funds or resources have not been secured to augment the water supply as needed over the next 18 months.
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**Example 1**  
WSP A has undertaken an indicative water balance and considers a worst case scenario of around 30 months supply remaining, based on no inflows (as BOM has predicted the dry spell to continue for at least the next season) and planned demand management measures including restrictions and continued use of recycled water.  
WSP A reports 'High' and comments 'Good understanding of supply'.

**Example 2**  
WSP B relies on bores that have historically met town water supply requirements. However, in the past few years falling bore levels due to poor recharge events have been recorded. Also, the Bureau of Meteorology is predicting that dry climate conditions will continue for at least the next season. WSP B has not fully investigated contingency supplies.  
WSP B reports 'Low' and provides in the comments 'Poor recharge events have led to low groundwater levels. Contingency not yet determined'.

**Example 3**  
WSP C has access to an in-stream pumping pool. Climate projections indicate that there is only a 30% chance of exceeding median rainfall in the next season. Recent demand management has not been as successful as anticipated. If demand does not come down to target levels current supplies may last less than 18 months. A pipeline to provide a contingency supply is currently being constructed and is planned to be completed within 12 months.  
WSP C reports 'Unsure' and comments "Dry conditions projected. Uncertain of effectiveness of future restrictions. Pipeline currently being constructed as contingency measure'.

**Example 4**  
WSP E relies on run of river flows (i.e. no storage). Historically this system has been able to meet demands and when it hasn't, water has been carted from a neighbouring provider as pre-arranged.  
Bureau of Meteorology climate projections indicate average inflows are likely to occur in the next season.  
WSP E reports 'Fair' and comments 'Assuming average river flows'.

**QG 2.14: Confidence that water demands will be met over the next 5 years (S) (SWIM WS24)**

**The service provider’s level of confidence that the water demand for the scheme can be reliably met over the next 5 years.**

Response to this indicator should include consideration of:

- ✓ assumed inflow/streamflow/recharge based on history and with regard to the Bureau of Meteorology (BOM) climate projections
- ✓ projected population estimated by the Queensland Government Statistician’s Office (QGSO)
- ✓ anticipated demand, including planned demand management measures such as water restrictions
- ✓ any relevant future water infrastructure planned to be constructed

Scheme X: Confidence level descriptor

Scheme Y: Confidence level descriptor

Where there is uncertainty or a low or very low level of confidence in being able to meet the demands over the next 5 years, comments must be provided to detail actions being taken or planned to be taken.

**Response choice:**

Confidence level that water supply will reliably meet the water demands of the scheme’s community over the next 5 years.

<b>Confidence level</b>	<b>Definition</b>	<b>Guidance</b>
High	There is a high level of confidence that we can reliably meet the community’s water demands for the next 5 years.	There is a good understanding of the water supply (including historical performance and confidence in the volume of assumed inflows/recharge/stream flow) and of future water demands. There is considered to be adequate available supply, including reliable contingency supply.
Fair	We have a fair level of confidence that we can reliably meet the community’s water demands for the next 5 years.	There is a sound understanding of the water supply (including historical performance, confidence in the volume of assumed inflows/recharge/stream flow) and of future water demands. There is considered to be adequate available supply including identified contingency supply.
Unsure	We are unsure if we can reliably meet the community’s water demand for the next 5 years.	There is uncertainty in either the demand projections or supply reliability including the reliability and/or availability of the contingency supply due to a lack of reliable data / a lack of analyses and planning / other reasons.
Low	We have a low level of confidence that we can reliably meet the community’s water demand for the next 5 years.	There may be a supply shortfall over the next 5 years, based on demand management options and contingency supply options, i.e. there is a low level of confidence in the supply reliability. OR Planning for supply augmentation has commenced, but construction may not be completed in time.

QG 2.14: Confidence that water demands will be met over the next 5 years (S) (SWIM WS24)		
Very low	We have a very low level of confidence that we can reliably meet the community's water demand for the next 5 years.	Planning indicates that supply shortfall is likely over the next 5 years, considering demand management options and contingency supply options, i.e. very low confidence in supply reliability or there is insufficient supply to meet projected demands. OR No/limited planning is in place and/or adequate funds or resources have not been secured to undertake necessary works.
<p>Example 1</p> <p>WSP A holds a water allocation of 5,000 ML/annum of High Priority water from a dam, and services a current demand of around 4,000 ML/annum. The demand is expected to increase about 1% per year. The dam historically has a high performance, with few occurrences of falling to low storage levels. WSP A also has a bore for use as a contingency, but the associated infrastructure requires repairs. The bore will be repaired within the next 2-3 years. WSP A reports 'High' and comments 'Good understanding of supply, some uncertainty regarding contingency bore'.</p> <p>Example 2</p> <p>WSP B relies on bores that have met town water supply requirements historically. However, in the past few years falling bore levels due to poor recharge events have been recorded (not seeming to be correlated to weather patterns). WSP B has not fully investigated the contingency supplies. WSP B reports 'Low' and provides in the comments 'Poor recharge events have led to low groundwater levels. Contingency not yet determined'.</p> <p>Example 3</p> <p>WSP C has access to an in-stream pumping pool. Recent demand management has not been as successful as anticipated. A pipeline from a reliable source is currently being constructed to enable supply of restricted demand (for the next 10-15 years). The pipeline is expected to be completed within 12 months. A review of demand management is to be undertaken in consultation with the community over the next 1-2 years. WSP C reports 'Fair' and comments 'Assuming pipeline able to supply restricted demand. Review of demand management to be done'.</p> <p>Example 4</p> <p>WSP E relies on run of river flows. Historically this system has been able to meet demands. The water demands of the community are expected to only slightly increase over the coming 5 years. WSP E has an arrangement to cart water from a neighbouring provider (with an independent supply). The long-term reliability of this neighbouring supply is unclear. WSP E reports 'Unsure' and comments 'Climate dependent supply'.</p>		

