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1. Introduction

1.1 Purpose

This handbook provides definitions and notes for all performance indicators in the National Performance Report Framework for Water and Wastewater Service Providers (the Framework).

The handbook is provided to support consistency in reporting across all jurisdictions. It is reviewed regularly so there is consistency in interpreting and applying the definitions, calculations, and examples.

For the existing reporting entities the handbook should be read alongside the Release Note.

The Release Note summarises the change from the 2018 handbook to help reporting entities understand the changes.

Queries about the definitions and Notes should be sent to the Bureau of Meteorology's (the Bureau) Water Sector Services team water@bom.gov.au.

1.2 Background on the National Performance Report (NPR)

On 25 June 2004, the Commonwealth of Australia, the States of New South Wales, Victoria, Queensland and South Australia, the Australian Capital Territory and the Northern Territory signed the Intergovernmental Agreement on a National Water Initiative (NWI). The State of Tasmania became a signatory to the NWI Agreement on 2 June 2005 and Western Australia became a signatory on 6 April 2006.

Under clauses 75 and 76 of the NWI, the parties agreed to:

75. *report independently, publicly, and on an annual basis, on benchmarking of pricing and service quality for urban and rural water utilities; and*
76. *meet the costs of this performance reporting through the recovery of water management costs.*

1.3 Governance and annual reporting

In September 2005, the National Water Commission (NWC), in conjunction with State and Territory governments and the Water Services Association (WSAA), led the formation of the Framework's steering committee—the Roundtable Group. The Roundtable Group developed the Framework's performance indicators, definitions, data collection, collation, auditing, and reporting processes and practices. It continues to oversee the collection of performance indicators and the production of the annual *Urban National Performance Report* (Urban NPR).

The Roundtable Group's objectives are to:

a. Ensure nationally consistent reporting on the performance of urban water service providers.
b. Oversee the maintenance and revision of the urban national performance reporting framework indicator set which includes the definition and derivation of indicators, reporting handbook and audit protocols.

c. Oversee the production of an annual, independent and public Urban NPR, including the processes for the collection of data and its audit.

Under guidance from the Roundtable Group, the NWC produced the annual performance reports for the 2006–7 to 2012–13 reporting years. Following the disbandment of the NWC, the Bureau entered into an agreement with the States and Territories to coordinate and produce annual performance reports.

1.4 Participation

Entities required to report to the National Performance Report are:

- A service provider (bulk water suppliers, water and/or wastewater utilities and councils) with more than 10,000 connected properties
- A service provider with less than 10,000 connected properties if they are captured under relevant regulations into the NPR framework, with the option for additional entities to opt in.

As agreed with the NPR technical reference group (TRG), service providers with less than 10,000 connected properties might report to a subset of the indicators staring from 2024–25 reporting year. The expansion of the subset will be discussed with the TRG in the coming years. Separate memos will be published each year to clarify the reporting requirement for more and less than 10,000 connected properties.

1.5 Benefits

National performance reporting provides an annual benchmarking of water and wastewater service providers across a range of parameters that influence the cost and quality of urban water supply and wastewater services across Australia.

The independent and public nature of the report helps consumers and governments determine whether the urban water sector is operating efficiently and cost-effectively. Benchmarking informs customers and provides a catalyst to support industry innovation, improved service delivery and efficiency gains.

2. National performance reporting

The performance indicators (indicators) defined in this handbook are required as part of the States' and Territory's commitment under the NWI to report independently, publicly, and on an annual basis, on benchmarking of pricing and service quality for urban and rural water and wastewater service providers.

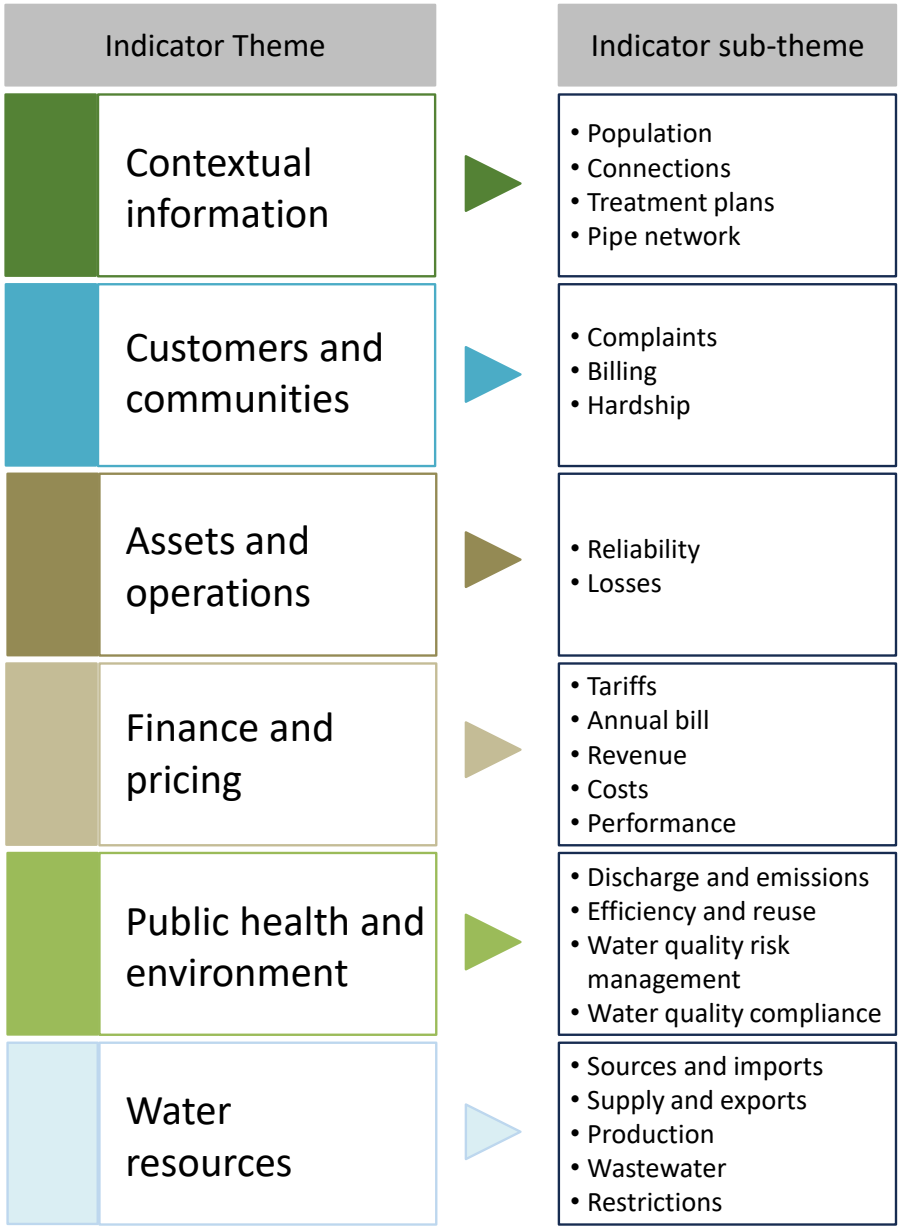
Indicator data is maintained in the National Performance Report database (database) developed and supported by the Bureau. For access to the database, and the associated reporting system, please contact water@bom.gov.au.

2.1 Performance Indicators

The indicators were developed in collaboration with the Roundtable Group representing all parties to the NWI Agreement, the Water Services Association of Australia (WSSA), the Bureau, and in consultation with water utilities.

The indicators are grouped into six themes (see Figure 1). Within each theme, sub-themes outline more details.

Figure 1
National Performance Reporting Framework
Performance Indicator Themes and Sub-themes



Further details in this handbook are in the following sections:

- Section 3 is a summary of the indicators.
- Sections 4 to 9 provide detailed definitions, supporting notes, examples and, where applicable, derivations for each indicator. The definitions, notes and examples clarify the inclusions or exclusions relevant to each indicator.

- Section 10 contains a series of practice notes relating to topics that impact the interpretation of multiple indicators.

2.2 General notes for reporting

Units: All indicators should be reported in the units specified in the indicator definition

Reporting year: The reporting year is the financial year, that is, from 1 July to 30 June

Derived indicators: Derived indicators are calculated solely from other component indicators.

For example, indicator A8, the number of water main breaks per 100 km of water mains, is a derived indicator calculated by dividing the number of water main breaks (IA8) by the length of water supply mains (A2).

Service providers are not required to enter values for derived indicators. These are calculated automatically by the database.

The method of calculating derived indicators is provided in both the indicator summary (Section 3) and in its detailed definition and supporting notes (Sections 4 to 9). Derived indicators are also identified using a grey background.

Nominal and real values: In economic terms, a nominal value has not been adjusted for inflation.

Only nominal values should be used when reporting pricing and financial indicators.

Real values are those that have been adjusted for inflation.

Reporting on financial and pricing indicators in the NPR (Parts A and B) utilises real values. This enables the comparison of indicators across years by excluding the effect of inflation.

Real values are calculated using the national average Consumer Price Index[1] (CPI) to inflate values to real dollars.

2.3 Terminology—key interchangeable terms

Due to different terms used in legislation in various jurisdictions, the following are considered interchangeable terms:

- *wastewater* and *sewage*—the term *wastewater* is mostly used in this handbook
- *connected properties* and *customers*
- *sewer blockages* and *sewer chokes*

[1] The national average consumer price index is calculated as the mean of the Australian Bureau of Statistics' quarterly national CPI estimates for the reporting year. ABS product ID 6401.0 - Consumer Price Index, Australia, Series ID A2325846C.

- *sewer spills* and *wastewater overflows*
- *treatment plants* and *treatment works*
- *supply* and *consumption*
- *property service* and *mains to meter connections*.

2.4 Zero, not applicable and no data

Appropriately characterising a service provider's operations is important when reporting indicators. To assist with the clear interpretation of indicator data, the following convention is in place.

Zero: A value of zero should only be entered where it is a legitimate value and not when data is unavailable, or an indicator is not applicable.

No data: Reporting no data shows the indicator applies to a service provider but no data is available at the time of reporting.

Not applicable: Reporting an indicator as not applicable should only be done in circumstances where it is not relevant to a service provider's operations.

Example

Council X provides water and wastewater services to a large regional urban centre in inland Australia.

In the current reporting year, Council X sourced all its water from surface water. Council X also has a groundwater extraction licence and can source water from a local bore field during times of drought. Given the Council's distance from the coast, desalination of marine water is not an option for sourcing water. In addition to surface water, Council X recycles treated wastewater from its wastewater treatment plant. However, due to a metering failure, it does not have any data on the volume of recycled water supplied to residential properties during the reporting year.

Council X would, therefore, characterise its water sourced in the following manner:

W1—Volume of water self-sourced from climate-dependent surface water sources **= 50,000 ML**

W2 —Volume of water self-sourced from groundwater sources **= 0 ML**

W3.1—Volume of water self-sourced from marine or estuarine water sources **= Not applicable**

W20—Volume of recycled water supplied to residential customers **= No data**

3. Indicator summary table

3.1 Contextual information

Sub-theme	Indicator	Units	Status
Population	**C1**—Estimated population receiving water supply services	people	Report
Connections	**C2**—Number of connected residential properties: water supply	properties	Report
Connections	**C3**—Number of connected non-residential properties: water supply	properties	Report
Connections	**C4**—Total number of connected properties: water supply	properties	C4 = C2 + C3
Connections	**C6**—Number of connected residential properties: wastewater	properties	Report
Connections	**C7**—Number of connected non-residential properties: wastewater	properties	Report
Connections	**C8**—Total number of connected properties: wastewater	properties	C8 = C6 + C7
Connections	**CI_N1**—Number of connected residential properties: recycled water	properties	Report
Connections	**CI_N2**—Number of connected non-residential properties: recycled water	properties	Report
Connections	**CI_N3**—Total number of connected properties: recycled water	properties	CI_N3 = CI_N1 + CI_N2
Treatment plants	**A1**—Number of water treatment plants providing full treatment	plants	Report
Treatment plants	**A4**—Number of wastewater treatment plants	plants	Report
Pipe networks	**A2**—Length of water supply mains	km	Report
Pipe networks	**A5**—Length of sewer mains	km	Report
Pipe networks	**A3**—Number of connected properties served per km of water main	properties/km	A3 = C4 / A2
Pipe networks	**A6**—Number of connected properties served per km of sewer main	properties/km	A6 = C8 / A5

3.2 Customer and communities

Sub-theme	Indicator	Units	Status
Complaints	**IC9**—Number of drinking water quality complaints	complaints	Report
Complaints	**C9**—Number of drinking water quality complaints per 1000 properties	complaints/1000 properties	C9 = (IC9 / C4) x 1000
Complaints	**IC10**—Number of drinking water service complaints	complaints	Report
Complaints	**C10**—Number of drinking water service complaints per 1000 properties	complaints/1000 properties	C10 = (IC10 / C4) x 1000
Complaints	**IC11**—Number of wastewater service complaints	complaints	Report
Complaints	**C11**—Number of wastewater service complaints per 1000 properties	complaints/1000 properties	C11 = (IC11 / C8) x 1000
Complaints	**IC12**—Number of drinking water and wastewater service billing and account complaints	complaints	Report
Complaints	**C12**—Number of drinking water and wastewater service billing and account complaints per 1000 properties	complaints/1000 properties	C12 = (IC12 / C4) x 1000 C12 = (IC12 / C8) x 1000 (for only wastewater service providers)
Complaints	**IC13**—Total number of complaints	complaints	Report
Billing	**IC18**—Number of restrictions applied for non-payment of water accounts	restrictions	Report
Billing	**C18**—Number of restrictions applied for non-payment of water accounts per 1000 properties	restrictions/1000 properties	C18 = (IC18 / C4) x 1000
Billing	**CC_N1**—Percentage of restriction for non-payment of water accounts removed within 3 business days	percentage	Report
Billing	**CC_N2**—Percentage of restriction for non-payment of water accounts resulting in legal action	percentage	Report
Hardship	**CC_N3**—Number of residential customers on a hardship program as of 1 July of the reporting year	customers	Report
Hardship	**CC_N4**—Number of residential customers entering a hardship program during the reporting year	customers	Report

Sub-theme	Indicator	Units	Status
Hardship	**CC_N5**—Number of residential customers exiting a hardship program during the reporting year	customers	Report
Hardship	**CC_N6**—Percentage of residential customers in hardship program who met their instalment plan	percentage	Report
Hardship	**CC_N7**—Percentage of residential customers successfully exiting a hardship program during the reporting year	percentage	Report

3.3 Assets and operations

Sub-theme	Indicator	Units	Status
Reliability	**IA8**—Number of water main breaks	breaks	Report
Reliability	**A8**—Number of water main breaks per 100 km of water mains	breaks/100 km	A8 = (IA8 / A2) x 100
Reliability	**IA14**—Number of sewerage main breaks, leaks and chokes	breaks	Report
Reliability	**A14—**Number of sewerage main breaks, leaks and chokes per 100 km of sewer mains	breaks, leaks and chokes /100km	A14 = (IA14 / A5) x 100
Reliability	**A15—**Number of property connection sewerage breaks, leaks and chokes per 1000 properties	breaks, leaks and chokes /1000 properties	Report
Reliability	**C15—**Average duration of an unplanned interruption: drinking water supply	minutes	Report
Reliability	**IC17—**Number of unplanned interruptions: drinking water supply	Interruptions	Report
Reliability	**C17—**Number of unplanned interruptions per 1000 properties: drinking water supply	Interruptions/ 1000 properties	C17 = (IC17 / C4) x 1000
Losses	**A9**—Infrastructure leakage index (ILI): drinking water supply system	-	Report
Losses	**A10**—Real losses, per service connection, from the drinking water supply system	L/service connection/day	Report
Losses	**A11**—Real losses, per kilometre of water main, from the drinking water supply system	kL/km water main/day	Report

3.4 Finance and pricing

Sub-theme	Indicator	Units	Status
Tariffs	**FP_N1**—Residential drinking water supply tariff data	text	Report
Tariffs	**FP_N2**—Residential wastewater services tariff data	text	Report
Tariffs	**FP_N3**—Residential recycled water supply tariff data	text	Report
Annual bill	**P2**—Annual residential customer bill based on 200 kL per annum: drinking water supply	$	Report
Annual bill	**P3**—Typical residential customer bill: drinking water supply	$	Report
Annual bill	**P5**—Annual residential customer bill based on 200 kL per annum: wastewater	$	Report
Annual bill	**P6**—Typical residential customer bill: wastewater	$	Report
Annual bill	**P7**—Total annual residential customer bill based on 200 kL per annum	$	P7 = P2 + P5
Annual bill	**P8**—Total typical residential customer bill	$	P8 = P3 + P6
Revenue	**F1**—Revenue: drinking and non-drinking water	$ 000s	Report
Revenue	**F2**—Revenue: wastewater	$ 000s	Report
Revenue	**FP_N4**—Revenue: developer services charges levied as cash payments	$ 000s	Report
Revenue	**FP_N5**—Revenue: developer services charges levied as non-cash contributions	$ 000s	Report
Revenue	**F3**—Total income for the service provider	$ 000s	Report
Revenue	**F26**—Capital works grants: water supply	$ 000s	Report
Revenue	**F27**—Capital works grants: wastewater	$ 000s	Report

Sub-theme	Indicator	Units	Status
Revenue	**F25**—Community service obligations	$ 000s	Report
Revenue	**F8**— Community service obligations ratio	-	F8 = F25 / F3
Costs	**FP_N6**—Operating cost: purchase bulk drinking and non-drinking water	$ 000s	Report
Costs	**FP_N7**—Operating cost: purchase bulk recycled water	$ 000s	Report
Costs	**IF11—**Operating cost: water supply	$ 000s	Report
Costs	**FP_N8**—Operating cost, excluding bulk water purchases, per property: water supply	$ 000s/property	FP_N8 = (IF11 – FP_N6 – FP_N7) / C4
Costs	**FP_N9**—Operating cost: bulk wastewater payments	$ 000s	Report
Costs	**IF12**—Operating cost: wastewater	$ 000s	Report
Costs	**FP_N10**—Operating cost, excluding bulk wastewater charges, per property: wastewater	$ 000s/property	FP_N10 = (IF12 - FP_N9) / C8
Costs	**F14**—Capital expenditure: water supply	$ 000s	Report
Costs	**FP_N11**—Capital renewal expenditure: water supply	$ 000s	Report
Costs	**F15**—Capital expenditure: wastewater	$ 000s	Report
Costs	**FP_N12**—Capital renewal expenditure: wastewater	$ 000s	Report
Costs	**F16**—Total capital expenditure: water supply and wastewater	$ 000s	Report
Costs	**F28**—Capital expenditure per property: water supply	$ 000s/property	F28 = F14 / C4
Costs	**F29**—Capital expenditure per property: wastewater	$ 000s/property	F29 = F15 / C8
Performance	**F24**—Net profit after tax (NPAT)	$ 000s	Report
Performance	**F30**—Net profit after tax (NPAT) ratio	-	F30 = F24 / F3