### **'3' series – Finance**

Series 3 'Finance' includes QG KPIs in relation to capital expenditure, grants, replacement costs, revenue, operation and maintenance cost, depreciation and renewal expenditure for both water and sewerage services. Service providers are to report on all QG KPIs at service-wide level.



**QG 3.1: Total water supply capital expenditure (W) (SWIM FN14)**

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

Includes:

- ✓ new works
- ✓ renewals or replacements
- ✓ work in progress expenditure that is expected to be capitalised
- ✓ 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) (SWIM FN15)**

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

Includes:

- ✓ new works
- ✓ renewals or replacements
- ✓ work in progress expenditure that is expected to be capitalised
- ✓ 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) (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)

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

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**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) (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)

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

**QG 3.5: Nominal written-down replacement cost of fixed water supply assets (W) (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)

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

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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) (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)

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

Note

1. 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) (SWIM FN74)**

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

Includes:

- ✓ work in progress expenditure that is expected to be capitalised
- ✓ replacement of water recycling assets

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

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

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Note

1. 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) (SWIM FN75)**

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

Includes:

- ✓ work in progress expenditure that is expected to be capitalised

Excludes:

- × replacement of water recycling assets

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

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

Note

1. 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) (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

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

**QG 3.10: Total revenue – sewerage (W) (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)

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

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Note

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

**QG 3.11: Operating cost per property – Water (W) (SWIM FN11 – except bulk water providers, SWIM FN11.1 – bulk water providers)**

**The operating costs (operation, maintenance, administration) of a service provider per connected property or per ML for bulk water 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 apportioned to water services

Excludes:

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

# operating cost – water (\$ / property)

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

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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 water providers only

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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.
4. In apportioning indirect costs between water and sewerage services, the business should apply a consistent methodology for all financial years and note the methodology that was used as a comment for the indicator.

**QG 3.11a: Operating cost – water (W) (SWIM FN32)**

**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 apportioned to water 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 (\$'000s)

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

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.
4. In apportioning indirect costs between water and sewerage services, the business should apply a consistent methodology for all financial years and can note the methodology as a comment for the indicator.

**QG 3.12: Operating cost per property – sewerage (W) (SWIM FN12)**

**The operating costs (operation, maintenance, administration) of a service provider per connected property.**

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 apportioned to 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)

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

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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.
4. In apportioning indirect costs between water and sewerage services, the business should apply a consistent methodology for all financial years and note the methodology that was used as a comment for the indicator.

**QG 3.12a: Operating cost – sewerage (W) (SWIM FN33)**

**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 apportioned to 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 (\$'000s)

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

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.
4. In apportioning indirect costs between water and sewerage services, the business should apply a consistent methodology for all financial years and can note the methodology as a comment for the indicator.

**QG 3.13: Annual maintenance costs – water (W) (SWIM FN76)**

**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)

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

**QG 3.14: Annual maintenance costs – sewerage (W) (SWIM FN77)**

**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)

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



**QG 3.15: Current cost depreciation – water (W) (SWIM FN78)**

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

# current cost depreciation – water (\$'000s)

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

**QG 3.16: Current cost depreciation – sewerage (W) (SWIM FN79)**

**Expenses incurred relating to change in value of the fixed sewerage services assets, plant and equipment during the reporting financial 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 financial 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) (SWIM FN80)**

**The average of the annual renewals expenditures for the last 5 years (i.e. the reporting financial 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 financial year was \$180,000. In the four years before the reporting financial 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) (SWIM FN81)**

**The average of the annual renewals expenditures for the last 5 years (i.e. the reporting financial 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)

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

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**Example**

A service provider's renewals expenditure in the reporting financial year was \$180,000. In the four years before the reporting financial 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.

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**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).

**QG 3.19: Forecast 5 year average annual renewals expenditure – water (W) (SWIM FN82)**

**The average annual renewals expenditures planned for 5 years after the reporting financial 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) (SWIM FN83)**

**The average annual renewals expenditures planned for 5 years after the reporting financial 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).

**QG 3.21: Other costs – water (W) (SWIM FN49)**

**The other water supply expenses incurred by the service provider, which are not reported under another indicator.**

Includes:

- ✓ all non-core water supply business operating costs
- ✓ any write-downs of water supply assets to recoverable amounts
- ✓ depreciation and amortisation of water supply assets
- ✓ interest expenses

Excludes:

- × all expenses incurred on provision of sewerage and stormwater services
- × all other water supply expenses reported elsewhere

# other costs – water (\$'000s)

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

Note

1. Information on estimates should be included in the comments.

**QG 3.22: Other costs – sewerage (W) (SWIM FN50)**

**The other sewerage service expenses incurred by the service provider, which are not reported under another indicator.**

Includes:

- ✓ all non-core sewerage service business operating costs
- ✓ any write-downs of water supply assets to recoverable amounts
- ✓ depreciation and amortisation of water supply assets
- ✓ interest expenses

Excludes:

- × all expenses incurred on provision of water supply and stormwater services
- × all other water supply expenses reported elsewhere

# other costs – sewerage (\$'000s)

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

Note

1. Information on estimates should be included in the comments.



## **'4' series – Customer**

Series 4 'Customer' includes QG KPIs in relation to water and sewerage billing and customer service standards (CSS).