Sub-theme	Indicator	Units	Status
Performance	**FP_N13**— Earnings before interest, taxes, depreciation, and amortization (EBITDA)	$ 000s	Report
Performance	**F20**—Dividends	-	Report
Performance	**F22**—Net debt to equity ratio	-	Report
Performance	**FP_N14**—Debt to assets ratio	-	Report
Performance	**FP_N15**—Return on assets (ROA)	-	Report
Performance	**FP_N16**—Return on equity (ROE)	-	Report
Performance	**FP_N17**—Funds from operations (FFO) to net debt	-	Report
Performance	**FP_N18**— Funds from operations (FFO) to net interest expense	-	Report

3.5 Public health and environment

Sub-theme	Indicator	Units	Status
Discharges and emissions	**IE1**—Volume of wastewater only treated to a primary level	ML	Report
Discharges and emissions	**IE2**—Volume of wastewater only treated to a secondary level	ML	Report
Discharges and emissions	**IE3**—Volume of wastewater treated to a tertiary level	ML	Report
Discharges and emissions	**E1**—Percentage of wastewater only treated to a primary level	%	E1 = IE1 / (W18 – W18.1 + W18.2) x 100
Discharges and emissions	**E2**—Percentage of wastewater only treated to a secondary level	%	E2 = IE2 / (W18 – W18.1 + W18.2) x 100
Discharges and emissions	**E3**—Percentage of wastewater treated to a tertiary level	%	E3 = IE3 / (W18 – W18.1 + W18.2) x 100

Sub-theme	Indicator	Units	Status
Discharges and emissions	**HE_N1**—Total greenhouse gas emissions reported under the NGER scheme	t CO_2 equivalents	Report
Discharges and emissions	**HE_N2**—Greenhouse gas emissions reduction target/s	text	Report
Water efficiency and reuse	**E8**—Percentage of biosolids reused	%	Report
Water efficiency and reuse	**W27**—The percentage of treated effluent supplied as recycled water	%	W27 = (W20 + W21 + W15 + WR_N3 + W23 + W25.1 + WR_N4 – W6) / (IE1 + IE2 + IE3) x 100
Water quality risk management	**H1**—Water quality risk management guidelines used	text	Report
Water quality risk management	**H5**—External assessment of risk-based drinking water management plan	yes/no	Report
Water quality risk management	**HE_N3**—Date of last drinking water quality systems audit	dd/mm/yyyy	Report
Water quality compliance	**H3**—Percentage of the population where microbiological compliance was achieved	%	Report
Water quality compliance	**H4**— Percentage of the population where chemical compliance is met	%	Report
Water quality compliance	**HE_N4**—Number of boil water alerts issued	alerts	Report
Water quality compliance	**HE_N5**—Number of do not drink notices issued	notices	Report

3.6 Water Resources

Sub-theme	Indicator	Units	Status
Sources and imports	**W1**—Volume of water self-sourced from climate-dependent surface water sources	ML	Report
Sources and imports	**W2**—Volume of water self-sourced from groundwater sources	ML	Report
Sources and imports	**W3.1**—Volume of water self-sourced from marine or estuarine water sources	ML	Report
Sources and imports	**W5.3**—Volume of drinking and non-drinking water, excluding recycled water, imported from other service providers	ML	Report
Sources and imports	**W6**—Volume of recycled water imported from other service providers	ML	Report
Sources and imports	**WR_N1**—Volume of stormwater harvested for supply as recycled water	ML	Report
Sources and imports	**W5**—Total volume of drinking and non-drinking water, including recycled water, imported from other service providers	ML	W5 = W5.3 + W6
Sources and imports	**W7**—Total volume of drinking and non-drinking water, excluding recycled water, self-sourced and imported from other service providers	ML	W7 = W1 + W2 + W3.1 + W5.3 – W31
Supply and exports	**W8.3**—Volume of drinking and non-drinking water, excluding recycled water, supplied to residential customers	ML	Report
Supply and exports	**W9.3**—Volume of drinking and non-drinking water, excluding recycled water, supplied to non-residential customers	ML	Report
Supply and exports	**WR_N2**—Volume of drinking and non-drinking water, excluding recycled water, supplied for own use	ML	Report
Supply and exports	**W14.3**—Volume of drinking and non-drinking water, excluding recycled water, exported to other service providers	ML	Report
Supply and exports	**W31**—Volume of drinking and non-drinking water, excluding recycled water, returned to surface water	ML	Report

Sub-theme	Indicator	Units	Status
Supply and exports	**W10.1**—Volume of non-revenue drinking and non-drinking water, excluding recycled water	ML	Report
Supply and exports	**W20**—Volume of recycled water supplied to residential customers	ML	Report
Supply and exports	**W21**—Volume of recycled water supplied to non-residential customers	ML	Report
Supply and exports	**W15**—Volume of recycled water exported to other service providers	ML	Report
Supply and exports	**WR_N3**—Volume of recycled water supplied for own use	ML	Report
Supply and exports	**WR_N4**—Volume of non-revenue recycled water supplied for beneficial reuse	ML	Report
Supply and exports	**W23**—Volume of recycled water supplied as environmental flows	ML	Report
Supply and exports	**W25.1**—Volume of recycled water supplied to managed aquifer recharge	ML	Report
Supply and exports	**W11**—Total volume of water supplied to residential and non-residential customers	ML	W11 = W8.3 + W9.3 + W20 + W21 W11 = W8.3 + W9.3 + W20 + W21 + W14.3 + W15 (for bulk water service providers)
Supply and exports	**W12**—Average volume of residential water supplied per property	ML/property	W12 = (W8.3 + W20) / C2
Supply and exports	**W26**—Total volume of recycled water supplied	ML	W26 = W20 + W21 + W15 + WR_N3 + W23 + W25.1 + WR_N4
Production	**W11.3**— Volume of drinking water produced for supply into the urban water supply system	ML	Report
Wastewater	**W16**—Volume of wastewater, excluding trade wastewater, collected	ML	Report

Sub-theme	Indicator	Units	Status
Wastewater	**W17**—Volume of trade wastewater collected	ML	Report
Wastewater	**W18.1**—Volume of wastewater exported to other service providers	ML	Report
Wastewater	**W18.2**—Volume of wastewater received from other service providers	ML	Report
Wastewater	**W18.3**—Volume of wastewater taken through sewer mining	ML	Report
Wastewater	**W18.4**— Volume of wastewater inflow to wastewater treatment plants	ML	Report
Wastewater	**W18.5**—Volume of treated effluent outflow from wastewater treatment plants	ML	Report
Wastewater	**W29**—Volume of effluent discharged	ML	Report
Wastewater	**W30**—Volume of wastewater losses and spills	ML	Report
Wastewater	**W18**—Total volume of wastewater collected	ML	W18 = W16 + W17
Wastewater	**W19**—Average volume of wastewater collected per property	ML/property	W19 = W18 / C8
Restrictions	**WR_N5**—Number of days spent at level 1 restriction	days	Report
Restrictions	**WR_N6**—Number of days spent at level 2 restriction	days	Report
Restrictions	**WR_N7**—Number of days spent at or greater than level 3 restriction	days	Report

4. Contextual information

4.1 Population

Indicator	C1—Estimated population receiving water supply services
Definition	The estimated population receiving water supply services, excluding recycled water, from the service provider during the reporting year (people).
Intent	Population data supports an understanding of service provider scale and provides contextual information for assessing, comparing, and understanding of performance. Per capita normalisation of indicators can be used to inform service provider comparisons.
General supporting notes	**Water supply services** encompass the provision of drinking (potable), partially treated, and raw water but exclude recycled water services. **Recycled water services** encompass the provision of water generated from wastewater, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. Reported population should account for all properties connected to the service provider's piped (reticulated) supply network. The method used to estimate the reported population is at the discretion of the service provider, however, it should be statistically defensible and where possible make use of the best available data. For many service providers, the Australian Bureau of Statistic's regional population data set will provide reliable estimates of population that can be used in a spatial analysis to estimate the resident population receiving drinking and non-drinking water supply services. Estimated Resident Population (ERP) is the official estimate of the Australian population, which links people to a place of usual residence within Australia. More information about ERP and other population concepts is available in Information Paper: Population Concepts, Australia (cat. no. 3107.0.55.006). **Footnote requirements** In addition to the reported population estimate, the service provider should report a footnote that describes the method used to estimate the population, including the source/s of the data used. For example: *The estimated population was derived from the gridded 2020–21 ABS regional population data, along with service boundaries for all towns receiving reticulated supply.*

4.2 Connections

Indicator	C2—Number of connected residential properties: water supply
Definition	The number of connected residential properties receiving water supply services from the service provider during the reporting year (properties).
Intent	Connected properties data supports an understanding of service provider scale and provides contextual information for the assessment, comparison and understanding of performance. Per property normalisation of indicators can be used to inform service provider comparisons.
General supporting notes	**Water supply services** encompass the provision of drinking (potable), partially treated, and raw water but exclude recycled water services. **Recycled water services** encompass the provision of water generated from wastewater, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. A **connected property** is a property that is connected at the end of the reporting year to the service provider's piped (reticulated) supply network and subjected to billing for metered and/or unmetered water supply services. A **residential property** is a property associated with a customer who principally utilises supplied water for personal, household, and domestic use. **Connected residential properties** include: • connected metered and unmetered properties • connected non-rateable properties • each apartment in a high-rise apartment complex • each property in a department of housing unit complex • each individual stand-alone residential property within a retirement village and exclude: • rated but unconnected properties (e.g., vacant lots) • connections associated with non-real properties–including body corporate entities, strata garages and master meters for blocks of separately metered strata title flats • properties only receiving recycled water services. **Additional guidance** • Properties with a single dwelling (i.e., not an apartment complex, units etc.) that have more than one connection should be counted as a single property. • The owner and tenant of a rented property are *not* counted as separate properties. • A property that is not connected (i.e., no mains to meter connection), but is on a street with a main running along it, is *not* counted as a connected property. Similarly, if a vacant lot is being charged/rated, but is not physically connected, it is not to be counted as a connected property.

	• Units in a block with a single meter are considered as individual connected residential properties. For example, 30 units with a single meter, are considered 30 connected residential properties. • With respect to retirement villages, communal buildings count as one non-residential property, whereas stand-alone buildings for residents are each counted as residential properties. For example, 20 stand-alone buildings for residents and a communal building are counted as 20 residential connected properties and one non-residential connected property. • Residential apartments in a building owned as an entire building should be counted as individual connected residential properties. For example, 20 residential apartments in a building with 20 associated shares is considered as 20 connected residential properties. • Where combined commercial and residential dwellings exist, the property should be classified according to its primary purpose where one bill is issued. If two separate bills are issued for the commercial and residential parts of the property, then the property is counted as one residential connected property and one non-residential connected property.

Indicator	**C3—Number of connected non-residential properties: water supply**
Definition	The number of connected non-residential properties receiving water supply services from the service provider during the reporting year (properties).
Intent	Connected properties data supports an understanding of service provider scale and provides contextual information for the assessment, comparison and understanding of performance. Per property normalisation of indicators can be used to inform service provider comparisons.
General supporting notes	**Water supply services** encompass the provision of drinking (potable), partially treated, and raw water but exclude recycled water services. **Recycled water** is water generated from wastewater, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. A **connected property** is a property that is connected at the end of the reporting year to the service provider's piped (reticulated) supply network and subjected to billing for metered and/or unmetered water supply services. A **non-residential property** is a property associated with a customer who does not principally utilise the supplied water for personal, household, and domestic use. **Non-residential** customers include: • commercial customer—including offices, wholesale and retail trade, and accommodation • industrial customer—including manufacturing, construction, transport, warehouses • institutional customer—including public administration, education and training, health care and social assistance, corrections, and emergency service buildings (e.g., fire stations) • parks and gardens— including sport fields, golf courses and racecourses, except where these facilities are supplied as part of the service provider's own use (i.e., water is supplied without a billing arrangement) • agricultural—including market gardens, turf farms, nurseries • forestry

- aquaculture or fishing
- mining
- other non-residential customers who receive water supplied via metered and/or unmetered billing arrangements

and exclude:

other water service providers

Other water service providers include:

- bulk water authorities and corporations
- water corporations
- publicly and privately owned and council-run water utilities

and exclude:

service providers operating infrastructure on behalf of a water service provider e.g. BOOT schemes.

Connected non-residential properties include:

- connected metered and unmetered properties
- connected non-rateable properties
- each apartment in a high-rise business complex
- each property in a department of business complex

and exclude:

- rated but unconnected properties (e.g., vacant lots)
- connections associated with non-real properties–including body corporate entities
- properties only receiving recycled water services.

Additional guidance

- A property that is not connected (i.e., no mains to meter connection), but is on a street with a main running along it, is not counted as a connected property. Similarly, if a vacant lot is being charged/rated, but is not physically connected, it is not to be counted as a connected property.
- Each partitioned company within a factory building is counted as a connected non-residential property. For example, five partitioned companies with separate water bills are considered five non-residential connections.
- Properties are classified according to their main purpose. For example, a hotel with a few permanent residential tenants (short-term, long-term or strata-titled apartments) = one non-residential connected property, likewise a shopping centre, or a serviced apartment or hotel complex = one non-residential connected property.
- A shopping centre where each shop within the complex has a separate connection = one non-residential connected property.
- Retirement villages, communal buildings etc. count as one non-residential property, whereas stand-alone buildings for residents are each counted as residential properties. For example, 20 stand-alone buildings for residents and a communal building are counted as 20 residential connected properties and one non-residential connected property.
- A TAFE property that extends over two blocks and has six separate connections = one non-residential connected property. Similarly, a school or hospital = one non-residential connected property.

	• Non-residential properties that extend over multiple blocks and have multiple separate connections are counted as one non-residential connection. • Where combined commercial and residential dwellings exist, the property should be classified according to its primary purpose where one bill is issued. If two separate bills are issued for the commercial and residential parts of the property, then the property is counted as one residential connected property and one non-residential connected property.

Indicator	**C4—Total number of connected properties: water supply**
Definition	The total number of connected residential and non-residential properties receiving water supply services from the service provider during the reporting year (properties).
Intent	Connected properties data supports an understanding of service provider scale and provides contextual information for the assessment, comparison, and understanding of performance. Per property normalisation of indicators can be used to inform service provider comparisons.
General supporting notes	See indicators **C2** and **C3**.
Derivation	**C4** = **C2** + **C3** = [**C2**—Number of connected residential properties: water supply] + [**C3**—Number of connected non-residential properties: water supply]

Indicator	**C6—Number of connected residential properties: wastewater**
Definition	The number of connected residential properties receiving wastewater services from the service provider during the reporting year (properties).
Intent	Connected properties data supports an understanding of service provider scale and provides contextual information for assessing, comparing, and understanding of performance. Per property normalisation of indicators can be used to inform service provider comparisons
General supporting notes	**Wastewater**[2] is the water used by residential and non-residential customers that is disposed of through the wastewater system. A **connected property** is a property that is connected at the end of the reporting year to the service provider's sewer network and subjected to billing for metered and/or unmetered wastewater services. A **residential property** is a property associated with a customer who principally utilises supplied water for personal, household, and domestic use. **Connected residential properties** include: • connected metered and unmetered properties • connected non-rateable properties • each apartment in a high-rise apartment complex

[2] Due to the use of different terms in legislation across jurisdictions, the terms ‘wastewater’ and ‘sewage' are treated as interchangeable—the term ‘wastewater’ is used by the National Performance Report.

	• each property in a department of housing unit complex • each individual stand-alone residential property within a retirement village and exclude: • rated but unconnected properties (e.g., vacant lots) • connections associated with non-real properties–including body corporate entities, strata garages and master meters for blocks of separately metered strata title flats. **Additional guidance** • Properties with a single dwelling (i.e., not an apartment complex, units etc.) that have more than 1 connection should be counted as a single property. • The owner and tenant of a rented property are *not* counted as separate properties. • A property that is not connected (i.e., no mains to meter connection), but is on a street with a main running along it, is not counted as a connected property. Similarly, if a vacant lot is being charged/rated, but is not physically connected, it is not to be counted as a connected property. • Units in a block with a single meter are considered as individual connected residential properties. For example, 30 units with a single meter, are considered 30 connected residential properties. • With respect to retirement villages, communal buildings count as 1 non-residential property, whereas stand-alone buildings for residents are each counted as residential properties. For example, 20 stand-alone buildings for residents and a communal building are counted as 20 residential connected properties and 1 non-residential connected property. • Residential apartments in a building owned as an entire building should be counted as individual connected residential properties. For example, 20 residential apartments in a building with 20 associated shares is considered as 20 connected residential properties. • Where combined commercial and residential dwellings exist, the property should be classified according to its primary purpose where 1 bill is issued. If two separate bills are issued for the commercial and residential parts of the property, then the property is counted as 1 residential connected property and 1 non-residential connected property.

Indicator	**C7—Number of connected non-residential properties: wastewater**
Definition	The number of connected non-residential properties receiving wastewater services from the service provider during the reporting year (properties).
Intent	Connected properties data supports an understanding of service provider scale and provides contextual information for the assessment, comparison and understanding of performance. Per property normalisation of indicators can be used to inform service provider comparisons.
General supporting notes	**Wastewater** [2] is the water used by residential and non-residential customers that is disposed of through the wastewater system. A **connected property** is a property that is connected at the end of the reporting year to the service provider's sewer network and subjected to billing for metered and/or unmetered wastewater services. A **non-residential property** is a property associated with a customer who does not principally utilise the supplied water for personal, household, and domestic use. **Non-residential** customers include: • commercial customer—including offices, wholesale and retail trade, and accommodation • industrial customer—including manufacturing, construction, transport, warehouses

- institutional customer—including public administration, education and training, health care and social assistance, corrections, and emergency service buildings (e.g., fire stations)
- parks and gardens—including sport fields, golf courses and racecourses, except where these facilities are part of the service provider's own operations (i.e., wastewater services are supplied without a billing arrangement)
- agricultural—including market gardens, turf farms, nurseries
- forestry
- aquaculture or fishing
- mining
- other non-residential customers who receive wastewater services via metered and/or unmetered billing arrangements

and exclude:

- other wastewater service providers.