For billing-related QG KPIs, service providers are to report on fixed charges for water and sewerage at scheme level, annual bills based on 200 KL consumption as well as typical bills at service-wide level.

For CSS-related QG KPIs, service providers are to report on number of mains breaks, incidence of unplanned interruptions and complaints that they have had in the reporting financial year. Also, for some CSS related QG KPIs, service providers report their performance against the targets set in their CSS for responses to water and sewerage incidents.

**QG 4.1: Fixed charge – water (S) (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

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

**QG 4.2: Fixed charge – sewerage (S) (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

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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) (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**

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

QG 4.4: Typical residential bill (W) (SWIM PR48)	
<b>The dollar amount of the typical residential annual water and sewerage bill for the financial year.</b>	
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
<b>Example</b> Typical residential bill water and sewerage, where: <ul style="list-style-type: none"> <li>• Sewerage fixed charge = \$100/year (no usage charge)</li> <li>• Water fixed charge = \$50/year</li> <li>• Special levy = \$30/year</li> <li>• Average residential water consumption per property = 300 kL (calculated from 'Average annual residential water supplied per property',)</li> <li>• Water pay-for-use charge = \$1/kL = \$1 x 300 kL = \$300</li> </ul> Therefore, the typical residential bill water and sewerage = \$100 + \$50 + \$300 + \$30 = \$480 The service provider reports \$480.	
<b>Note</b> 1. This indicator is to be reported for the service provider's scheme with highest number of connections.	

QG 4.5: Total water main breaks (per 100 km) (S) (SWIM AS8)	
<p><b>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 financial year, irrespective of whether the break, burst or leak resulted in an interruption.</b></p> <p>Includes:</p> <ul style="list-style-type: none"> <li>✓ breaks caused by third-parties</li> </ul> <p>Excludes:</p> <ul style="list-style-type: none"> <li>× those in the property service (i.e. mains to meter connection)</li> </ul> <p>Scheme X: # of breaks / 100km of water main  Scheme Y: # of breaks / 100km of water main</p>	
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	<ol style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> </ol>

**QG 4.6: Total sewerage main breaks and chokes (per 100 km) (S) (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 financial year.**

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  $(\text{Total number of sewerage main breaks} / \text{Total length of sewerage mains (QG 1.2)}) \times 100$

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) (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

Example

In the financial year, water service provider (WSP) 'A' had 3 unplanned interruptions. In the first, second and third unplanned interruptions, the number of properties affected were 100, 125 and 200 respectively. Therefore, in total, service provider had 425 properties (100 + 125 + 200 = 425) affected in the financial year as a result of all unplanned interruptions. WSP A has 1500 connections in the scheme.

The incidence of unplanned interruptions is calculated as:

Total number of properties affected – 425

Number of connections in the scheme – 1500

Therefore,

Number of incidence of unplanned interruptions per 1000 connections =  $425 / (1500 / 1000) = 283.3$

WSP A reports 283.

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.
4. Service providers reporting through the SWIM database only have to enter the total number of properties affected by all unplanned interruptions that occurred during the financial year. The SWIM database automatically calculates the 'Number of incidence of unplanned interruptions per 1000 properties' (based on number of connections in the scheme).



**QG 4.8a: Performance against customer service standard for response to water incidents (bursts and leaks) (S) (SWIM CS66)**

**This indicator reports a water service provider's (WSP) performance against their customer service standard for responding to water incidents. This indicator measures the percentage of water incidents the WSP responds to within the agreed timeframe.**

Scheme X: % met with customer service standard for responding to water incidents.

Scheme Y: % met with customer service standard for responding to water incidents.

Units Percentage: 1 decimal place

**Formula**

If the WSP did achieve or exceed all their Customer Service Standard targets for water incidents, their performance is reported as 100%.

If the WSP did NOT achieve all their Customer Service Standard targets for water incidents, then their performance is calculated as:

$\% \text{ water incidents that met the customer service target} / \text{customer service target (\%)} \times 100.$

**Example 1: Complied with Customer Service Standard**

WSP U has a customer service target of 90% of water incidents responded to within 12 hours.

For the financial year, WSP U had 70 water incidents and they responded to 65 water incidents within their customer service standard target of 12 hours, therefore their performance is calculated as  $(65 / 70 \times 100) = 93\%$ .

As WSP U did achieve their Customer Service Standard of 90%, WSP U reports 100%.

**Example 2: Did NOT comply with Customer Service Standard**

WSP V has a customer service target of 80% of water incidents responded to within 3 hours.

For the financial year, WSP V had 320 water incidents and they responded to 208 within their customer service target of 3 hours, therefore, their performance is calculated as  $(208 / 320 \times 100) = 65\%$ .