Other wastewater service providers include:

- bulk water authorities and corporations
- water corporations
- publicly and privately owned and council-run utilities

and exclude:

- service providers operating infrastructure on behalf of a wastewater service provider e.g. BOOT schemes.

Connected non-residential properties include:

- connected metered and unmetered properties
- connected non-rateable properties

and exclude:

- rated but unconnected properties (e.g., vacant lots)
- connections associated with non-real properties–including body corporate entities.

Additional guidance

- A property that is not connected (i.e., no mains to meter connection), but is on a street with a main running along it, is not counted as a connected property. Similarly, if a vacant lot is being charged/rated, but is not physically connected, it is not to be counted as a connected property.
- Each partitioned company within a factory building is counted as a connected non-residential property. For example, five partitioned companies with separate wastewater bills are considered five non-residential connections.
- Properties are classified according to their main purpose. For example, a hotel with a few permanent residential tenants (short-term, long-term or strata-titled apartments) = one non-residential connected property, likewise a shopping centre, or a serviced apartment or hotel complex = one non-residential connected property.
- A shopping centre where each shop within the complex has a separate connection = one non-residential connected property.
- Retirement villages, communal buildings etc. count as one non-residential property, whereas stand-alone buildings for residents are each counted as residential properties. For example, 20 stand-alone buildings for residents and a communal building are counted as 20 residential connected properties and one non-residential connected property.
- A TAFE property that extends over two blocks and has 6 separate connections = one non-residential connected property. Similarly, a school or hospital = one non-residential connected property.

	• Non-residential properties that extend over multiple blocks and have multiple separate connections are counted as one non-residential connection. • Where combined commercial and residential dwellings exist, the property should be classified according to its primary purpose where one bill is issued. If two separate bills are issued for the commercial and residential parts of the property, then the property is counted as one residential connected property and one non-residential connected property.

Indicator	**C8—Total number of connected properties: wastewater**
Definition	The total number of connected residential and non-residential properties receiving wastewater services from the service provider during the reporting year (properties).
Intent	Connected properties data supports an understanding of service provider scale and provides contextual information for the assessment, comparison and understanding of performance. Per property normalisation of indicators can be used to inform service provider comparisons.
General supporting notes	See indicators **C6** and **C7**
Derivation	**C8** = **C6** + **C7** = [**C6**—Number of connected residential properties: wastewater] + [**C7**—Number of connected non-residential properties: wastewater]

Indicator	**CI_N1—Number of connected residential properties: recycled water**
Definition	The number of connected residential properties receiving recycled water services from the service provider during the reporting year (properties).
Intent	Understanding residential recycled water connections can provide insight into the growth of residential properties supplied with recycled water and provide a basis for normalising the volume of recycled water supplied to residential customers. Its inclusion provides insight into the driver of changes to the volume of recycled water supplied to residential properties—i.e., is it due to a change in the number of properties being supplied or a change in usage.
General supporting notes	**Recycled water services** encompass the provision of water generated from wastewater, greywater or stormwater systems and treated to a standard that is appropriate for its intended use.[3] A **connected property** is a property that is connected at the end of the reporting year to the service provider's recycled water network and subjected to billing for metered and/or unmetered recycled water services. A **residential property** is a property associated with a customer who principally utilises supplied water for personal, household, and domestic use. **Connected residential properties** include: • connected metered and unmetered properties

[3] The supply of drinking water that includes harvested stormwater as a source (i.e., indirect potable reuse of harvested stormwater) is not considered a recycled water service.

	• connected non-rateable properties • each apartment in a high-rise apartment complex • each property in a department of housing unit complex • each individual stand-alone residential property within a retirement village and exclude: • rated but unconnected properties (e.g., vacant lots) • connections associated with non-real properties–including body corporate entities, strata garages and master meters for blocks of separately metered strata title flats. • Recycled water supplied through the reticulated water supply system **Additional guidance** • Properties with a single dwelling (i.e., not an apartment complex, units etc.) that have more than one connection should be counted as a single property. • The owner and tenant of a rented property are *not* counted as separate properties. • A property that is not connected (i.e., no mains to meter connection), but is on a street with a main running along it, is not counted as a connected property. Similarly, if a vacant lot is being charged/rated, but is not physically connected, it is not to be counted as a connected property. • Units in a block with a single meter are considered as individual connected residential properties. For example, 30 units with a single meter, are considered 30 connected residential properties. • With respect to retirement villages, communal buildings count as one non-residential property, whereas stand-alone buildings for residents are each counted as residential properties. For example, 20 stand-alone buildings for residents and a communal building are counted as 20 residential connected properties and one non-residential connected property. • Residential apartments in a building owned as an entire building should be counted as individual connected residential properties. For example, 20 residential apartments in a building with 20 associated shares is considered as 20 connected residential properties. • Where combined commercial and residential dwellings exist, the property should be classified according to its primary purpose where one bill is issued. If two separate bills are issued for the commercial and residential parts of the property, then the property is counted as one residential connected property and one non-residential connected property.

Indicator	**CI_N2—Number of connected non-residential properties: recycled water**
Definition	The number of connected non-residential properties receiving recycled water services from the service provider during the reporting year (properties).
Intent	Understanding non-residential recycled water connections can provide insight into the growth of non-residential customers supplied with recycled water and provide a basis for normalising the volume of recycled water supplied to non-residential customers.
General supporting notes	**Recycled water services** encompass the provision of water generated from wastewater, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. [3]

A **connected property** is a property that is connected at the end of the reporting year to the service provider's piped (reticulated) supply network and subjected to billing for metered and/or unmetered water supply services.

A **non-residential property** is a property associated with a customer who does not principally utilise the supplied water for personal, household, and domestic use.

Non-residential customers include:

- commercial customer—including offices, wholesale and retail trade, and accommodation
- industrial customer—including manufacturing, construction, transport, warehouses
- institutional customer—including public administration, education and training, health care and social assistance, corrections, and emergency service buildings (e.g., fire stations)
- parks and gardens— including sport fields, golf courses and racecourses, except where these facilities are part of the service provider's own operations (i.e., recycled water services are supplied without a billing arrangement)
- agricultural—including market gardens, turf farms, nurseries
- forestry
- aquaculture or fishing
- mining
- other non-residential customers who receive water supplied via metered and/or unmetered billing arrangements

and exclude:

- other recycled water service providers

Other recycled water service providers include:

- bulk water authorities and corporations
- water corporations
- publicly and privately owned and council-run water utilities

and exclude:

- service providers operating infrastructure on behalf of a recycled water service provider e.g. BOOT schemes.

Connected non-residential properties include:

- connected metered and unmetered properties
- connected non-rateable properties
- each apartment in a high-rise business complex
- each property in a department of business complex

and exclude:

- rated but unconnected properties (e.g., vacant lots)
- "connections" associated with non-real properties–including body corporate entities.
- Recycled water supplied through the reticulated water supply system

Additional guidance

- A property that is not connected (i.e., no mains to meter connection), but is on a street with a main running along it, is not counted as a connected property. Similarly, if a vacant lot is being charged/rated, but is not physically connected, it is not to be counted as a connected property.
- Each partitioned company within a factory building is counted as a connected non-residential property. For example, five partitioned companies with separate water bills are considered five non-residential connections.

	• Properties are classified according to their main purpose. For example, a hotel with a few permanent residential tenants (short-term, long-term or strata-titled apartments) = one non-residential connected property, likewise a shopping centre, or a serviced apartment or hotel complex = one non-residential connected property. • A shopping centre where each shop within the complex has a separate connection = one non-residential connected property. • Retirement villages, communal buildings etc. count as one non-residential property, whereas stand-alone buildings for residents are each counted as residential properties. For example, 20 stand-alone buildings for residents and a communal building are counted as 20 residential connected properties and one non-residential connected property. • A TAFE property that extends over two blocks and has six separate connections = one non-residential connected property. Similarly, a school or hospital = one non-residential connected property. • Non-residential properties that extend over multiple blocks and have multiple separate connections are counted as one non-residential connection. • Where combined commercial and residential dwellings exist, the property should be classified according to its primary purpose where one bill is issued. If two separate bills are issued for the commercial and residential parts of the property, then the property is counted as one residential connected property and one non-residential connected property.

Indicator	**CI_N3—Total number of connected properties: recycled water**
Definition	The total number of connected residential and non-residential properties receiving recycled water from the service provider during the reporting year (properties).
Intent	Connected properties data supports an understanding of service provider scale and provides contextual information for the assessment, comparison, and understanding of performance. Per property normalisation of indicators can be used to inform service provider comparisons.
General supporting notes	See indicators **CI_N1** and **CI_N2**.
Derivation	**CI_N3** = **CI_N1** + **CI_N2** = [**CI_N1**—Number of connected residential properties: recycled water] + [**CI_N2**—Number of connected non-residential properties: recycled water]

4.3 Treatment plants

Indicator	A1—Number of water treatment plants providing full treatment
Definition	The total number of water treatment plants, owned or operated on behalf of the service provider, providing full treatment during the reporting year (plants).
Intent	The indicator provides insight into the level and complexity of treatment provided to bring water quality to an acceptable level for the customer. This indicator can also provide a partial explanation of a service provider's relative operating cost and total cost – e.g., a service provider providing full treatment for most of its supply would have a significantly higher cost structure than one providing lesser treatment such as disinfection only or further treatment.
General supporting notes	A **water treatment plant** (WTP) is a facility receiving raw or partially treated water for treatment and ultimate delivery to customers. Typically, **full treatment** plants encompass multiple treatment methods to produce high-quality water that meets or exceeds relevant drinking water guidelines. Full treatment plants typically include processes that remove colour and/or turbidity as well as provide filtration and disinfection. In addition, they may also include processes to improve taste and/or reduce odour, adjust hardness, correct pH and remove specific elements and compounds such as iron, manganese, nitrates and organics (e.g., pesticides). The number of **full treatment plants** excludes: • plants that do not include processes to remove colour and/or turbidity as well as provide filtration and disinfection • plants that only include disinfection processes such as chlorination, chlorination, ozonation, and ultraviolet treatment • secondary or booster disinfection plants even when there is pH correction as well • treatment by cooling down bore water through heat exchange processes. Plants that are owned by the service provider or form part of a build own, operate, transfer (BOOT) contract between the service provider and a third party (see Practice Note 4) should be included in the number reported where they meet the above definition.

Indicator	A4—Number of wastewater treatment plants
Definition	The number of wastewater treatment plants, owned or operated on behalf of the service provider, providing wastewater services to customers during the reporting year (plants).
Intent	The number of wastewater treatment plants provides insight into the scale of the service provider's wastewater operation and supports the estimation of the spatial density of properties served through the calculation of the number of properties served per km of sewer main.
General supporting notes	A **wastewater treatment plant** (WWTP) is a facility receiving raw or partially treated wastewater for treatment and discharge to a receiving environment (e.g., an ocean or river). The number of WWTP includes any plants providing primary, secondary or tertiary treatment.

	Plants that are owned by the service provider or form part of a Build own, operate, transfer (BOOT) contract between the service provider and a third party (see Practice Note 4) should be included in the number reported where they meet the above definition.

4.4 Pipe networks

Indicator	A2—Length of water supply mains
Definition	The total length of water supply mains at the end of the reporting year, in kilometres (km).
Intent	The indicator provides insight into the scale of the service provider's water mains distribution and reticulation network and is used to estimate the spatial density of properties served. It also provides an indication of the ease or difficulty of delivery of water to customers and is used as a normaliser for a number of other indicators.
General supporting notes	**Water supply services** encompass the provision of drinking (potable), partially treated, and raw water but exclude recycled water services.
	Recycled water is water generated from wastewater, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Water supply mains** include: • transfer mains • distribution mains • reticulation mains and exclude: • recycled water mains–including distribution and reticulation mains • 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 • mains associated with facilities, e.g., mains within pump stations, storage facilities or treatment plants.

Indicator	A5—Length of sewer mains
Definition	The total length of sewer mains at the end of the reporting year, in kilometres (km).
Intent	The indicator provides insight into the scale of the service provider's sewer network and is used to estimate the spatial density of properties served (A6). It also provides an indication of the ease or difficulty of providing wastewater service to customers and is used as a normaliser for various other indicators.
General supporting notes	**Mains and channels** include: • all trunk, pressure, and reticulation mains • wastewater mains and exclude: • property connection sewers • conduits and pipelines downstream from the treatment plant.

Indicator	A3—Number of connected properties served per km of water main
Definition	The average number of properties connected to the water supply network per kilometre of water main (properties/km).
Intent	The indicator provides insight into the spatial density of properties served which is a partial indication of the ease or difficulty of providing water services to customers and is used as a normaliser for a number of other indicators.
General supporting notes	See indicators **C4** and **A2**
Derivation	**A3** = **C4** / **A2** = [**C4**—Total number of connected properties: water supply] / [**A2**—Length of water supply mains]

Indicator	A6—Number of connected properties served per km of sewer main
Definition	The average number of properties connected to the sewer network per kilometre of sewer main (properties/km).
Intent	The indicator provides insight into the spatial density of properties served which is a partial indication of the ease or difficulty of providing wastewater services to customers and is used as a normaliser for a number of other indicators.
General supporting notes	See indicators **C8** and **A5**
Derivation	**A6** = **C8** / **A5** = [**C8**—Total number of connected properties: wastewater] / [**A5**—Length of sewer mains]

5. Customers and communities

5.1 Complaints

Indicator	IC9—Number of drinking water quality complaints	C9—Number of drinking water quality complaints per 1000 properties
Definition	The total number of complaints received by the service provider that relate to the quality of the drinking water supplied, including water quality complaints resulting from operational practices, during the reporting year (complaints).	The average number of complaints received by the service provider, per 1000 connected properties, that relate to drinking water quality, including water quality complaints resulting from operational practices during the reporting year (complaints/1000 properties).
Intent	These indicators inform an understanding of customer satisfaction with the quality of drinking water supplied and as such is also a partial indicator of customer service and level of service levels. Over time, trends in water quality complaints can also be a lead indicator of performance.	
General supporting notes	A **complaint** is an expression of dissatisfaction made to or about a service provider, related to its products, services, staff or the handling of a complaint, where a response or resolution is explicitly or implicitly expected or legally required (AS/NZS ISO 10002:2018). A **complaint** can be a written or verbal expression and can be received by the water utility in person, by mail, fax, phone, email, text message or other non-public messaging platforms on which the service provider operates [4] or has an explicit presence [5] on. **Complaints** made via public forums and social media applications are not counted unless the complainant subsequently follows up on the issue through a non-public channel (e.g., a direct message, email or phone call). **Drinking water** is water intended primarily for human consumption. [6] **Drinking water quality complaints** are complaints in relation to: • illness • discoloured or cloudy water • taste • odour • staining—including staining of washing and exclude complaints in relation to: • bursts • leaks • service interruption • water pressure • water restrictions	

[4] Examples of messaging platforms that a service provider operates include customer mobile applications and automated chatbot/service agents.

[5] Explicit presence means that the service provider communicates as an entity from an account or profile that it "owns" on the platform.

[6] National Health and Medical Research Council, 2011. *Australian Drinking Water Guidelines (2011) – Updated March 2021*, NHMRC Canberra.

	• infrastructure • billing and accounts, including meter readings, tariff structures and government pricing policy • service connections and disconnections. The **number of complaints** includes: • **complaints** in relation to matters that the service provider is responsible for or has control over, including third-party contractors under the service provider's control and excludes: • **complaints** regarding a matter that is not the responsibility of the service provider or over which the service provider has no control, e.g., issues that are the responsibility of the customer • queries on an issue where dissatisfaction is not expressed or where a response or resolution is not explicitly or implicitly expected or legally required—i.e., not a **complaint** as defined by AS/NZS ISO 10002:2018. Multiple **complaints** from one customer on multiple issues should be counted as multiple **complaints**. **Complaints** from multiple customers in relation to the same issue should be counted as multiple **complaints.** Subsequent **complaints** from a customer on an issue should be recorded as separate **complaints** if the customer remains unsatisfied after a resolution has been offered. A service provider who does not provide a drinking water service should report this indicator as **Not Applicable.**
Derivation	**C9** = (**IC9** / **C4)** x 1000 = ([**IC9**—Number of drinking water quality complaints] / [**C4**—Total number of connected properties: water supply]) x 1000

Indicator	**IC10—Number of drinking water service complaints**	**C10—Number of drinking water service complaints per 1000 properties**
Definition	The total number of drinking water service complaints received by the service provider during the reporting year (complaints).	The average number of drinking water service complaints, per 1000 connected properties, received by the service provider during the reporting year (complaints per 1000 properties).
Intent	These indicators inform an understanding of customer perceptions of service and as such is a partial indicator of satisfaction and service levels. Over time, trends in complaints can also be a lead indicator of performance.	
General supporting notes	A **complaint** is an expression of dissatisfaction made to or about a service provider, related to its products, services, staff or the handling of a complaint, where a response or resolution is explicitly or implicitly expected or legally required (AS/NZS ISO 10002:2018).	

A **complaint** is an expression of dissatisfaction made to or about a service provider, related to its products, services, staff or the handling of a complaint, where a response or resolution is explicitly or implicitly expected or legally required (AS/NZS ISO 10002:2018).

A **complaint** can be a written or verbal expression and can be received by the water utility in person, by mail, fax, phone, email, text message or other non-public messaging platforms on which the service provider operates [4] or has an explicit presence [5] on.

Complaints made via public forums and social media applications are not counted unless the complainant subsequently follows up on the issue through a non-public channel (e.g., a direct message, email or phone call).

Drinking water is water intended primarily for human consumption.

Drinking water service complaints are complaints in relation to:

- bursts
- leaks
- service interruption
- water pressure
- water reliability
- water service system works, i.e., repairs, maintenance, upgrades and new infrastructure—including site rehabilitation

and exclude complaints in relation to:

- drinking water quality (captured under IC9)
- billing and accounts, including meter readings, tariff structures and government pricing policy
- service connections and disconnections.

The **number of complaints** includes:

complaints in relation to matters that the service provider is responsible for or has control over, including third-party contractors under the service provider's control

and excludes:

- **complaints** regarding a matter that is not the responsibility of the service provider or over which the service provider has no control, e.g., issues that are the responsibility of the customer
- queries on an issue where dissatisfaction is not expressed or where a response or resolution is not explicitly or implicitly expected or legally required—i.e., not a **complaint** as defined by AS/NZS ISO 10002:2018.

Multiple **complaints** from one customer on multiple issues should be counted as multiple **complaints**.

Complaints from multiple customers in relation to the same issue should be counted as multiple **complaints.**

Subsequent **complaints** from a customer on an issue should be recorded as separate **complaints** if the customer remains unsatisfied after a resolution has been offered.

A service provider who does not provide a drinking water service should report this indicator as **Not Applicable.**

Derivation	**C10** = (**IC10** / **C4**) x 1000 = ([**IC10**—Number of drinking water service complaints] / [**C4**—Total number of connected properties: water supply]) x 1000

Indicator	**IC11—Number of wastewater service complaints**	**C11—Number of wastewater service complaints per 1000 properties**
Definition	The total number of complaints received by the service provider that relate to wastewater service quality and reliability during the reporting year (complaints).	The average number of complaints received by the service provider, per 1000 connected properties, that relate to wastewater service quality and reliability during the reporting year (complaints/1000 properties).
Intent	These indicators inform an understanding of customer perceptions of service and as such is a partial indicator of satisfaction and service levels. Over time, trends in complaints can also be a lead indicator of performance.	
General supporting notes	A **complaint** is an expression of dissatisfaction made to or about a service provider, related to its products, services, staff or the handling of a complaint, where a response or resolution is explicitly or implicitly expected or legally required (AS/NZS ISO 10002:2018). A **complaint** can be a written or verbal expression and can be received by the water utility in person, by mail, fax, phone, email, text message or other non-public messaging platforms on which the service provider operates [4] or has an explicit presence [5] on. **Complaints** made via public forums and social media applications are not counted unless the complainant subsequently follows up on the issue through a non-public channel (e.g., a direct message, email or phone call). **Wastewater** [7] is the water used by residential and non-residential customers that is disposed of through the wastewater system. **Wastewater service complaints** are complaints in relation to: • sewer breaks, chokes and overflows • service interruption • trade wastewater services • wastewater service system works, i.e., repairs, maintenance, upgrades and new infrastructure—including site rehabilitation and exclude complaints in relation to: • septic tanks • billing and accounts, including meter readings, tariff structures and government pricing policy	

[7] Due to the use of different terms in legislation across jurisdictions, the terms ‘wastewater’ and ‘sewage' are treated as interchangeable—the term ‘wastewater’ is used by the National Performance Report.

	• service connections and disconnections. The **number of complaints** includes: • **complaints** in relation to matters that the service provider is responsible for or has control over, including third-party contractors under the service provider's control and excludes: • **complaints** regarding a matter that is not the responsibility of the service provider or over which the service provider has no control, e.g., issues that are the responsibility of the customer • queries on an issue where dissatisfaction is not expressed or where a response or resolution is not explicitly or implicitly expected or legally required—i.e., not a **complaint** as defined by AS/NZS ISO 10002:2018. Multiple **complaints** from one customer on multiple issues should be counted as multiple **complaints**. **Complaints** from multiple customers in relation to the same issue should be counted as multiple **complaints.** Subsequent **complaints** from a customer on an issue should be recorded as separate **complaints** if the customer remains unsatisfied after a resolution has been offered. A service provider who does not provide a wastewater service should report this indicator as **Not Applicable.**
Derivation	**C11** = (**IC11** / **C8**) x 1000 = ([**IC11**—Number of wastewater service complaints] / [**C8**—Total number of connected properties: wastewater]) x 1000

Indicator	**IC12—Number of drinking water and wastewater service billing and account complaints**	**C12—Number of drinking water and wastewater service billing and account complaints per 1000 properties**
Definition	The total number of complaints received by the service provider that relate to drinking water and wastewater billing and accounts during the reporting year (complaints).	The average number of complaints received by the service provider, per 1000 connected properties, that relate to drinking water and wastewater billing and accounts during the reporting year (complaints/1000 properties).
Intent	These indicators inform an understanding of customer perceptions of service and as such is a partial indicator of satisfaction and service levels. Over time, trends in complaints can also be a lead indicator of performance.	
General supporting notes	A **complaint** is an expression of dissatisfaction made to or about a service provider, related to its products, services, staff or the handling of a complaint, where a response or resolution is explicitly or implicitly expected or legally required (AS/NZS ISO 10002:2018).	

	A **complaint** can be a written or verbal expression and can be received by the water utility in person, by mail, fax, phone, email, text message or other non-public messaging platforms on which the service provider operates [4] or has an explicit presence [5] on. **Complaints** made via public forums and social media applications are not counted unless the complainant subsequently follows up on the issue through a non-public channel (e.g., a direct message, email or phone call). **Drinking water** is water intended primarily for human consumption. **Wastewater** is the water used by residential and non-residential customers that is disposed of through the wastewater system. [2] **Billing and account complaints** are complaints in relation to: • meter reading errors and issues • billing errors • accounts and account payment • affordability • service connections and disconnections. and exclude complaints in relation to: • government pricing policy • tariff structures • a bill increase where the increase relates to usage by the customer and the bill was calculated correctly. The **number of complaints** includes: • **complaints** in relation to matters that the service provider is responsible for or has control over, including third-party contractors under the service provider's control and excludes: • **complaints** in relation to non-drinking water, including recycled water • **complaints** regarding a matter that is not the responsibility of the service provider or over which the service provider has no control, e.g., issues that are the responsibility of the customer • queries on an issue where dissatisfaction is not expressed or where a response or resolution is not explicitly or implicitly expected or legally required—i.e., not a **complaint** as defined by AS/NZS ISO 10002:2018. Multiple **complaints** from one customer on multiple issues should be counted as multiple **complaints**. **Complaints** from multiple customers in relation to the same issue should be counted as multiple **complaints.** Subsequent **complaints** from a customer on an issue should be recorded as separate **complaints** if the customer remains unsatisfied after a resolution has been offered.
Derivation	Where a service provider delivers either drinking water and wastewater service or just drinking water service **C12** is derived as:

	C12 = (**IC12** / **C4**) x 1000 = ([**IC12** — Number of drinking water and wastewater service billing and account complaints] / [**C4**—Total number of connected properties: water supply]) x 1000 Where a service provider only delivers wastewater service **C12** is derived as **C12** = (**IC12** / **C8**) x 1000 = ([**IC12**—Number of drinking water and wastewater service billing and account complaints] / [**C8**—Total number of connected properties: wastewater]) x 1000

Indicator	**IC13—Total number of complaints**
Definition	The total number of complaints received by the service provider during the reporting year (complaints).
Intent	The indicator informs an understanding of customer perceptions of service and as such is a partial indicator of satisfaction and service levels. Over time, trends in complaints can also be a lead indicator of performance.
General supporting notes	A **complaint** is an expression of dissatisfaction made to or about a service provider, related to its products, services, staff or the handling of a complaint, where a response or resolution is explicitly or implicitly expected or legally required (AS/NZS ISO 10002:2018). A **complaint** can be a written or verbal expression and can be received by the water utility in person, by mail, fax, phone, email, text message or other non-public messaging platforms which the service provider operates [4] or has an explicit presence[5] on. **Complaints** made via public forums and social media applications are not counted unless the complainant subsequently follows up on the issue through a non-public channel (e.g., a direct message, email or phone call). **The total number of complaints** includes complaints in relation to: • Drinking and non-drinking water supply services—which encompass the provision of raw, partially treated and potable water but exclude recycled water services. • recycled water services—which encompass the provision of water that is generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. • wastewater services—which encompass the treatment of wastewater from residential and non-residential customers that is disposed of through the wastewater system. With respect to these services the reported number of complaints should include: i) Water quality complaints in relation to: • illness • discoloured or cloudy water • taste • odour • staining—including staining of washing. ii) Service complaints in relation to: • service interruption • water main bursts and leaks

	• sewer breaks, chokes and overflows • water pressure • water service system works, i.e., repairs, maintenance, upgrades and new infrastructure—including site rehabilitation. iii) Billing and account complaints in relation to: • meter reading errors and issues • billing errors • accounts and account payment • affordability • service connections and disconnections. iv) The behaviour of a staff member or agent. The **number of complaints** includes: • **complaints** in relation to matters that the service provider is responsible for or has control over, including third-party contractors under the service provider's control and excludes: • **complaints** regarding a matter that is not the responsibility of the service provider or over which the service provider has no control, e.g., issues that are the responsibility of the customer • queries on an issue where dissatisfaction is not expressed or where a response or resolution is not explicitly or implicitly expected or legally required—i.e., not a **complaint** as defined by AS/NZS ISO 10002:2018. Multiple **complaints** from one customer on multiple issues should be counted as multiple **complaints**. **Complaints** from multiple customers in relation to the same issue should be counted as multiple **complaints.** Subsequent **complaints** from a customer on an issue should be recorded as separate **complaints** if the customer remains unsatisfied after a resolution has been offered.

5.2 Billing

Indicator	IC18—Number of restrictions applied for non-payment of water accounts	C18—Number of restrictions applied for non-payment of water accounts per 1000 properties
Definition	The number of restrictions applied to residential and non-residential customer's water supply services for non-payment of water accounts during the reporting year (restrictions).	The number of restrictions applied to residential and non-residential customer's water supply services, per 1000 connected properties, for non-payment of water accounts during the reporting year (restrictions/1000 properties).
Intent	Reporting on restrictions and legal actions is important for transparency and accountability and informs an understanding of customer and community outcomes.	
General supporting notes	**Restrictions applied for non-payment** of residential and non-residential customer accounts include**:** • fitting of a device to reduce water flows due to non-payment of an account	

	• disconnection of a customer's supply due to non-payment of an account and exclude: • disconnections carried out due to unsafe infrastructure connected to the service provider's system • customers who choose to disconnect from the service provider's water supply system • customers threatened with disconnection due to non-payment of accounts but where no actual disconnection or restrictor is applied. Multiple restrictions or disconnections for one customer should be counted as separate instances. Where a formal policy (State, Territory or organisation), legislation or regulation prohibits a service provider from restricting customer supply they should report this indicator as "Not applicable" (NA) and document why supply restrictions are not used. For example, "State policy enacted through licence conditions does not allow for customer restrictions" or "As part of the States COVID response restrictions were not applied in the 2021–22 reporting year". Where no such policy, legislation or regulation exists and a service provider elects to, or does not, apply restrictions in a given year they should report a value of 0.
Derivation	**C18** = (**IC18 / C4**) x 1000 = ([**IC18**—Number of restrictions applied for non-payment of water accounts] / [**C4**—Total number of connected properties: water supply]) x 1000

Indicator	**CC_N1— Percentage of restriction for non-payment of water accounts removed within three business days**	**CC_N2—Percentage of restriction for non-payment of water accounts resulting in legal action**
Definition	The number of restrictions applied to residential and non-residential customer's water supply services, for non-payment of water accounts during the reporting year, that were removed within three business days (%).	The percentage of restrictions applied to residential and non-residential customer's water supply services during the reporting year that resulted in legal action (%).
Intent	Reporting on restrictions and legal actions is important for transparency and accountability and informs an understanding of customer and community outcomes.	
General supporting notes	**Restrictions applied for non-payment** of residential and non-residential customer accounts include**:** • fitting of a device to reduce water flows due to non-payment of an account • disconnection of a customer's supply due to non-payment of an account and exclude: • disconnections carried out due to unsafe infrastructure connected to the service provider's system • customers who choose to disconnect from the service provider's water supply system	

	• customers threatened with disconnection due to non-payment of accounts but where no actual disconnection or restrictor is applied. Multiple restrictions or disconnections for one customer should be counted as separate instances. **Legal actions** are defined as legal proceedings that have led to the issuing of a court summons. **Legal actions** exclude: • threats of legal action for non-payment of water accounts • actions that have started but for which a summons has not been issued. Multiple legal actions against one customer should be counted as separate instances. Where a formal policy (State, Territory or organisation), legislation or regulation prohibits a service provider from restricting customer supply they should report this indicator as "Not applicable" (NA) and document why supply restrictions are not used. For example, "State policy enacted through licence conditions does not allow for customer restrictions" or "As part of the States COVID response restrictions were not applied in the 2021–22 reporting year". Where no such policy, legislation or regulation exists and a service provider elects to, or does not, apply restrictions in a given year they should report a value of 0.
Derivation	**CC_N1** = [The total number of restrictions removed within 3 business days] / [**IC18**—Number of restrictions applied for non-payment of water accounts] x 100 **CC_N2** = [The total number of restrictions resulting in legal action] / [**IC18**—Number of restrictions applied for non-payment of water accounts] x 100

5.3 Hardship

Indicator	**CC_N3—Number of residential customers on a hardship program as of 1 July of the reporting year**
Definition	The number of residential customers on a hardship program, offered by the service provider, as of 1 July of the reporting year (customers).
Intent	Reporting on participation in hardship programs is important for transparency and accountability and informs an understanding of the impact of pricing on customer and community outcomes. The definition of a hardship program or eligibility for a customer to enter a hardship program is not consistent across water utilities. Care should be taken when comparing numbers across utilities.

General supporting notes	A **residential customer** is one who principally utilises supplied water for personal, household, and domestic use. A **hardship program** is a program, operated by the service provider, to support customers who are willing to pay their bills but do not have the capacity to do so due to financial difficulties or other forms of hardship. A **hardship customer** means a residential customer of a retailer who is identified as a customer experiencing financial payment difficulties due to hardship in accordance with the service provider's hardship policy. Where a service provider does not have a **hardship program**, they should report this indicator as "**Not Applicable**" (NA).

Indicator	**CC_N4—Number of residential customers entering a hardship program during the reporting year**
Definition	The total number of residential customers entering a hardship program offered by the service provider during the reporting year (customers).
Intent	Reporting on participation in hardship programs is important for transparency and accountability and informs an understanding of the impact of pricing on customer and community outcomes. The definition of a hardship program or eligibility for a customer to enter a hardship program is not consistent across water utilities. Care should be taken when comparing numbers across utilities.
General supporting notes	A **residential customer** is one who principally utilises supplied water for personal, household, and domestic use. A **hardship program** is a program, operated by the service provider, to support customers who are willing to pay their bills but do not have the capacity to do so due to financial difficulties or other forms of hardship. A **hardship customer** means a residential customer of a retailer who is identified as a customer experiencing financial payment difficulties due to hardship in accordance with the service provider's hardship policy. Customers who enter a **hardship program** multiple times within a year should be counted as separate instances. Where a service provider does not have a **hardship program**, they should report this indicator as "**Not Applicable**" (NA).

Indicator	**CC_N5—Number of residential customers exiting a hardship program during the reporting year**
Definition	The total number of residential customers exiting a hardship program, offered by the service provider, during the reporting year (customers).
Intent	Reporting on participation in hardship programs is important for transparency and accountability and informs an understanding of the impact of pricing on customer and community outcomes.

	The definition of a hardship program or eligibility for a customer to enter a hardship program is not consistent across water utilities. Care should be taken when comparing numbers across utilities.
General supporting notes	A **residential customer** is one who principally utilises supplied water for personal, household, and domestic use. A **hardship program** is a program, operated by the service provider, to support customers who are willing to pay their bills but do not have the capacity to do so due to financial difficulties or other forms of hardship. A **hardship customer** means a residential customer of a retailer who is identified as a customer experiencing financial payment difficulties due to hardship in accordance with the service provider's hardship policy. Customers who exit a **hardship program** multiple times within a year should be counted as separate instances. Where a service provider does not have a **hardship program**, they should report this indicator as "**Not Applicable**" (NA).

Indicator	**CC_N6— Percentage of residential customers in hardship program who met their instalment plan**
Definition	The percentage of residential customers in a hardship program, offered by the service provider, who met their instalment plan by the end of the reporting year (%).
Intent	Reporting on participation in hardship programs is important for transparency and accountability and informs an understanding of the impact of pricing on customer and community outcomes. The definition of a hardship program or eligibility for a customer to enter a hardship program is not consistent across water utilities. Care should be taken when comparing numbers across utilities.
General supporting notes	A **residential customer** is one who principally utilises supplied water for personal, household, and domestic use. A **hardship program** is a program, operated by the service provider, to support customers who are willing to pay their bills but do not have the capacity to do so due to financial difficulties or other forms of hardship. A **hardship customer** means a residential customer of a retailer who is identified as a customer experiencing financial payment difficulties due to hardship in accordance with the service provider's hardship policy. Where a service provider does not have a **hardship program**, they should report this indicator as "**Not Applicable**" (NA).

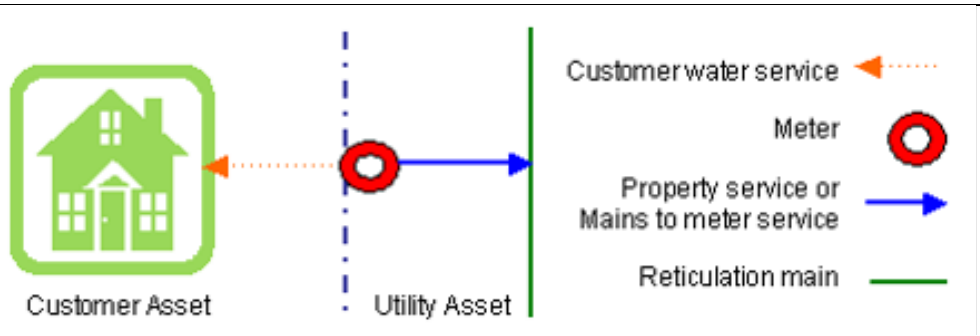
Indicator	CC_N7—Percentage of residential customers successfully exiting a hardship program during the reporting year
Definition	The percentage of residential customers in a hardship program, offered by the service provider, who successfully exited the program during the reporting year (%).
Intent	Reporting on participation in hardship programs is important for transparency and accountability and informs an understanding of the impact of pricing on customer and community outcomes.
General supporting notes	A **residential customer** is one who principally utilises supplied water for personal, household, and domestic use. A **hardship program** is a program, operated by the service provider, to support customers who are willing to pay their bills but do not have the capacity to do so due to financial difficulties or other forms of hardship. A **hardship customer** means a residential customer of a retailer who is identified as a customer experiencing financial payment difficulties due to hardship in accordance with the service provider's hardship policy. A **successful exit** is defined as one where a customer completes their hardship program and is returned to normal billing and payment schedules. Customers who **successfully exit** a **hardship program** multiple times within a year should be counted as separate instances. Where a service provider does not have a **hardship program**, they should report this indicator as "**Not Applicable**" (NA).