As WSP V did NOT achieve their Customer Service Standard of 80%, their performance is calculated as  $65\% / 80\% \times 100 = 81.3\%$ .

WSP V reports 81.3%.

**Example 3: Did NOT comply with priority-based Customer Service Standard**

WSP X has a priority-based customer service target of 80% of water incidents responded to within:

- Priority 1: Response within 2 hours.
- Priority 2: Response within 5 hours.
- Priority 3: Response within 2 days.

For the financial year, WSP X had the following water incidents, and responded as follows:

- Priority 1: Had 20 incidents and responded to 12 within 2 hours.
- Priority 2: Had 100 incidents and responded to 85 within 5 hours.
- Priority 3: Had 450 incidents and responded to 320 within 2 days.

**QG 4.8a: Performance against customer service standard for response to water incidents (bursts and leaks) (S) (SWIM CS66)**

WSP X had a total of 570 water incidents (20 + 100 + 450) and responded to 417 water incidents (12 + 85 + 320) within response target times, therefore their performance is calculated as  $(417 / 570 \times 100) = 73\%$ .

As WSP X did NOT achieve their Customer Service Standard of 80%, their performance is calculated as  $73\% / 80\% \times 100 = 91.3\%$ .

WSP X reports 91.3%.

**Notes**

1. Where service provider only has a timeframe (within 2 hours etc.) as a target for this indicator, it indicates that service provider has agreed with their customers to meet the target timeframe for all water incidents (i.e. 100% of the time).
2. Customer service standards or service performance standards must set targets for response to water incidents. This indicator aims to demonstrate how well the provider meets those targets.

**QG 4.9a: Performance against customer service standard for response to sewerage incidents (including mains breaks and chokes) (S) (SWIM CS65)**

**This indicator reports a water service provider's (WSP) performance against their customer service standard for responding to sewerage incidents. This indicator measures the percentage of sewerage incidents the WSP responds to within the agreed timeframe.**

Scheme X: % met with customer service standard for responding to sewerage incidents.

Scheme Y: % met with customer service standard for responding to sewerage incidents.

Units Percentage: one decimal place

**Formula**

If the WSP did achieve or exceed all their Customer Service Standard targets for sewerage incidents, their performance is reported as 100%.

If the WSP did NOT achieve all their Customer Service Standard targets for sewerage incidents, then their performance is calculated as:

$\% \text{ sewerage incidents that met the customer service target} / \text{customer service target (\%)} \times 100.$

**Example 1: Complied with Customer Service Standard**

WSP U has a customer service target of 90% of sewerage incidents responded to within 12 hours.

For the financial year, WSP U had 70 sewerage incidents and they responded to 65 incidents within their customer service standard target of 12 hours, therefore their performance is calculated as

$(65 / 70 \times 100) = 93\%.$

As WSP U did achieve their Customer Service Standard of 90%, WSP U reports 100%.

**Example 2: Did NOT comply with Customer Service Standard**

WSP V has a customer service target of 80% of sewerage incidents responded to within 3 hours.

For the financial year, WSP V had 320 sewerage incidents and they responded to 208 within their customer service target of 3 hours, therefore their performance is calculated as  $(208 / 320 \times 100) = 65\%.$

As WSP V did NOT achieve their Customer Service Standard of 80%, their performance is calculated as  $65\% / 80\% \times 100 = 81.3\%.$

WSP V reports 81.3%.

**Example 3: Did NOT comply with priority-based Customer Service Standard**

WSP X has a priority-based customer service target of 80% of sewerage incidents responded to within:

- Priority 1: Response within 2 hours.
- Priority 2: Response within 5 hours.
- Priority 3: Response within 2 days.

For the financial year, WSP X had the following sewerage incidents, and responded as follows:

- Priority 1: Had 20 incidents and responded to 12 within 2 hours.
- Priority 2: Had 100 incidents and responded to 85 within 5 hours.
- Priority 3: Had 450 incidents and responded to 320 within 2 days.

**QG 4.9a: Performance against customer service standard for response to sewerage incidents (including mains breaks and chokes) (S) (SWIM CS65)**

WSP X had a total of 570 sewerage incidents (20 + 100 + 450) and responded to 417 sewerage incidents (12 + 85 + 320) within response target times, therefore their performance is calculated as  $(417 / 570 \times 100) = 73\%$ .

As WSP X did NOT achieve their Customer Service Standard of 80%, their performance is calculated as  $73\% / 80\% \times 100 = 91.3\%$ .

WSP X reports 91.3%.

**Notes**

1. Where service provider only has a timeframe (within 2 hours etc.) as a target for this indicator, it indicates that service provider has agreed with their customers to meet the target timeframe for all water incidents (i.e. 100% of the time).
2. Customer service standards or service performance standards must set targets for response to sewerage incidents. This indicator aims to demonstrate how well the provider meets those targets.

**QG 4.10: Water quality complaints (per 1000 properties) (S) (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  $\frac{\text{Total number of water quality complaints}}{\text{Total water connected properties ('000s)}} \text{ (QG 1.13 + QG 1.14)}$

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 on multiple issues 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 (per 1000 properties) (S) (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)

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

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

**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 on multiple issues 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 10002-2006).

**QG 4.12: Water service complaints (per 1000 properties) (S) (SWIM CS10)**

**The total number of water service complaints received by the service provider during the financial year.**

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:

- ✓ bursts
- ✓ leaks
- ✓ service interruptions
- ✓ adequacy of service
- ✓ water pressure
- ✓ water reliability

Excludes complaints regarding:

- × Water quality
- × Billing and accounts
- × Government pricing policy
- × Tariff structures

Scheme X: # water service complaints (per 1000 properties)

Scheme Y: # water service complaints (per 1000 properties)

Units Complaints per 1000 properties: as a whole number

Formula Total number of water service complaints / Total water connected properties ('000) (QG1.13 + QG1.14)

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 on multiple issues 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 10002-2006).

**QG 4.13: Sewerage service complaints (per 1000 properties) (S) (SWIM CS11)**

**The total number of complaints received by the service provider that relate to sewerage service quality and reliability during the financial year.**

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:

- ✓ sewer chokes and overflows
- ✓ trade waste services
- ✓ sewerage odours
- ✓ sewerage system reliability
- ✓ all other sewerage issues

Excludes complaints regarding:

- × property connections
- × government pricing policy
- × tariff structures
- × other non-applicable areas of business

Scheme X: # sewerage service complaints (per 1000 properties)

Scheme Y: # sewerage service complaints (per 1000 properties)

Units Complaints per 1000 properties: as a whole number

Formula Total number of sewerage service complaints / Total sewerage connected properties ('000)  
(QG1.15 + QG1.16)

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 on multiple issues 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) Where legislation prescribes a minimum notification time for unplanned interruptions, this timeframe should be used.



**QG 4.14: Billing & account complaints: water & sewerage (per 1000 properties) (S) (SWIM CS12)**

**The total number of complaints received by the service provider that relate to billing and accounts during the financial year.**

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:

- ✓ account payment
- ✓ financial loss or overcharging
- ✓ billing errors
- ✓ affordability

Excludes complaints regarding:

- × Government pricing policy
- × Tariff structures
- × Correctly calculated bill that is too high

Scheme X: # billing and account complaints (per 1000 properties)

Scheme Y: # billing and account complaints (per 1000 properties)

Units Complaints per 1000 properties: as a whole number

Formula  $\text{Total number of billing and account complaints} / \text{Total water connected properties ('000)}$   
(QG1.13 + QG1.14)

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 on multiple issues 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 10002-2006) Where legislation prescribes a minimum notification time for unplanned interruptions, this timeframe should be used.

## **'5' series – Distributor retailers**

Series 5 'Distributor retailers' includes QG KPIs for operating ratio, capital replenishment ratio and debt to revenue ratio. These QG KPIs apply only to service providers who are distributor retailers and are to be reported at service-wide level.

QG 5.1: Operating ratio (W) (SWIM FN84)	
<b>Net operating result before tax divided by total operating revenue.</b>	
# operating ratio (%)	
Units	percentage
Formula	$[\text{net operating profit (before tax)} / \text{total operating revenue}] \times 100$
<b>Note</b>	
1. Refer to Queensland Audit Office (QAO), Results of Audit: Water sector entities 2012-13, p. 39 for more details.	

QG 5.2: Capital replenishment ratio (W) (SWIM FN85)	
<b>Purchases of non-current assets divided by depreciation expense.</b>	
# capital replenishment ratio	
Units	expressed as a number
Formula	purchases of non-current assets / depreciation expense
Note	
1. 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) (SWIM FN86)	
<b>Total loans and borrowings divided by total operating revenue.</b>	
# debt to revenue ratio (% or number)	
Units	expressed as a percentage or number
Formula	$[\text{total loans and borrowings} / \text{total operating revenue}] \times 100$ , or total loans and borrowings / total operating revenue
Note	
1. 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.	

## **'6' series – Cyber security**

The cyber security key performance indicators (introduced from the 2019-20 reporting period) are focussed on confirming that service providers have taken steps to identify their level of vulnerability to cyber threats and have taken action to address any findings from the vulnerability assessment on an ongoing basis. The below key performance indicators are aimed at establishing an overview of cyber security activities specifically being undertaken to protect water and sewerage assets. However, it is acknowledged that cyber security activities may be occurring at an organisational level and not specifically in relation to water and sewerage assets. In this case, it is acceptable to answer the series 6 key performance indicators from a broader organisational perspective and provide a comment advising that this is the case. Control and associated systems, as referred to in these key performance indicators, is any collection of data, information, devices or equipment, which support your organisation to perform its water and sewerage functions. They may include both operational technology and information technology assets such as:

- Data from water quality metrics from monitoring systems, e.g. SCADA,
- Control systems such as PLCs (Programmable logic controllers) and RTUs (Remote terminal units)
- Systems such as email communication systems, and
- Devices such as laptops, network equipment, cables and phones.

**QG 6.1: Governance structure implemented (W) (SWIM IT1)**

**Does your organisation implement cyber security governance practices aligned with recognised standards that:**

- Clearly defines internal roles and responsibilities for cyber security?
- Places cyber security responsibility with the appropriate component owner and cyber security risk accountability with the head of the executive team (CEO or equivalent level)?
- Considers appropriate security controls and compensating controls where applicable?

Units Yes / No

**Notes**

The implementation of the ISO/IEC 27000 standard family or other equivalent international standards (e.g. ISA/IEC 62443 series) is a strategic decision for an organisation. This decision and implementation should be influenced by the organisation's needs and objectives, security requirements, the organisational processes used and the size and structure of the organisation.