6. Assets and operations

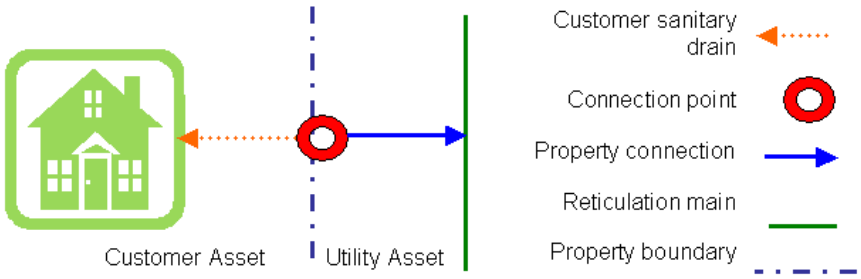
6.1 Reliability

Indicator	IA8—Number of water main breaks	A8—Number of water main breaks per 100 km of water mains
Definition	The number of water main breaks (i.e., bursts and leaks) in the service providers drinking and non-drinking water, excluding recycled water, distribution and reticulation mains during the reporting year (breaks).	The number of water main breaks (i.e., bursts and leaks) per 100km of the service providers drinking and non-drinking water, excluding recycled water, distribution and reticulation mains during the reporting year (breaks/100 km of water main).
Intent	Reporting on mains breaks provides insight into the level of service received by customers and informs an understanding of the condition of the service provider's water main network.	
General supporting notes	**Water main breaks** are **bursts and leaks** within the service provider's water supply network. A **burst** is a sudden rupturing of a water main—this includes both visible (i.e., surface discharge) and not visible (i.e., below-ground discharge) bursts. [8] A **leak** is a small crack or breach that typically worsens gradually over time until it is detected. **Drinking and non-drinking water** encompass potable (meets drinking water standards), partially treated, and raw (untreated) water but excludes recycled water. **Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Water main breaks** include: • breaks in all diameter water distribution and reticulation mains and exclude: • weeps or seepages associated with above-ground mains that can be fixed without shutting down the main • breaks due to third-party damage (e.g., accidental damage from excavation) • breaks in the mains to meter connection (i.e., the property service). 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.	

[8] WSAA, 2019. *Reducing leakage in Australia*, WSAA.

	
Derivation	**A8** = (**IA8** / **A2**) x 100 = ([**IA8**—Number of water main breaks] / [**A2**— Length of water supply mains]) x 100

Indicator	**IA14—Number of sewerage main breaks, leaks and chokes**	**A14—Number of sewerage main breaks, leaks, and chokes per 100 km of sewerage mains**
Definition	The number of sewerage main breaks, leaks and chokes in the service providers sewerage network during the reporting year (breaks).	The number of sewerage main breaks, leaks and chokes in the service provider's sewerage network during the reporting year (breaks, leaks and chokes/100 km main).
Intent	Reporting on sewerage main breaks provides insight into the level of service received by customers and informs an understanding of the condition of the service provider's sewerage main network.	
General supporting notes	**Sewerage main breaks** are **leaks and chokes** within the service provider's sewerage network. This handbook considers a **break** or **leak** as a failure that results in an interruption to the sewerage service. A **choke** is a confirmed partial or total blockage that may or may not result in a spill to the external environment from the sewerage system. Sewerage **mains breaks, leaks and chokes** include those in: • all diameter gravity sewerage mains • all diameter pressure mains, including common effluent pipelines and rising mains • all diameter vacuum system mains and exclude: • pipelines carrying treated wastewater, including recycled water distribution and reticulation mains • breaks due to third-party damage (e.g., accidental damage from excavation) • pump blockages and chokes • property connections. **Property connections** are the short sewerages, owned and operated by the service provider, that connect the sewerage main and the customer's sanitary drain.	

	Property connections [9, 10] include: • the junction on the sewerage main • property connection fittings • the vertical riser (where used) • any pipes installed to ensure the property connection fitting is within the lot being serviced. 
Derivation	**A14** = (**IA14** / **A5**) x 100 = ([**IA4**—Number of sewerage main breaks, leaks and chokes] / [**A5**—Length of sewerage main x 100

Indicator	**A15—Number of property connection sewerage breaks, leaks and chokes per 1000 properties**
Definition	The number of residential and non-residential property connection sewerage breaks, leaks and chokes in the service provider's sewerage network during the reporting year (breaks, leaks and chokes/1000 properties).
Intent	Reporting on property connection breaks, leaks and chokes provides insight into the level of service received by customers and informs an understanding of the condition of the service provider's sewerage network.
General supporting notes	A **residential customer** is one who principally utilises supplied water for personal, household, and domestic use. A **non-residential customer** is one who principally utilises their supplied water for uses other than personal, household, and domestic use. **Non-residential** customers include: • commercial customer—including offices, wholesale and retail trade, and accommodation • industrial customer—including manufacturing, construction, transport, warehouses

[9] WSAA 02 Sewerage Code of Australia

[10] The connection point (sometimes the inspection point) varies for different service providers and does not necessarily correspond to the customer boundary. The connection point is simply the point where the customer's sanitary drain intersects with the service provider's ownership or maintenance of the property connection.

- institutional customer—including public administration, education and training, health care and social assistance, corrections, and emergency service buildings (e.g., fire stations)
- parks and gardens— including sport fields, golf courses and racecourses, except where these facilities are part of the service provider's own operations (i.e., wastewater services are supplied without a billing arrangement)
- agricultural—including market gardens, turf farms, nurseries
- forestry
- aquaculture or fishing
- mining
- other non-residential customers who receive wastewater services via metered and/or unmetered billing arrangements

and exclude:

- other wastewater service providers.

Other wastewater service providers include:

- bulk water authorities and corporations
- water corporations
- publicly and privately owned and council-run water utilities

and exclude:

- service providers operating infrastructure on behalf of a water service provider e.g. BOOT schemes.

Own use is water used by the service provider, where the water is supplied without a billing arrangement.

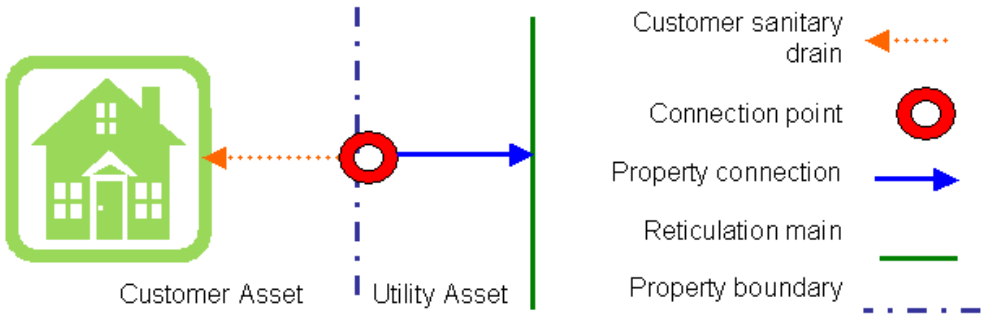
This handbook considers a **break** or **leak** as a failure that results in an interruption to the sewerage service.

A **choke** is a confirmed partial or total blockage that may or may not result in a spill to the external environment from the sewerage system.

A property connection is the short sewerage, owned and operated by the service provider, that connects the sewerage main and the customer's sanitary drain.

The **property connections** Error! Bookmark not defined., Error! Bookmark not defined. includes:

- the junction on the sewerage main
- property connection fittings
- the vertical riser (where used)
- any pipes installed to ensure the property connection fitting is within the lot being serviced.



	Property connection breaks, leaks and chokes include: **breaks, leaks and chokes** in any part of a residential or non-residential property connection and exclude: **breaks, leaks and chokes** due to third-party damage (e.g., accidental damage from excavation).
Derivation	**A15** = Total number of property connection sewerage breaks, leaks and chokes / [**C8**—Total number of connected properties: wastewater]) x 1000

Indicator	**C15—Average duration of an unplanned interruption: drinking water supply**
Definition	The average duration that customers, residential and non-residential, are without drinking water due to an unplanned supply interruption during the reporting year (minutes).
Intent	Reporting on unplanned water supply interruptions provides insight into the level of service received by customers and informs an understanding of the condition of the service provider's water main network.
General supporting notes	A **residential customer** is one who principally utilises supplied water for personal, household, and domestic use. A **non-residential customer** is one who principally utilises their supplied water for uses other than personal, household, and domestic use. **Non-residential** customers include: • commercial customer—including offices, wholesale and retail trade, and accommodation • industrial customer—including manufacturing, construction, transport, warehouses • institutional customer—including public administration, education and training, health care and social assistance, corrections, and emergency service buildings (e.g., fire stations) • parks and gardens—including sport fields, golf courses and racecourses, except where this is part of a service provider's **own use** • agricultural—including market gardens, turf farms, nurseries • forestry • aquaculture or fishing • mining • other non-residential customers who receive water supplied via metered and/or unmetered billing arrangements and exclude: • other water service providers. **Other water service providers** include: • bulk water authorities and corporations • water corporations • publicly and privately owned and council-run water utilities and exclude: • service providers operating infrastructure on behalf of a water service provider e.g. BOOT schemes.

Own use is water used by the service provider, where the water is supplied without a billing arrangement.

Drinking water, also referred to as potable water, is water that meets drinking water standards.

A **supply interruption** is any event causing a total loss of water supply due to any cause.

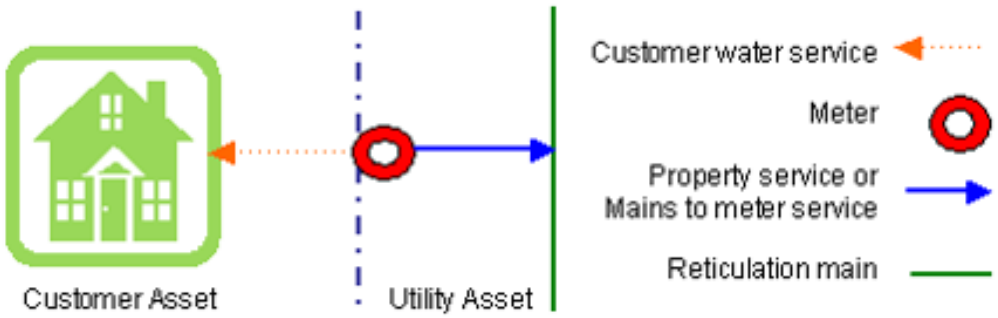
Unplanned water supply interruptions include:

- interruptions for which customers did not receive at least 24 hours notification—or as otherwise prescribed by regulatory requirements (see footnote requirements below)
- interruptions that extend beyond the period notified to the customer
- un-notified interruptions caused by third parties

and exclude:

- interruptions caused by bursts or leaks in the **property service** (mains to meter connection), unless the property connections are owned or maintained by the water utility, or the burst or leak requires the mains to be shut down for repair.

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.



Calculating the duration of an unplanned water supply interruption

- An interruption commences when the water utility is aware that water is no longer available at the customer's first cold water tap and ceases when 'normal' service is restored – this is when the last valve has been opened (see examples 2 and 3).
- Where the utility is aware of a water supply interruption through its internal systems alarms, the duration commences when the alarm is raised.
- If a customer notifies the water utility they are without water, the duration commences at the time of notification.
- If an interruption extends beyond the period notified the length of the entire interruption should be used in the calculation of **C15**.
- If the water utility is responding to a notification of a broken main, unless this notification also indicates a loss of supply, the duration commences once the break is isolated, if repairs are not being done under pressure.

Examples

1. A customer calls the water utility advising that they have no water. The interruption commences at the time the call is received.

2. A customer calls the water utility advising of a broken main. The interruption commences when staff arrive at the main and isolate the main break.
3. Mains are shut down due to firefighting requirements. This interruption is included and commences at the time the mains are shut down

The following table provides example calculations of the average duration.

Interruption	L = Length of interruption (Min)	N = Number of customers affected	L x N = Minutes off supply
i	240	20	4,800
ii	300	1,000	300,000
iii	120	400	48,000
iv	60	2	120
v	410	35	14,350
Total		**1,457**	**367,270**
Average duration of an unplanned interruption = Total minutes off supply / Total number of customers affected = 367,270 / 1,457			**252**

Customers affected is the count of individual customers who experience loss of water supply due to an unplanned water supply interruption. For example, a water supply interruption that causes the loss of supply to 100 customers is 100 customers affected.

Footnote requirements

Where state or territory legislation or regulatory requirements dictate a period other than 24 hours as the notice period for a planned interruption the service provider should note the notice period as part of a footnote to the reported data.

For example, “Under our operating licence, we are required to provide 48 hours' notice of a planned interruption to drinking water supplies. Our reported unplanned interruptions data reflect this increased notice period requirement.”

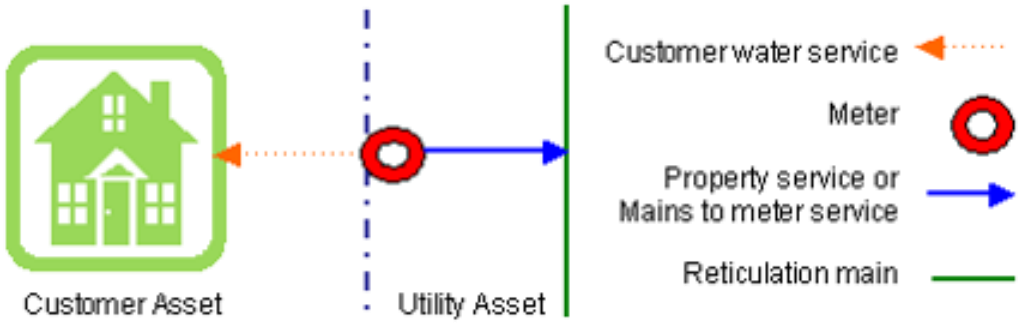
Where state or territory legislation or regulatory requirements dictate a period other than 24 hours as the notice period for a planned interruption the service provider should note the notice period as part of a footnote to the reported data.

For example, “Under our operating licence, we are required to provide 48 hours' notice of a planned interruption to drinking water supplies. Our reported unplanned interruptions data reflect this increased notice period requirement.”

Derivation	**C15** = Total minutes off water supply / Total number of customers affected

Indicator	**IC17—Number of unplanned interruptions: drinking water supply**	**C17—Number of unplanned interruptions per 1000 properties: drinking water supply**
Definition	The total number of unplanned interruptions affecting water supply service provision to residential and non-residential customers during the reporting year (interruptions).	The total number of unplanned interruptions affecting water supply service provision to residential and non-residential customers per

		1000 properties, during the reporting year (interruptions/1000 properties).
Intent	Reporting on unplanned water supply interruptions provides insight into the level of service received by customers and informs an understanding of the condition of the service provider's water main network.	
General supporting notes	A **residential customer** is one who principally utilises supplied water for personal, household, and domestic use. A **non-residential customer** is one who principally utilises their supplied water for uses other than personal, household, and domestic use. **Non-residential** customers include: • commercial customer—including offices, wholesale and retail trade, and accommodation • industrial customer—including manufacturing, construction, transport, warehouses • institutional customer—including public administration, education and training, health care and social assistance, corrections, and emergency service buildings (e.g., fire stations) • parks and gardens— including sports fields, golf courses and racecourses, except where these facilities are supplied as part of the service provider's own use (i.e., water is supplied without a billing arrangement) • agricultural—including market gardens, turf farms, nurseries • forestry • aquaculture or fishing • mining • other non-residential customers who receive water supplied via metered and/or unmetered billing arrangements and exclude: • other water service providers **Customers affected** is the count of individual customers who experience loss of water supply due to an unplanned water supply interruption. For example, a water supply interruption that causes the loss of supply to 100 customers is 100 customers affected. **Drinking water,** also referred to as potable water, is water that meets drinking water standards. A **supply interruption** is any event causing a total loss of water supply due to any cause. **Unplanned water supply interruptions** include: • interruptions for which customers did not receive at least 24 hours notification—or as otherwise prescribed by regulatory requirements (see footnote requirements below) • interruptions that extend beyond the period notified to the customer • un-notified interruptions caused by third parties and exclude: • interruptions caused by bursts or leaks in the **property service** (mains to meter connection), unless the property connections are owned or maintained by the water utility, or the burst or leak requires the mains to be shut down for repair • issues that cause some reduction to the level of service but where normal activities (e.g., shower, washing machine, toilet flushing etc.) are still possible.	

	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. 
Derivation	**C17** = (**IC17** / **C4**) x 1000 = ([**IC17**—Number of unplanned interruptions: drinking water supply] / [**C4**—Total number of connected properties: water supply]) x 1000

6.2 Losses

Indicator	**A9—Infrastructure leakage index (ILI): drinking water supply system**
Definition	The ratio of the current annual real losses (CARL) to the unavoidable annual real losses (UARL) for the service provider's drinking water supply system during the reporting year.
Intent	The infrastructure leakage index (ILI) is an indicator of how effectively real losses in the distribution system are being managed at the current operating pressures. It is the preferred indicator for state and national comparisons (metric benchmarking) and has been adopted by the International Water Association as the preferred indicator for international comparisons.
General supporting notes	The **infrastructure leakage index** (ILI) is the ratio of a service provider's **current annual real losses (**CARL) to its **unavoidable annual real losses** (UARL) within the drinking water supply system. Ongoing research into the reliability of UARL estimates has resulted in a series of revisions to the recommended thresholds for its application with current advice suggesting caution and potential use of a correction factor for systems with less than 5,000 service connections and or average pressures less than 45m and greater than 60m. The ILI indicator should only be reported in instances where the system for which the ILI is being calculated meets the applicability thresholds. Service providers below this threshold should report the ILI as Not Applicable (NA).

Where a service provider operates **multiple drinking water schemes** the reported losses should be for all schemes in the service provider service area.

CARL include:

- Leakage and overflow from mains service reservoirs and service connections prior to customer meters

and excludes:

- losses in the non-potable supply system.

The **reported volume** should be estimated using standard water balance approaches detailed in the Water Services Association of Australia[11] (WSAA) and International Water Association [12, 13] (IWA) (see Practice note 3).

Regional water utilities should report the ILI for the infrastructure providing water services to the major towns only.

UARL are a theoretical reference value representing the technical lower limit of leakage that could be achieved if all of today's best technology could be successfully applied. [14]

The UARL should be based on average system pressure measurements in the pressurised distribution system up to the point of customer metering.