The consistent use of a robust governance and risk structure increases the protection of an organisation's confidentiality, integrity and availability, and can also give confidence to external stakeholders and interested parties. An ideal equivalent internal standard aligned to the ISO/IEC 27000 series for example, should provide assurance to the accountable executive, that controls and processes are used to address business risks in line with the organisation's risk appetite and tolerance. It should also clearly define policies and procedures, internal roles and responsibilities for cyber security and place appropriate responsibility with the individual component owner.

**QG 6.2: Vulnerability / risk assessment of water / sewerage assets implemented (W) (SWIM IT2)**

**In the past 12 months, has your organisation undertaken an assessment of the vulnerability of water and sewerage services to cyber security risk which has also:**

- Identified critical assets?
- Identified vulnerabilities in critical assets?
- Evaluated the risk of vulnerabilities being exploited in terms of likelihood and impact?

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Units Yes / No

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**Notes**

A suitable vulnerability assessment would ideally include consideration of whether:

- A critical asset register exists, identifies data and applications across both information technology and operational technology systems, and is consistently reviewed and updated,
- The organisation can identify the design of its information and operational environments,
- A validated network diagram exists; and
- The organisation considered the requirements and implications of third-party access to its information technology and operational technology assets and whether this access is securely managed.

The vulnerability assessment should further identify whether exercises are undertaken to actively attempt to compromise the organisation's assets so weaknesses can be identified and addressed. Also, assessments should identify whether the organisation has visibility of the threats most likely to compromise its critical assets.

Recommendations should be made to remediate any identified vulnerabilities and manage the risks they introduce.



**QG 6.3: Cyber security safeguards implemented (W) (SWIM IT3)**

**Do risks identified as part of your vulnerability / risk assessment process for water and sewerage control and associated systems:**

- Have clear actions identified to mitigate risks?
- Have clearly defined responsibilities?

Units Yes / No

**Notes**

Actions could include implementing the Australian Signals Directorate Essential Eight mitigation strategies and following advice for 'Secure Administration' from the Australian Cyber Security Centre (ACSC). These strategies include, but are not limited to:

- Ensuring relevant access control systems and policies are in place,
- Performing periodic reviews of applications, devices and/or networks in the control environment for their relevance in the field (decommission unused assets),
- Assessing software for potential vulnerabilities and applying necessary patch management programs to remediate risks emerging from these vulnerabilities,
- Maintaining and enforcing an application 'whitelist' to disallow unintentional or intentional execution of non-whitelisted applications which may introduce malware to the control environment,
- Restricting administrative rights on the principle of least privilege' and data access on 'need to know' basis
- Enforcing the use of secure passwords that are sufficiently complex and ideally used in tandem with multi-factor authentication.

<b>QG 6.4: Cyber security detection process implemented (W) (SWIM IT4)</b>
<b>Does your organisation monitor its assets to detect cyber security incidents / occurrences in water and sewerage control and associated systems?</b>
Units Yes / No
<p>Note</p> <p>Monitoring could include the implementation of automated or manual processes that identify abnormal, unusual or suspicious cyber security events, such as timed administration resets and numbered log in attempts before accounts are disabled.</p>

QG 6.5: Cyber security response and recovery plan implemented (W) (SWIM IT5)	
<p><b>In the event of cyber security incident in water and sewerage control and associated systems does your organisation have a recovery plan with responses practiced at least annually?</b></p>	
Units	Yes / No
<p><b>Note</b></p> <p>A recovery plan should include the process of daily backups of critical data and procedures to restore backups, and plans and procedures to operate water and sewerage infrastructure manually that are regularly exercised.</p> <p>An internal Incident Response simulation exercise should be performed at least annually, and should include the involvement of members of the Incident Response leadership and their subordinates in an exercise that would test the Incident Response team's ability to identify, respond to and remediate an internal incident.</p>	

## Appendix 1: Reference information for water balance calculations

Figure 1: potable water schemes – relationship of the water balance KPIs

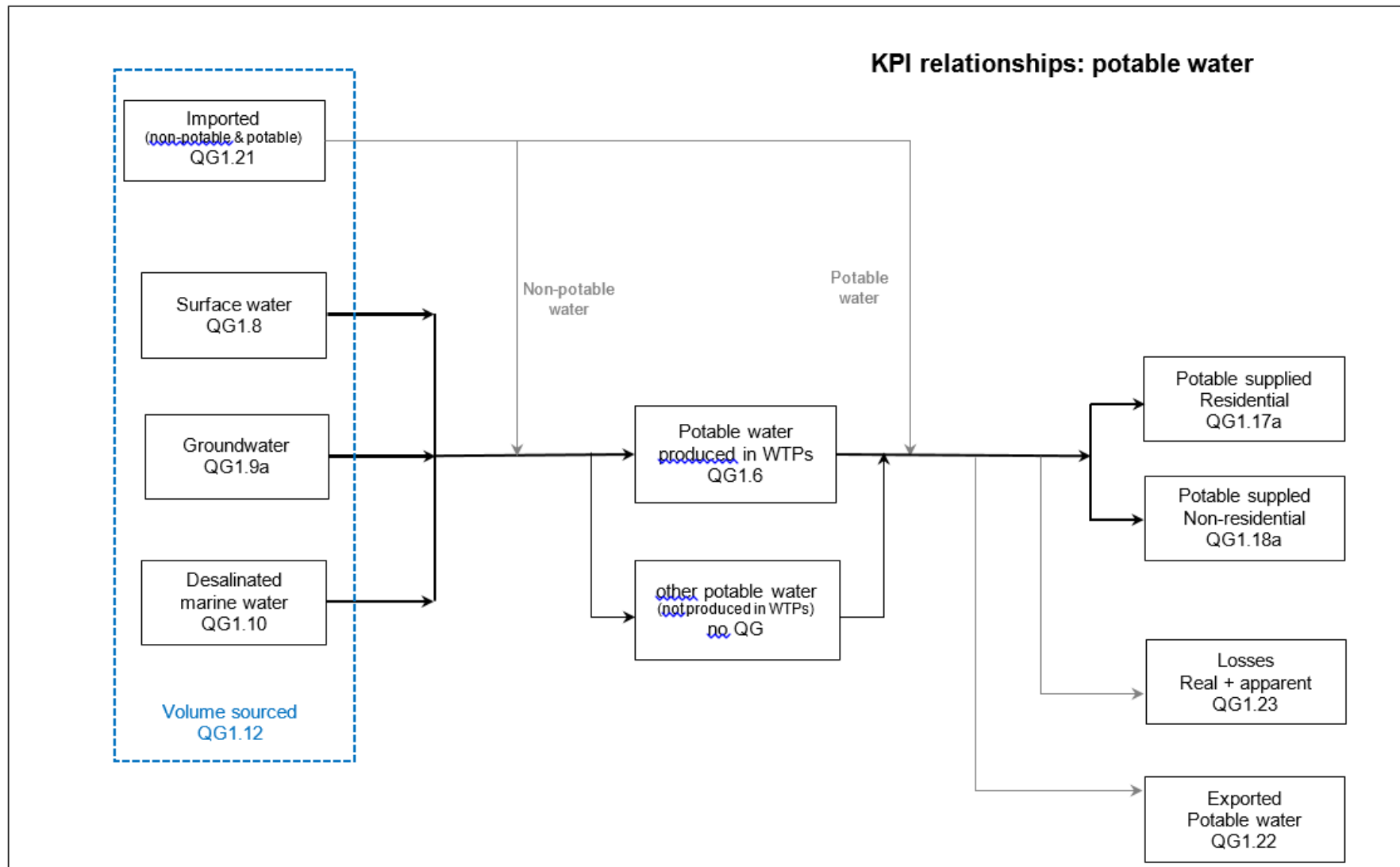


Figure 2: non-potable water schemes – relationship of the water balance KPIs

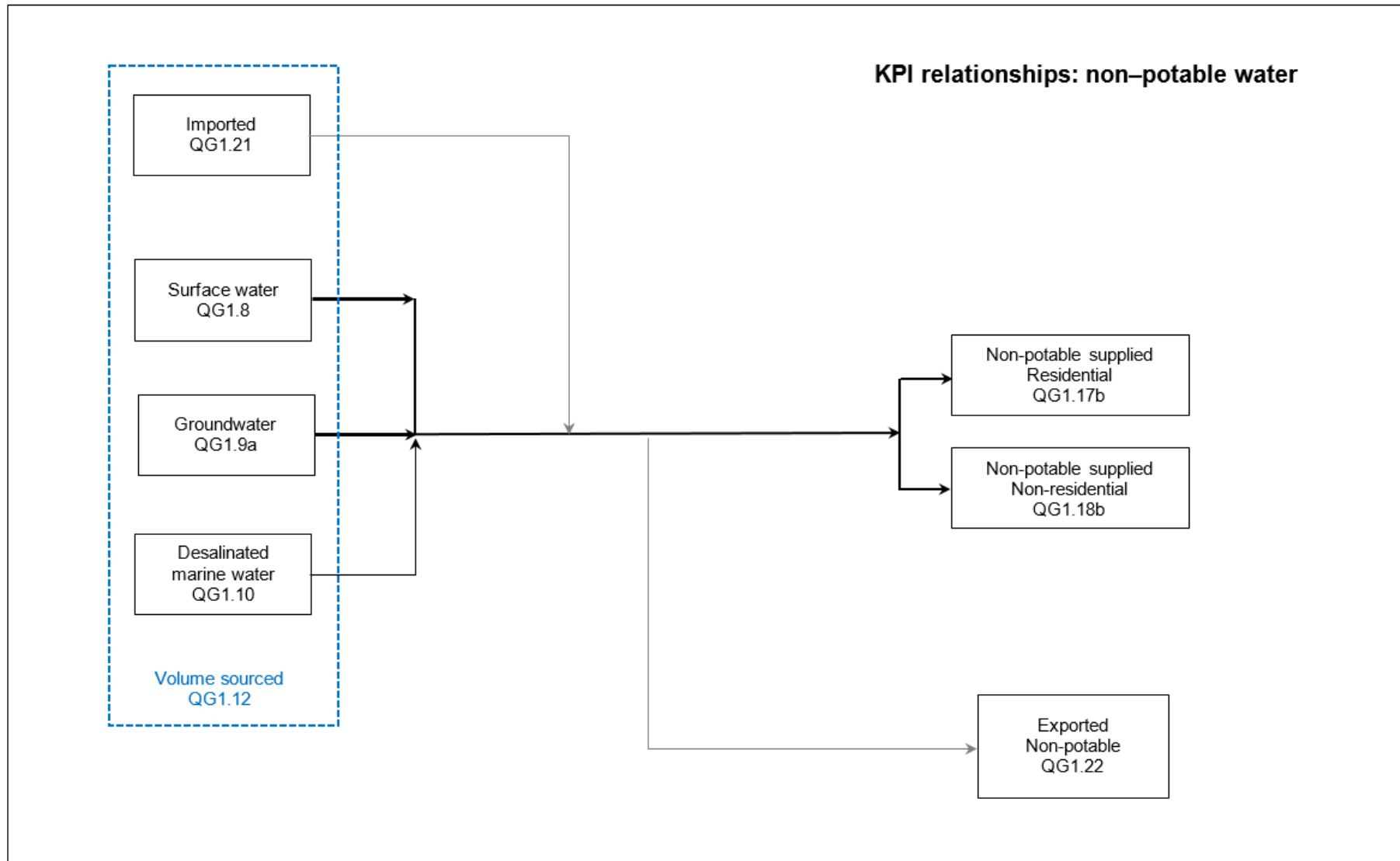