UARL = (18 x Lm + 0.8 x Nc) x P

Where Lm = mains length (km)

Nc = number of service connections

P = average system pressure (m)

The number of **service connections** can be taken as the number of metered accounts, minus the total of any sub-meters (after master meters, e.g., to shops and flats), plus the estimated number of unmetered service connections (e.g., fire service connections).

Service connections include:

- current customers and installations (properties), where a drinking water service is available at the property, including vacant land/lots

and exclude:

- finalised or non-current customers or installations
- slave and factored installations (properties) with no water meter
- properties that only have a sewerage service.

The number of **service connections** is **not** the same as the number of metered accounts or **connected properties**. It is **not** acceptable to use the total number of connected properties (indicator C4) when calculating real losses per service connection.

Estimating the number of service connections

[11] Lambert A. and Hirner W. (2000): Losses from Water Supply Systems: Standard Terminology and Recommended Performance Measures.

[12] Water Services Association of Australia (2001). Benchmarking of Water Losses in Australia. ISSN 1 876088 96 6

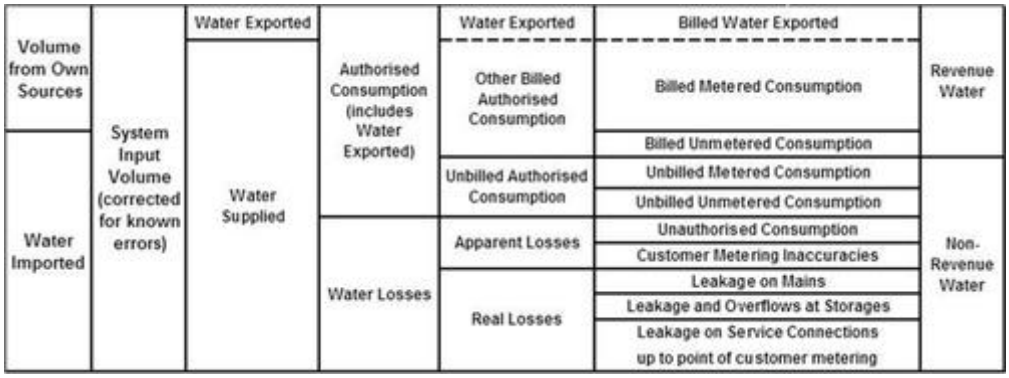
[13] Alegre H., Hirner W., Baptista J.M. and Parena R. (2000) Performance Indicators for Water Supply Services. IWA Manual of Best Practice. ISBN 900222272

[14] American Water Works Association (2012). IWA/AWWA Water Audit Method.

	To avoid the over-estimation of service connections in systems with multiple residential and commercial properties on common service connections (main to property line), the number of service connections should be calculated as: The number of **service connections** = The number of service connections to single properties + The number of service connections to multiple properties + The number of service connections to commercial and industrial properties + Any other service connections not previously counted. The following assumptions should be used in the estimation of the number of service connections. • Each master meter account = one service connection • Slave meter and factored accounts = 0 service connection • Individual metered accounts outside of metered networks = one service connection each • Account with multiple lots (installs) = one service connection • One or more units that have not been strata-titled = one service connection • One or more units that have been strata-titled and share a master meter = one service connection • Where units have been strata-titled and are not in a network = one service connection per unit • House on one lot/install = one service connection • House on two lots/installs = one service connection • Units on single or multiple Lots with a single master meter = one service connection • Units on single or multiple Lots with master meters (billed to a single account) = one service connection • A duplex with two metered accounts (no master meter) = two service connections (one service connection per account) • A duplex with one master meter and between 0 and 2 slave meters = one service connection • one service connection to 20 apartments = one service connection • Vacant land with a meter or pricing class that indicates water is available = one service connection (i.e., A duplex in a network = one service connection). **Footnote requirements** The service provider should note the number of service connections used in the calculation of A9 and the scheme (i.e., cities and or towns) to which the ILI estimate applies in a footnote to this indicator.

Indicator	**A10—Real losses, per service connection from the drinking water supply system**
Definition	The daily volume of real losses from the service provider's drinking water supply system during the reporting year, in litres per service connection per day (L/service connection/day).

Intent	Real losses represent a wasted resource, reduce the effective capacity of a water supply system, and may result in unnecessary operating costs. Reporting on real losses provides insight into a service provider's network condition, informs an understanding of asset and operational efficiency and can support the identification and leakage issues.
General supporting notes	Where a service provider operates **multiple drinking water schemes** the reported losses should be for all schemes in the service provider service area. **Real losses** are the volumes of water lost through leakage and overflows from mains, service reservoirs and service connections up to the point of the customer meter.



Source: Leak suite library

Drinking water, also referred to as potable water, is water that meets drinking water standards.

The number of **service connections** can be taken as the number of metered accounts, minus the total of any sub-meters (after master meters, e.g. to shops and flats), plus the estimated number of unmetered service connections (e.g. fire service connections).

Service connections include:

current customers and installations (properties), where a drinking water service is available at the property, including vacant land/lots

and exclude:

- finalised or non-current customers or installations
- slave and factored installations (properties) with no water meter
- properties that only have a sewerage service.

The number of **service connections** is **not** the same as the number of metered accounts or **connected properties**. It is **not** acceptable to use the total number of connected properties (indicator C4) when calculating real losses per service connection.

Estimating the number of service connections

To avoid the over-estimation of service connections in systems with multiple residential and commercial properties on common service connections (main to property line), the number of service connections should be calculated as:

The number of **service connections**

= The number of service connections to single properties

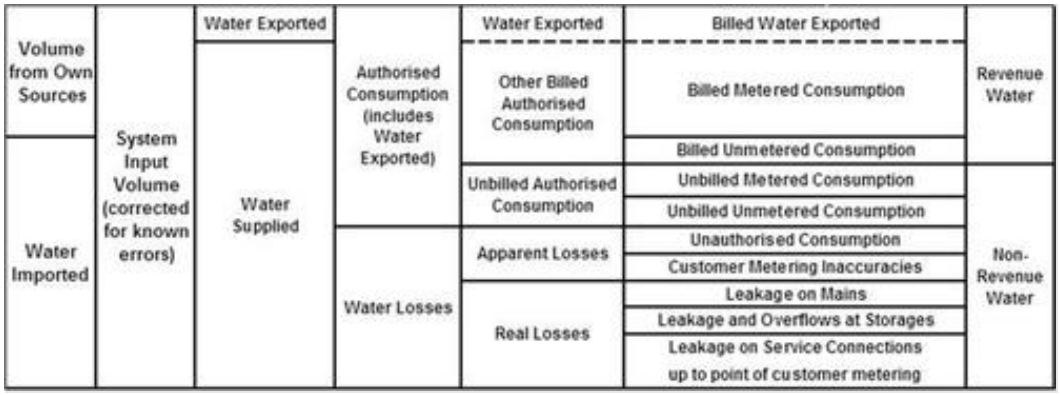
+ The number of service connections to multiple properties

+ The number of service connections to commercial and industrial properties

	+ Any other service connections not previously counted. The following assumptions should be used in the estimation of the number of service connections. • Each master meter account = one service connection • Slave meter and factored accounts = zero service connection • Individual metered accounts outside of metered networks = one service connection each • Account with multiple lots (installs) = one service connection • One or more units that have not been strata-titled = one service connection • One or more units that have been strata-titled and share a master meter = one service connection • Where units have been strata-titled and are not in a network = one service connection per unit • House on one lot/install = one service connection • House on two lots/installs = one service connection • Units on single or multiple Lots with a single master meter = one service connection • Units on single or multiple Lots with two master meters (billed to a single account) = one service connection • A duplex with two metered accounts (no master meter) = two service connections (one service connection per account) • A duplex with one master meter and between 0 and 2 slave meters = one service connection • one service connection to 20 apartments = one service connection • Vacant land with a meter or pricing class that indicates water is available = one service connection (i.e., A duplex in a network = one service connection). Real losses in litres/service connection/day, or kL/km of mains/day, are preferred for measuring progress towards individual utility targets for real losses (process benchmarking). Litres/service connection/day is preferred for service connection densities exceeding 20 connections/km of mains. **Footnote requirements** The service provider should note the number of service connections used in the calculation of **A10** and the scheme (i.e., cities and or towns) to which the loss estimate applies in a footnote to this indicator.

Indicator	**A11—Real losses, per kilometre of water main, from the drinking water supply system**
Definition	The daily volume of real losses from the service provider's drinking water supply system during the reporting year, in kilolitres per kilometre of water main per day (kL/km water main/day).
Intent	Real losses represent a wasted resource, reduce the effective capacity of a water supply system, and may result in unnecessary operating costs. Reporting on real losses provides insight into a service provider's network condition, informs an understanding of asset and operational efficiency and can support the identification and leakage issues.
General supporting notes	Where a service provider operates **multiple drinking water** schemes the reported losses should be for all schemes in the service provider service area.

Real losses are the volumes of water lost through leakage and overflows from mains, service reservoirs and service connections up to the point of the customer meter.



Source: Leak suite library

Drinking water, also referred to as potable water, is water that meets drinking water standards.

Where a service provider is reporting losses for the scheme supplying the major city or town in its service area the length of water mains for that scheme should be used in the calculation of **A11** and not the total length of water supply mains for all areas serviced (**A2**).

Footnote requirements

The service provider should note the length of water mains used in the calculation of **A11** and the scheme (i.e., cities and or towns) to which the loss estimate applies in a footnote to this indicator.

Derivation	**A11** = Real losses / [**A2**—Length of water supply mains]

7. Finance and pricing

7.1 Tariffs

Indicator	FP_N1—Residential drinking water supply tariff data	FP_N2—Residential wastewater services tariff data	FP_N3—Residential recycled water supply tariff data
Definition	Pricing and contextual data defining the service provider's residential drinking water supply tariffs (text).	Pricing and contextual data defining the service provider's residential wastewater tariffs (text).	Pricing and contextual data defining the service provider's residential recycled water supply tariffs (text).
Intent	Reporting tariff information supports pricing transparency, promotes competition by comparison and provides insight into the charging structure of a service provider and can be used to understand its alignment with the National Water Initiative pricing principles.		
General supporting notes	The NPR has adopted a text-based encapsulation of tariff data. Tariff data can be prepared using the **National Performance Report Tariff Data Capture Spreadsheet[15].** Where a service provider has **multiple or different tariff structures**, the tariff structure reported on should represent the major city or town in their service area. The service provider should note the major city or town to which the tariffs apply in a footnote to the reported data. A **residential customer** is one who mostly uses the water supplied for personal, household, and domestic use. **Drinking water**, also referred to as potable water, is water that meets drinking water standards. **Drinking water services** encompass the supply of water that meets drinking water standards (potable water supply). **Drinking water supply tariffs** are the fixed and variable charges levied on customers, by the service provider, for drinking water services during the reporting year. **Special levy** is an additional charge paid by customers on top of the fixed and variable charge of their water bill. Special levies can either be retained by the service provider or pass on to another entity such as a government body or department. **Wastewater**[2] is the water used by residential and non-residential customers that is disposed of through the wastewater system. **Wastewater services tariffs** are the fixed and variable charges levied on customers, by the service provider, for wastewater services during the reporting year. **Recycled water** services encompass the provision of water generated from wastewater, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Recycled water supply tariffs** are the fixed and variable charges levied on customers, by the service provider, for recycled water supply services during the reporting year.		

[15] The spreadsheet can be provided to service providers on request.

Reporting residential tariff data

Tariff data includes the following elements (see the examples below for further explanation):

Tariff Type: 'Flat-rate tariff', 'Two-part tariff', 'Allocation' or 'Inclining-block tariff'

Fixed Charge: the fixed annual access charge in dollars

Step X Charge: the variable charge in dollars per kilolitre

Step X Boundary: the upper bound in kilolitres for each step

Special Levy Charge: the annual charge for a special levy in dollars

Special Levy Retained: 'Yes', 'No', or 'Not applicable'

Service providers can respond with 'Not applicable' if the element is not relevant to their tariff structure. For example, service providers with a two-part tariff can respond 'Not applicable' to Step X Boundary. Service providers with an inclining-block tariff can add as many Step X Charge and Step X Boundary as needed.

Examples

The following examples demonstrate how tariff data should be reported. Service providers can use the **National Performance Report Tariff Data Capture Spreadsheet** to format their tariff data properly.

Example 1 – Residential drinking water – A two-part tariff structure with no special levies

Tariff Type: Two-part tariff

Fixed Charge: $150 per annum

Step 1 Charge: $3.20 per kL

Step 1 Boundary: Not applicable – two-part tariff with no upper bound

Special Levy Charge: Not applicable

Special Levy Retained: Not applicable

Tariff data reported:

FP_N1 = `('Tariff Type', Two-part tariff): ('Fixed Charge', 150): ('Step 1 Charge', 3.2): ('Step 1 Boundary', Not applicable): ('Step 2 Charge', Not applicable): ('Step 2 Boundary', Not applicable): ('Step 3 Charge', Not applicable): ('Step 3 Boundary', Not applicable): ('Special Levy Charge', Not applicable): ('Special Levy Retained', Not applicable)`

Example 2 – Residential drinking water – An inclining block tariff structure with a special levy

Tariff Type: Inclining-block tariff

Fixed Charge: $150 per annum

Step 1 Charge: $2.40 per kL

Step 1 Boundary: Up to 160 kL per annum

Step 2 Charge: $3.20 per kL

Step 2 Boundary: Up to 320 kL per annum

Step 3 Charge: $4.60 per kL

Step 3 Boundary: Not applicable – all usage over 320 kL is charged at the Step 3 Charge

Special Levy Charge: There is an environmental levy of $80 per annum

Special Levy Retained: Yes, the special levy is retained by the service provider

Tariff data reported:

FP_N1 = `('Tariff Type', Inclining-block tariff): ('Fixed Charge', 150): ('Step 1 Charge', 2.4): ('Step 1 Boundary', 160): ('Step 2 Charge', 3.2): ('Step 2 Boundary', 320): ('Step 3 Charge', 4.6): ('Step 3 Boundary', Not applicable): ('Special Levy Charge', 80): ('Special Levy Retained', Yes)`

Example 3 – Residential drinking water – Allocation tariff structure with no special levy

Tariff Type: Allocation

Fixed Charge: $500 per annum

Step 1 Charge: $0 per kL

Step 1 Boundary: 800 – allocation includes first 800 kL

Step 2 Charge: $1.20 per kL

Step 2 Boundary: Not applicable – all usage over 800 kL is charged at the Step 2 Charge

Special Levy Charge: Not applicable

Special Levy Retained: Not applicable

Tariff data reported:

FP_N1 = `('Tariff Type', Allocation): ('Fixed Charge', 500): ('Step 1 Charge', 0): ('Step 1 Boundary', 800): ('Step 2 Charge', 1.2): ('Step 2 Boundary', Not applicable): ('Step 3 Charge', Not applicable): ('Step 3 Boundary', Not applicable): ('Special Levy Charge', Not applicable): ('Special Levy Retained', Not applicable)`

Example 4 – Residential wastewater – A flat rate with a special levy

Tariff Type: Flat-rate tariff

Fixed Charge: $400 per annum

Step 1 Charge: Not applicable

Step 1 Boundary: Not applicable

Special Levy Charge: There is an environmental levy of $80 per annum

Special Levy Retained: Yes, the special levy is retained by the service provider

Tariff data reported:

FP_N2 = `('Tariff Type', Flat-rate tariff): ('Fixed Charge', 400): ('Step 1 Charge', Not applicable): ('Step 1 Boundary', Not applicable): ('Step 2 Charge', Not applicable): ('Step 2 Boundary', Not applicable): ('Step 3 Charge', Not applicable): ('Step 3 Boundary', Not applicable): ('Special Levy Charge', 80): ('Special Levy Retained', Yes)`

Example 5 – Residential wastewater – Inclining-block tariff structure with volumetric limit and no special levies

Tariff Type: Inclining-block tariff

Fixed Charge: $150 per annum

Step 1 Charge: $3.20 per kL

Step 1 Boundary: 800 kL – Step 1 Charge capped at 800 kL

Step 2 Charge: $0 per kL

	Step 2 Boundary: Not applicable **Special Levy Charge:** Not applicable **Special Levy Retained:** Not applicable **Tariff data reported:** **FP_N2 =** `('Tariff Type', Inclining-block tariff): ('Fixed Charge', 150): ('Step 1 Charge', 3.2): ('Step 1 Boundary', 800): ('Step 2 Charge', 0): ('Step 2 Boundary', Not applicable): ('Step 3 Charge', Not applicable): ('Step 3 Boundary', Not applicable): ('Special Levy Charge', Not applicable): ('Special Levy Retained', Not applicable)` **Example 6 – Residential recycled water – Two-part tariff structure with no special levies** **Tariff Type:** Two-part tariff **Fixed Charge:** $150 per annum **Step 1 Charge:** $3.20 per kL **Step 1 Boundary:** Not applicable – two-part tariff with no upper bound **Special Levy Charge**: Not applicable **Special Levy Retained:** Not applicable **Tariff data reported:** **FP_N3 =** `('Tariff Type', Two-part tariff): ('Fixed Charge', 150): ('Step 1 Charge', 3.2): ('Step 1 Boundary', Not applicable): ('Step 2 Charge', Not applicable): ('Step 2 Boundary', Not applicable): ('Step 3 Charge', Not applicable): ('Step 3 Boundary', Not applicable): ('Special Levy Charge', Not applicable): ('Special Levy Retained', Not applicable)`

7.2 Annual bill

Indicator	P2—Annual residential customer bill based on 200 kL per annum: drinking water supply
Definition	The annual residential customer drinking water supply bill, based on the consumption of 200 kL of drinking water during the reporting year ($).
Intent	Reporting on the bill based on 200 kL provides insight into price variations, supports pricing transparency and informs an understanding of affordability. The use of a fixed volume corrects for differences, between utilities, in the volumes of water supplied.
General supporting notes	**Residential customers** are customers who principally utilise supplied water for personal, household, and domestic use. **Drinking water** is water intended primarily for human consumption. The **annual residential customer water bill** includes: • fixed charges • usage charges for a consumption of 200 kL • special levies that apply to all or the majority of residential customer. [16]

[16] An example of a special levy in Victoria is the Environmental Contribution Levy, which is applied to all customer bills.

	Example Water fixed charge = $100/year Special levy = $80/year Water pay-for-use charge = $1/kL = $1 x 200 kL = $200 Therefore, the annual residential bill for 200 kL = $100 + $80 + $200 = $380
Derivation	Calculation of **P2** is a function of the service providers tariff structure, which is captured in indicator **FP_N1**. **P2** = [Water fixed charge] + [Special levy] + ([Water pay-for-use rate] x 200)

Indicator	**P5—Annual residential customer bill based on 200 kL per annum: wastewater**
Definition	The annual residential customer wastewater bill, based on the consumption of 200 kL of water during the reporting year ($).
Intent	Reporting on the bill based on 200 kL provides insight into price variations, supports pricing transparency and informs an understanding of affordability. The use of a fixed volume corrects for differences, between utilities, in the volumes of water supplied.
General supporting notes	**Residential customers** are customers who principally utilise supplied water for personal, household, and domestic use. **Wastewater** is the water used by residential and non-residential customers that is disposed of through the wastewater system. The **annual residential customer wastewater bill** includes: • fixed charges • volumetric disposal charges for a consumption of 200 kL • special levies that apply to all or the majority of residential customer.[16]
Derivation	Calculation of **P5** is a function of the service providers tariff structure, which is captured in indicator **FP_N2**. **P5** = [Wastewater fixed charge] + [Special levy] + ([Wastewater pay-for-disposal rate] x 200)

Indicator	**P7—Total annual residential customer bill based on 200 kL per annum**
Definition	The total annual residential customer water supply and wastewater bill, based on the consumption of 200 kL of drinking water during the reporting year ($).
Intent	Reporting on the bill based on 200 kL provides insight into price variations, supports pricing transparency and informs an understanding of affordability. The use of a fixed volume corrects for differences, between utilities, in the volumes of water supplied.
General supporting notes	See indicators **P2** and **P5**.
Derivation	**P7** = **P2** + **P5**

	= [**P2**—Annual residential customer bill based on 200 kL per annum: drinking water supply] + [**P5**—Annual residential customer bill based on 200 kL per annum: wastewater

Indicator	**P3—Typical residential customer bill: drinking water supply**
Definition	The annual residential customer drinking water supply bill, based on the service provider's customers' average annual residential drinking water usage during the reporting year ($).
Intent	Reporting on the bill based on average annual residential usage provides insight into price variations, supports pricing transparency and informs an understanding of affordability. The use of the average customer consumption provides insight into the impact of pricing on the service provider's customers.
General supporting notes	**Residential customers** are customers who principally utilise supplied water for personal, household, and domestic use. **Drinking water** is water intended primarily for human consumption. The **annual residential customer water bill** includes: • fixed charges • usage charges for the consumption of the service provider's average annual residential water supply volume (**W12**). • special levies that apply to all or the majority of residential customer. **Example** Water fixed charge = $100/year Special levy = $80/year Average annual volume of residential water supplied = 350 kL Water pay-for-use charge = $1/kL = $1 x 350 kL = $350 Therefore, the annual residential bill = $100 + $80 + $350 = $530
Derivation	The calculation of **P3** is a function of the service provider's tariff structure (**FP_N1**) and the average annual volume of water supplied to residential customers (**W12**). **P3** = [Water fixed charge] + [Special levy] + ([Water pay-for-use rate] x [**W12**—Average volume of residential water supplied per property])

Indicator	**P6—Typical residential customer bill: wastewater**
Definition	The annual residential customer wastewater bill, based on the service provider's customers' average annual residential drinking water usage during the reporting year ($).
Intent	Reporting on the bill based on average annual residential usage provides insight into price variations, supports pricing transparency and informs an understanding of affordability. The use of the average customer consumption provides insight into the impact of pricing on the service provider's customers.

General supporting notes	**Residential customers** are customers who principally utilise supplied water for personal, household, and domestic use. **Wastewater** [2] is the water used by residential and non-residential customers that is disposed of through the wastewater system. The **annual residential customer wastewater bill** includes: • fixed charges • disposal charges associated with the service provider's average annual residential water supply volume. • special levies that apply to all or the majority of residential customer.[16]
Derivation	The calculation of **P6** is a function of the service provider's tariff structure (**FP_N2**) and the disposal charges associated with average annual residential water supply volume.

Indicator	**P8—Total typical residential customer bill**
Definition	The annual residential customer water supply and wastewater bill, based on the service provider's customers' average annual residential drinking water usage during the reporting year ($).
Intent	Reporting on the bill based on average annual residential usage provides insight into price variations, supports pricing transparency and informs an understanding of affordability. The use of the average customer consumption provides insight into the impact of pricing on the service provider's customers.
General supporting notes	See indicators **P3** and **P6.**
Derivation	**P8** = **P3** + **P6** = [**P3**—Typical residential customer bill: drinking water supply] + [**P6**—Typical residential customer bill: wastewater]

7.3 Revenue

Indicator	**F1— Revenue: drinking and non-drinking water**
Definition	The revenue from the service provider's drinking and non-drinking water, including recycled water, services and related activities during the reporting year ($ 000s)
Intent	Publicly reporting on revenue supports transparency and accountability and provides an understanding of the financial health of service providers. It informs an understanding of customer and community outcomes and insight into affordability and financial efficiency.
General supporting notes	**Drinking and non-drinking water** encompass potable (meets drinking water standards), partially treated, and raw (untreated) water but excludes recycled water.

Recycled water is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use.

Revenue includes:

- revenue from pay-for-use and base-rate charges for the provision of drinking and non-drinking water services, including recycled water services, to residential and non-residential customers—reporting should be based on AASB 15 Revenue from Contracts with Customers [17]
- fees and interest charged on late payments by customers
- special levies
- bulk water sales, for service providers that supply bulk water
- 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

and excludes:

- asset revaluations
- foreign exchange adjustments and defined benefit adjustments
- receipts from governments for specific agreed services (e.g. community service obligations)
- where **material,** as defined in AASB 108 [18], revenue from:
- government equity contributions
- investment activities
- non-core utility activities (e.g., consulting, agriculture, property leases)
- net profit or loss from the disposal of assets (refer to AASB 116) [19].

All data, even when it is being provided for historical reporting years, should be reported as nominal values (unadjusted for inflation).

Indicator data published in Parts A and B of the annual National Performance Reports are presented in real terms (adjusted for inflation) using the average of the eight state/territory consumer price indices for the reporting year.

Footnote requirements

Spikes or falls in revenue should be explained in a footnote to the reported data. For example, "*Revenue for the financial year was down on previous years due to the impact of water restrictions on customer usage*".

Indicator	F2—Revenue: wastewater

[17] Australian Accounting Standards Board. (2019). *Revenue from Contracts with Customers* (AASB 15).

[18] Australian Accounting Standards Board. (2007). *Accounting Policies, Changes in Accounting Estimates and Errors (AASB 108)*.

[19] Australian Accounting Standards Board. (2017). *Property, Plant and Equipment (AASB 116)*

Definition	The revenue from the service provider's wastewater services and related activities during the reporting year ($ 000s).
Intent	Publicly reporting on revenue supports transparency and accountability and provides an understanding of the financial health of service providers. It informs an understanding of customer and community outcomes and insight into affordability and financial efficiency.
General supporting notes	**Wastewater** is the water used by residential and non-residential customers that is disposed of through the sewerage system. **Revenue** includes: • revenue from pay-for-use and base-rate charges for the provision of wastewater services to residential and non-residential customers—reporting should be based on AASB 15 Revenue from Contracts with Customers. • fees and interest charged on late payments by customers • special levies • bulk wastewater services, where provided • 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 and excludes: • asset revaluations • foreign exchange adjustments and defined benefit adjustments • receipts from governments for specific agreed services (e.g., community service obligations) • where **material,** as defined in AASB 108 revenue from: • government equity contributions • investment activities • non-core service provider activities (e.g., consulting, agriculture, property leases) • net profit or loss from the disposal of assets (refer to AASB 116) All data, even when it is being provided for historical reporting years, should be reported as nominal values (unadjusted for inflation). Indicator data published in Parts A and B of the annual National Performance Reports are presented in real terms (adjusted for inflation) using the average of the eight state/territory consumer price indices for the reporting year. **Footnote requirements** Spikes or falls in revenue should be explained in a footnote to the reported data. For example, "*Revenue for the financial year was down on previous years due to the impact of water restrictions on customer usage*".

Indicator	**FP_N4—Revenue: developer services charges levied as cash payments**

Definition	The revenue from the developer services charges, levied as cash payments, by the service provider on developers during the reporting year ($ 000s).
Intent	Publicly reporting on revenue from developer services charges supports transparency and accountability and improves the comparability of revenue metrics by enabling inter- and intra-jurisdictional differences in revenue models to be explicitly considered.
General supporting notes	**Developer services charges** [20] are cash and non-cash fees and contributions levied by the service provider on developers to: • recover a component of the infrastructure costs associated with servicing new developments or extending or changing the network within existing developments • provide signals regarding the cost of development and thus encourage efficient development practices. **Revenue from developer services charges, levied as cash payments,** includes all cash fees and contributions levied by the service provider on developers for: • drinking and non-drinking water supply services, including recycled water • wastewater services and excludes: • all non-cash contributions, i.e., developer contributed assets. [21] All data, even when it is being provided for historical reporting years, should be reported as nominal values (unadjusted for inflation). Indicator data published in Parts A and B of the annual National Performance Reports are presented in real terms (adjusted for inflation) using the average of the eight state/territory consumer price indices for the reporting year.

Indicator	**FP_N5—Revenue: developer services charges levied as non-cash contributions**
Definition	The revenue from the developer services charges, levied as non-cash contributions, by the service provider on developers during the reporting year ($ 000s).
Intent	Publicly reporting on revenue from developer services charges supports transparency and accountability and improves the comparability of revenue metrics by enabling inter- and intra-jurisdictional differences in revenue models to be explicitly considered.
General supporting notes	**Developer services charges** are cash and non-cash fees and contributions levied by the service provider on developers to: • recover a component of the infrastructure costs associated with servicing new developments or extending or changing the network within existing developments • provide signals regarding the cost of development and thus encourage efficient development practices. **Revenue from developer services charges, levied as non-cash contributions**, includes all developer contributed assets [21]: • drinking and non-drinking water supply service assets, including recycled water assets

[20] Developer services charges are also referred to as "developer contributions" and "headworks contributions".

[21] Developer contributed assets are also referred to as "gifted assets".

	• wastewater services assets and excludes: • all cash fees and contributions levied by the service provider on developers. All data, even when it is being provided for historical reporting years, should be reported as nominal values (unadjusted for inflation). Indicator data published in Parts A and B of the annual National Performance Reports are presented in real terms (adjusted for inflation) using the average of the eight state/territory consumer price indices for the reporting year.

Indicator	**F3—Total income for the service provider**
Definition	The total income from drinking and non-drinking water, including recycled water, and wastewater services and related activities received by the service provider during the reporting year ($ 000s).
Intent	Publicly reporting on income supports transparency and accountability and provides an understanding of the financial health of service providers. It informs an understanding of customer and community outcomes and insight into affordability and financial efficiency.
General supporting notes	**Drinking and non-drinking water** encompass potable (meets drinking water standards), partially treated, and raw (untreated) water but excludes recycled water. **Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Wastewater** is the water used by residential and non-residential customers that is disposed of through the sewerage system. The **total income** from drinking and non-drinking water, including recycled water, and wastewater services and **related activities** includes: • any item that would be classified as income in the 'Income statement'. **Related activities** include: • developer charges • headworks • insurance recoveries • private works • water supply (including bulk water and recycling) • administration fees and charges (e.g., information statements, property plans) • net profit or loss from the disposal of assets (refer to AASB 116) and excludes: • non-regulated income (for economically regulated entities) • drainage activities, with the exception of stormwater harvesting for supply as drinking, non-drinking and recycled water. **Total income** is *not* the sum of: **F1**—Total revenue: water supply **F2**—Total revenue: wastewater

	FP_N4—Revenue from developer contributions (cash) **FP_N5**—Revenue from developer contributions (non-cash) **F25**—Community service obligations. All data, even when it is being provided for historical reporting years, should be reported as nominal values (unadjusted for inflation). Indicator data published in Parts A and B of the annual National Performance Reports are presented in real terms (adjusted for inflation) using the average of the eight state/territory consumer price indices for the reporting year. In case of council run utilities, this subsidies amount can also include any subsidy transfer from that council's (local government's) consolidated fund to the council's separate/ring-fenced water supply and/or sewerage business activities fund. **Footnote requirements** Service providers who report on individual schemes within their total service area, for example, WA Water Corporation and NT Power and Water, should also report their total income for their entire operations in the associated footnote.

Indicator	F25—Community service obligations	F8—Community service obligations ratio
Definition	The dollar amount of any community service obligation subsidies provided by the government, to the service provider, to allow for the provision of goods or services at less than total cost during the reporting year ($ 000s).	The ratio of the dollar amount of any community service obligation subsidies provided by the government, to the service provider, to the service provider's total income for the reporting year.
Intent	Reporting of community service obligations (CSO) supports funding transparency and insight into progress towards NWI commitments on state and territory government funding provided to water utilities. The CSO ratio provides insight into the percentage of revenue a service provider receives from community service obligations and therefore the extent to which operations are subsidised.	
General supporting notes	A **Community Service Obligation** (CSO) is a payment provided by government to allow for the provision of a good or service at less than total cost, e.g., small regional community provided with water at less than total cost. A CSO must be: • a non-commercial product or service • It should be clearly established that a CSO relates to the provision of non-commercial products or services, that is, products and services whose provision is not in the commercial interests of a commercial business entity. • To qualify as CSOs, activities must be ones that would otherwise not be undertaken, or would be priced differently, by commercial entities (based on the entity earning normal commercial profit levels and the products or services being delivered on a cost-effective basis). • In some instances, the delivery of products and services may be commercially viable at levels below those desired by the government. Therefore, such services will contain both commercial and non-commercial elements. CSOs should relate only to the non-commercial element of the product or service. • purchased by the government on behalf of the community	

- To qualify as a CSO, a product or service needs to be clearly purchased by the government for delivery to the community on its behalf to achieve a specific social or economic objective that has been established by the government.
- purchased from a commercial business entity
- To qualify as a CSO, a product or service must be purchased by the government from an appropriate commercial business entity.

On the basis of the criteria outlined above, the following four categories of activities would qualify as CSO payments:

- payment by government for the delivery of services to final consumers or industry at uniform prices, regardless of variations in the cost of supply (e.g., uniform water tariff)
- payment by government for the delivery, at no charge or below cost, of services or service levels that would not be provided on purely commercial grounds (e.g., remote community water services)
- payment by government towards the cost of price concessions to particular groups of customers (e.g., various pensioner/senior concessions)
- payment by government towards the cost of purchase of inputs at levels or types that differ from purely commercial levels in order to achieve other objectives (e.g., employing additional apprentices).

All data, even when it is being provided for historical reporting years, should be reported as nominal values (unadjusted for inflation).

Indicator data published in Parts A and B of the NPR are presented in real terms (adjusted for inflation) using the average of the eight state/territory consumer price indices for the reporting year.

Service providers who do not receive CSO payments should report **Not Applicable** (NA). Service providers who typically receive CSO payments but did not receive one within a given year should report a value of $0 for **F25**.

In case of council run service providers, this subsidies amount can also include any subsidy transfer from that council's (local government's) consolidated fund to the council's separate/ring-fenced water supply and/or sewerage business activities fund.

Examples

1. Legislation requires a water service provider to provide a $100 reduction to the water supply bills for pensioners. The government meets the cost of $60 of this reduction, with the remaining $40 to be met by the water service provider —The CSO value is $60 as this is the amount paid by the government.
2. Legislation states that certain properties (e.g., schools and churches) may be provided with a reduction in water supply and wastewater charges, but the government does not make any payments—as there are no payments by the government, such reductions in charges are not a CSO.
3. Reductions in charges for services to any consumers, including pensioners and seniors, which are provided without the government paying for the reduction are a cross-subsidy and not a CSO.

Footnote requirements

Service providers who report on individual schemes within their total service area, for example, WA Water Corporation and NT Power and Water, should clarify through the use of a footnote if the CSO applies only to the scheme being reported on or their entire service area.

Derivation	**F8** = **F25** / **F3** = [**F25**—Community service obligations] / [**F3**—Total income for the service provider]

Indicator	**F26—Capital works grants: water supply**	**F27—Capital works grants: wastewater**
Definition	The dollar amount of funds received, by the service provider, during the reporting year from government for capital works related to drinking and non-drinking water, including recycled water services ($ 000s).	The dollar amount of funds received, by the service provider, during the reporting year from government for capital works related to wastewater services ($ 000s).
Intent	Reporting of grants supports funding transparency and insight into progress towards NWI commitments on state and territory government funding provided to water utilities.	
General supporting notes	**Drinking and non-drinking water** encompass potable (meets drinking water standards), partially treated, and raw (untreated) water but excludes recycled water. **Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Wastewater** is the water used by residential and non-residential customers that is disposed of through the sewerage system. **Capital works grants** are funds received, by the service provider, during the reporting year from governments for specific and non-specific capital works. Examples 1. A grant of $1 million for a backlog water supply scheme for a town without a reticulated water supply is a capital works grant. 2. A grant for construction of a new weir, which will not be owned by the service provider, is *not* a capital works grant. All data, even when it is being provided for historical reporting years, should be reported as nominal values (unadjusted for inflation). Indicator data published in Parts A and B of the annual National Performance Reports are presented in real terms (adjusted for inflation) using the average of the eight state/territory consumer price indices for the reporting year.	

7.4 Costs

Indicator	**FP_N6—Operating cost: purchase bulk drinking and non-drinking water**	**FP_N7—Operating cost: purchase bulk recycled water**
Definition	The costs of bulk drinking and non-drinking water purchased by the service provider during the reporting year ($ 000s).	The costs of bulk recycled water purchased by the service provider during the reporting year ($ 000s).
Intent	Publicly reporting on costs supports transparency and accountability and provides an understanding of the operating efficiency of a service provider, informs industry benchmarks and can lead to competition by comparison.	