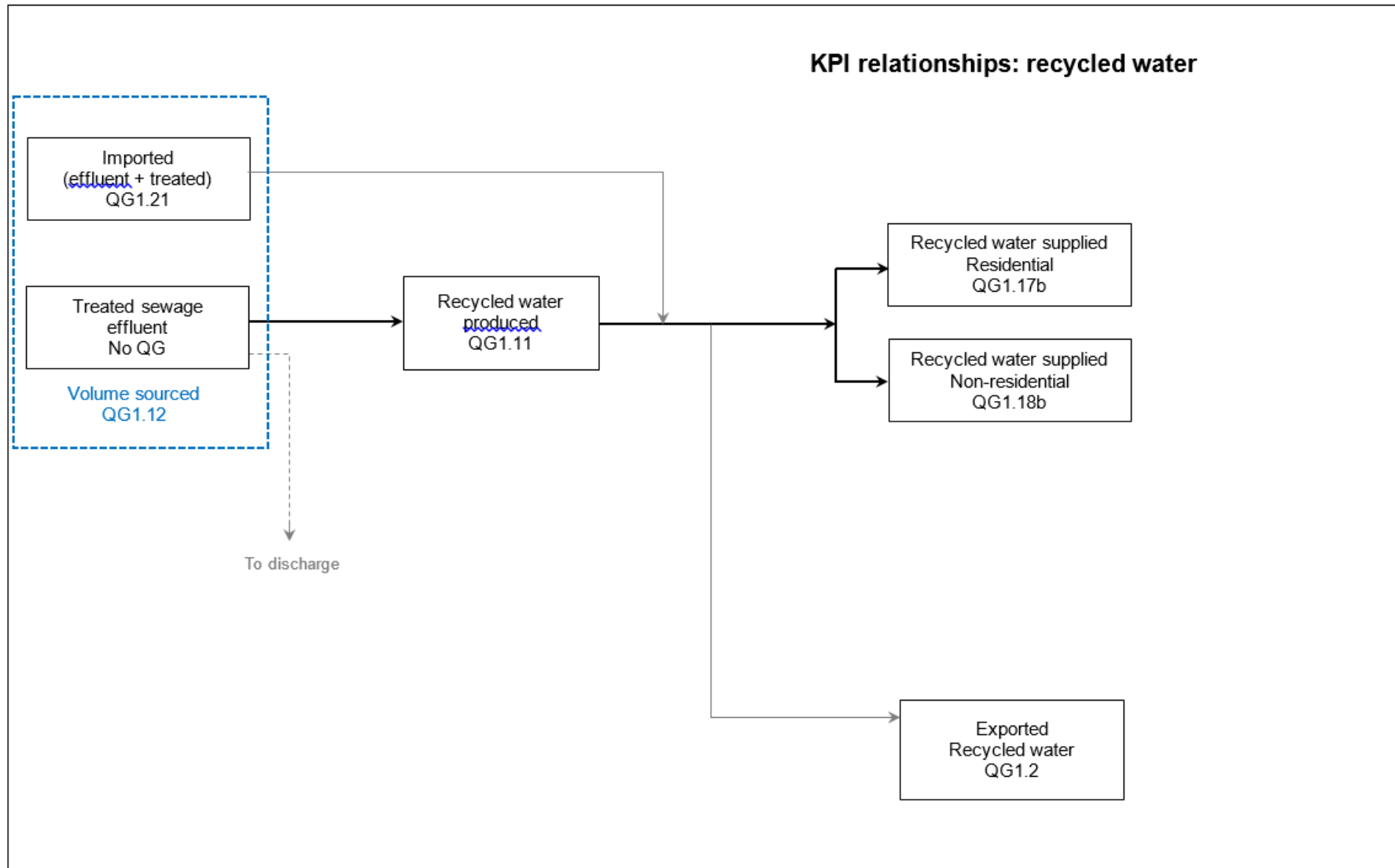


Figure 3: recycled water schemes – relationship of the water balance KPIs



## **Appendix 2: 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 Natural Resources, Mines and Energy (DNRME).

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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