	Separating the costs associated with the purchase of bulk water provides a better comparison between vertically integrated and vertically separated systems – for vertically separated systems, bulk water costs will be reported as operating costs for the distributor/retailer, however, this will include capital costs from the bulk water supplier. These indicators will allow changes in operating costs to be tracked for each utility over time. However, significant caution must be exercised in comparing operating costs across utilities as the structure of the industry varies across Australia.
General supporting notes	**Bulk water** is water supplied from one water provider to another and includes drinking and non-drinking water, but for the purposes of the NPR reporting excludes recycled water. Bulk supplies are typically 'wholesale supply' arrangements between service providers, with the recipient then distributing to final customers according to a 'retail supply' arrangement. **Bulk recycled water** is recycled water supplied from one water provider to another. Bulk supplies are typically 'wholesale supply' arrangements between service providers, with the recipient then distributing to final customers according to a 'retail supply' arrangement. **Drinking and non-drinking water** encompass potable (meets drinking water standards), partially treated, and raw (untreated) water but excludes recycled water. **Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. All data, even when it is being provided for historical reporting years, should be reported as nominal values (unadjusted for inflation). Indicator data published in Parts A and B of the annual National Performance Reports are presented in real terms (adjusted for inflation) using the average of the eight state/territory consumer price indices for the reporting year.

Indicator	**IF11—Operating cost: water supply**	**FP_N8—Operating cost, excluding bulk water purchases, per property: water supply**
Definition	The operation, maintenance and administration (OAM) costs for the service provider's drinking and non-drinking water, including recycled water, services during the reporting year ($ 000s).	The operation, maintenance and administration (OAM) costs of the service provider for the provision of drinking, non-drinking water, less recycled water services and bulk water purchases, per property connected to the water supply system during the reporting year ($ 000s/property).
Intent	Publicly reporting on costs supports transparency and accountability and provides an understanding of the operating efficiency of a service provider, informs industry benchmarks and can lead to competition by comparison. Separating the costs associated with the purchase of bulk water provides a better comparison between vertically integrated and vertically separated systems – for vertically separated systems, bulk water costs will be reported as operating costs for the distributor/retailer, however, this will include capital costs from the bulk water supplier. These indicators will allow changes in operating costs to be tracked for each utility over time. However, significant caution must be exercised in comparing operating costs across utilities as the structure of the industry varies across Australia.	

General supporting notes	**Drinking and non-drinking water** encompass potable (meets drinking water standards), partially treated, and raw (untreated) water but excludes recycled water. **Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Bulk wastewater** services are those supplied from one service provider to another. Bulk wastewater services are typically carried out by a bulk water authority that receives wastewater from retail service providers. Operating, maintenance and administration costs (OMA) include where material (as defined in AASB 108): • purchases of bulk water (drinking and non-drinking and recycled water) • water resource access charge or resource rent • purchases of raw, treated or recycled water • salaries and wages, including overheads on salaries and wages • 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 (Community Service Obligations 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 using a consistent methodology for all reporting years. • costs associated with BOOT schemes should be reported according to accounting standards (see Practice Note 4) and exclude: • all non-core business operating costs • depreciation • any write-downs of assets to recoverable amounts • write-offs retired or scrapped assets • the written-down value of assets sold. Write-offs could be equated to accelerated depreciation and therefore should be included within current cost depreciation. This will then be included as part of the calculation of total costs for the relevant period. When assets are sold, their book value should be included in current cost depreciation (as it may be accelerated depreciation). Selling expenses, although expected to be immaterial, should be included in operating costs. Interest should be excluded from operating cost as it is a means of servicing the capital cost of projects, rather than operating them. Where defined benefit schemes impact materially on operating costs, this should be reflected in a footnote. All data, even when it is being provided for historical reporting years, should be reported as nominal values (unadjusted for inflation). Indicator data published in Parts A and B of the

	annual National Performance Reports are presented in real terms (adjusted for inflation) using the average of the eight state/territory consumer price indices for the reporting year.
Derivation	**FP_N8** = **(IF11** – **FP_N6** – **FP_N7**) / **C4** = ([**IF11**—Operating cost: water supply] – [**FP_N6**—Operating cost: purchase bulk drinking and non-drinking water] – [**FP_N7**—Operating cost: purchase bulk recycled water]) / [**C4**—Total number of connected properties: water supply]

Indicator	**FP_N9—Operating cost: bulk wastewater payments**
Definition	The costs of bulk wastewater services purchased by service provider during the reporting year ($ 000s).
Intent	Publicly reporting on costs supports transparency and accountability and provides an understanding of the operating efficiency of a service provider, informs industry benchmarks and can lead to competition by comparison. Separating the costs associated with the purchase of bulk wastewater services provides a better comparison between vertically integrated and vertically separated systems – for vertically separated systems, bulk wastewater services will be reported as operating costs for the distributor/retailer, however, this will include capital costs from the bulk wastewater services supplier.
General supporting notes	**Wastewater** is the water used by residential and non-residential customers that is disposed of through the sewerage system. **Bulk wastewater** services are those supplied from one service provider to another. Bulk wastewater services are typically carried out by a bulk water authority that receives wastewater from retail service providers. All data, even when it is being provided for historical reporting years, should be reported as nominal values (unadjusted for inflation). Indicator data published in Parts A and B of the annual National Performance Reports are presented in real terms (adjusted for inflation) using the average of the eight state/territory consumer price indices for the reporting year.

Indicator	**IF12—Operating cost: wastewater**	**FP_N10—Operating cost, excluding bulk wastewater charges, per property: wastewater**
Definition	The operation, maintenance and administration (OAM) costs of the service provider for the provision of wastewater services during the reporting year ($ 000s).	The operation, maintenance and administration (OAM) costs of the service provider for the provision of wastewater services, less bulk wastewater charges, per property connected to the wastewater system during the reporting year ($ 000s/property).
Intent	Publicly reporting on costs supports transparency and accountability and provides an understanding of the operating efficiency of a service provider, informs industry benchmarks and can lead to competition by comparison. Separating the costs associated with the purchase of bulk wastewater services provides a better comparison between vertically integrated and vertically separated systems – for vertically separated systems, bulk wastewater services will be reported as operating costs for	

	the distributor/retailer, however, this will include capital costs from the bulk wastewater services supplier. These indicators will allow changes in operating costs to be tracked for each utility over time. However, significant caution must be exercised in comparing operating costs across utilities as the structure of the industry varies across Australia.
General supporting notes	**Wastewater** is the water used by residential and non-residential customers that is disposed of through the sewerage system. **Bulk wastewater** services are those supplied from one service provider to another. Bulk wastewater services are typically carried out by a bulk water authority that receives wastewater from retail service providers. **Operating, maintenance and administration costs** (OMA) include where material (as defined in AASB 108): • charges for bulk treatment/transfer of sewerage • salaries and wages salaries and wages, including overheads on salaries and wages • 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 (Community Service Obligations 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 wastewater services using a consistent methodology for all reporting years. • costs associated with BOOT schemes should be reported according to accounting standards (see Practice Note 4) and excludes: • all non-core business operating costs • depreciation • any write-downs of assets to recoverable amounts • write-offs retired or scrapped assets • the written-down value of assets sold. Write-offs could be equated to accelerated depreciation and therefore should be included within current cost depreciation. This will then be included as part of the calculation of total costs for the relevant period. When assets are sold, their book value should be included in current cost depreciation (as it may be accelerated depreciation). Selling expenses, although expected to be immaterial, should be included in operating costs. Interest should be excluded from operating cost as it is a means of servicing the capital cost of projects, rather than operating them. Where defined benefit schemes impact materially on operating costs, this should be reflected in a footnote.

	All data, even when it is being provided for historical reporting years, should be reported as nominal values (unadjusted for inflation). Indicator data published in Parts A and B of the annual National Performance Reports are presented in real terms (adjusted for inflation) using the average of the eight state/territory consumer price indices for the reporting year.
Derivation	**FP_N10** = (**IF12** - **FP_N9**) / **C8** = ([**IF12**—Operating cost: wastewater] – [**FP_N9**—Operating cost: bulk wastewater payments]) / [**C8**—Total number of connected properties: wastewater]

Indicator	**F14—Capital expenditure: water supply**	**F28—Capital expenditure per property: water supply**
Definition	The capital expenditure of the service provider on the provision of drinking and non-drinking water, including recycled water, services during the reporting year ($ 000s).	The capital expenditure, per connected property, of the service provider on the provision of drinking and non-drinking water, including recycled water, services during the reporting year ($ 000s/property).
Intent	Publicly reporting on capital expenditure supports transparency and accountability and provides an understanding of the investment of a service provider in assets, informs industry benchmarks and can lead to competition by comparison. It informs an understanding of the financial health of service providers, customer and community outcomes and insight into affordability. It can also support the assessment of policy and investment decisions and inform regulatory decisions and policy development.	
General supporting notes	**Drinking and non-drinking water** encompass potable (meets drinking water standards), partially treated, and raw (untreated) water but excludes recycled water. **Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Capital expenditure** includes: • new works • renewals or replacements of assets • other expenditure that would otherwise be referred to as capital expenditure • plant and equipment and excludes: • contributed assets, i.e., non-cash developer services contributions (reported under **FP_N5**) • corporate capital expenditure allocations (reported as part of **F16**). Capital expenditure is recognised in the year that it is incurred. All data, even when it is being provided for historical reporting years, should be reported as nominal values (unadjusted for inflation). Indicator data published in Parts A and B of the annual National Performance Reports are presented in real terms (adjusted for inflation) using the average of the eight state/territory consumer price indices for the reporting year.	
Derivation	**F28** = **F14** / **C4** = [**F14**—Capital expenditure: water supply]	

	/ [**C4**—Total number of connected properties: water supply]

Indicator	FP_N11—Capital renewal expenditure: water supply
Definition	The capital expenditure of the service provider on existing drinking, non-drinking and recycled water assets, where the expenditure returns the service capability of the assets to their original capacity ($ 000s).
Intent	Publicly reporting on asset renewal expenditure supports transparency and accountability and provides an understanding of the investment of a service provider in assets, informs industry benchmarks. It informs an understanding of the financial health of service providers, customer and community outcomes and insight into affordability. It can also support the assessment of policy and investment decisions and inform regulatory decisions and policy development.
General supporting notes	**Drinking and non-drinking water** encompass potable (meets drinking water standards), partially treated, and raw (untreated) water but excludes recycled water. **Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Capital renewal expenditure** includes activities that restore, rehabilitate, or replace an existing asset to its original capacity. It is periodically required expenditure, relatively large (material) in value compared with the value of the components or sub-components of the asset being renewed. Capital expenditure is recognised in the year that it is incurred. Service providers should only report nominal figures to the National Performance Report. Historical data is reported in real terms using the eight-state average consumer price index for the reporting year. Calculations of real figures are completed automatically in the database.

Indicator	F15—Capital expenditure: wastewater	F29—Capital expenditure per property: wastewater
Definition	The capital expenditure of the service provider on the provision of wastewater services during the reporting year ($ 000s).	The capital expenditure, per connected property, of the service provider on the provision of wastewater services during the reporting year ($ 000s/property).
Intent	Publicly reporting on capital expenditure supports transparency and accountability and provides an understanding of the investment of a service provider in assets, informs industry benchmarks and can lead to competition by comparison. It informs an understanding of the financial health of service providers, customer and community outcomes and insight into affordability. It can also support the assessment of policy and investment decisions and inform regulatory decisions and policy development.	

General supporting notes	**Wastewater** is the water used by residential and non-residential customers that is disposed of through the sewerage system. **Capital expenditure** includes: • new works • renewals or replacements of assets • other expenditure that would otherwise be referred to as capital expenditure • plant and equipment and excludes: • contributed assets, i.e., non-cash developer services contributions (reported under **FP_N5**) • corporate capital expenditure allocations (reported as part of **F16**). Capital expenditure is recognised in the year that it is incurred. All data, even when it is being provided for historical reporting years, should be reported as nominal values (unadjusted for inflation). Indicator data published in Parts A and B of the annual National Performance Reports are presented in real terms (adjusted for inflation) using the average of the eight state/territory consumer price indices for the reporting year.
Derivations	**F29** = **F15** / **C8** = [**F15**—Capital expenditure: wastewater] / [**C8**—Total number of connected properties: wastewater]

Indicator	FP_N12—Capital renewal expenditure: wastewater
Definition	The capital expenditure of service provider on wastewater assets, where the expenditure returns the service capability of the assets to their original capacity ($ 000s).
Intent	Publicly reporting on asset renewal expenditure supports transparency and accountability and provides an understanding of the investment of a service provider in assets, informs industry benchmarks. It informs an understanding of the financial health of service providers, customer and community outcomes and insight into affordability. It can also support the assessment of policy and investment decisions and inform regulatory decisions and policy development.
General supporting notes	**Wastewater** is the water used by residential and non-residential customers that is disposed of through the sewerage system. **Capital renewal expenditure** includes activities that restore, rehabilitate, or replace an existing asset to its original capacity. It is periodically required expenditure, relatively large (material) in value compared with the value of the components or sub-components of the asset being renewed. Capital expenditure is recognised in the year that it is incurred. All data, even when it is being provided for historical reporting years, should be reported as nominal values (unadjusted for inflation). Indicator data published in Parts A and B of the annual National Performance Reports are presented in real terms (adjusted for inflation) using the average of the eight state/territory consumer price indices for the reporting year.

Indicator	F16—Total capital expenditure: water supply and wastewater
Definition	The total capital expenditure of the service provider on the provision of drinking, non-drinking and recycled water supply and wastewater services during the reporting year ($ 000s).
Intent	Publicly reporting on capital expenditure supports transparency and accountability and provides an understanding of the investment of a service provider in assets, informs industry benchmarks and can lead to and ‘competition by comparison. It informs an understanding of the financial health of service providers, customer and community outcomes and insight into affordability. It can also support the assessment of policy and investment decisions and inform regulatory decisions and policy development.
General supporting notes	**Drinking and non-drinking water** encompass potable (meets drinking water standards), partially treated, and raw (untreated) water but excludes recycled water. **Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Wastewater** is the water used by residential and non-residential customers that is disposed of through the sewerage system. **Capital expenditure** includes: • new works • renewals or replacement of assets

	• other expenditure that would otherwise be referred to as capital expenditure • plant and equipment • corporate capital expenditure and excludes: • contributed assets, i.e., non-cash developer services contributions (reported under **FP_N5**). **Capital expenditure** is recognised in the year that it is incurred. All data, even when it is being provided for historical reporting years, should be reported as nominal values (unadjusted for inflation). Indicator data published in Parts A and B of the annual National Performance Reports are presented in real terms (adjusted for inflation) using the average of the eight state/territory consumer price indices for the reporting year.

7.5 Performance

Indicator	F24—Net profit after tax (NPAT)	F30—Net profit after tax (NPAT) ratio
Definition	The net profit after tax (NPAT), disclosed in the service provider's annual financial statements, for the reporting year ($ 000s).	The ratio of the net profit after tax (NPAT), disclosed in the service provider's annual financial statements, to its total income for the reporting year.
Intent	Publicly reporting on service provider financial performance supports transparency and accountability and provides an understanding of the financial health of service providers. Net profit after tax (NPAT) provides insight into the profitability of the service provider. It can also support the assessment of policy and investment decisions and inform regulatory decisions and policy development.	
General supporting notes	Data reported for this indicator should represent **all** the services provider's drinking, non-drinking, recycled and wastewater operations and schemes (service areas). The reported net profit after tax (NPAT) should be that which is disclosed in the service provider's annual financial statements. All data, even when it is being provided for historical reporting years, should be reported as nominal values (unadjusted for inflation). Indicator data published in Parts A and B of the annual National Performance Reports are presented in real terms (adjusted for inflation) using the average of the eight state/territory consumer price indices for the reporting year.	
Derivation	**F30** = **F24** / **F3** = [**F24**—Net profit after tax (NPAT)] / [**F3**—Total income for the service provider] ^ ^ State- and territory-wide water utilities who report on sub-areas or schemes should ensure that F30 is calculated using the total income for their entire operations.	

Indicator	FP_N13—Earnings before interest, taxes, depreciation, and amortisation (EBITDA)
Definition	The earnings before interest, taxes, depreciation and amortisation (EBITDA) disclosed in, or calculated from, the service provider's annual financial statements, for the reporting year ($ 000s).
Intent	Publicly reporting on capital expenditure supports transparency and accountability. earnings before interest, taxes, depreciation and amortisation (EBITDA) is a widely used measure of profitability and used more commonly than net profit after tax (NPAT) to understand profit before paying the deduction of expenses, taxes, depreciation and amortisation. Because EBITDA provides a comparison of finical performance (earnings) before the influence of accounting and financial deductions.
General supporting notes	Data reported for this indicator should represent **all** the services provider's drinking, non-drinking, recycled and wastewater operations and schemes (service areas). Earnings before interest, taxes, depreciation and amortisation (EBITDA) provides a comparison of the financial performance (earnings) of a service provider before the influence of accounting and financial deductions. It is typically disclosed in the service provider's annual financial statements. All data, even when it is being provided for historical reporting years, should be reported as nominal values (unadjusted for inflation). Indicator data published in Parts A and B of the annual National Performance Reports are presented in real terms (adjusted for inflation) using the average of the eight state/territory consumer price indices for the reporting year.

Indicator	F20—Dividends
Definition	The dividends paid, payable or proposed to be paid by the service provider in relation to profits from its drinking and non-drinking water, recycled water and wastewater services for the whole service provider for the reporting year ($ 000s).
Intent	Information on dividends supports an understanding of dividends paid, payable or proposed to be paid in relation to current year profit for the water and wastewater supply business for the whole service provider.
General supporting notes	Data reported for this indicator should represent **all** the services provider's drinking, non-drinking, recycled and wastewater operations and schemes (service areas). **Drinking and non-drinking water** encompass potable (meets drinking water standards), partially treated, and raw (untreated) water but excludes recycled water. **Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Wastewater** is the water used by residential and non-residential customers that is disposed of through the sewerage system. A **dividend** is a sum of money paid regularly, typically annually by the service provider to its shareholder/s. In the case of local government-owned service providers, this will typically be the council or councils that own the service provider. In the case of state-owned corporations, this will be the state or territory government.

Dividends include:

- interim dividends paid during the financial year
- final dividend declared and proposed to be paid in relation to the current financial year profits
- where appropriate, this will include non-metropolitan businesses.

Where a dividend is based on profits from activities other than drinking, non-drinking, recycled and wastewater operations (e.g., drainage services—stormwater management, not stormwater harvesting) the service provider should note this in a footnote to their reported data.

All data, even when it is being provided for historical reporting years, should be reported as nominal values (unadjusted for inflation). Indicator data published in Parts A and B of the NPR are presented in real terms (adjusted for inflation) using the average of the eight state/territory consumer price indices for the reporting year.

Example

The year being reported on is the year ending 30 June 2007.

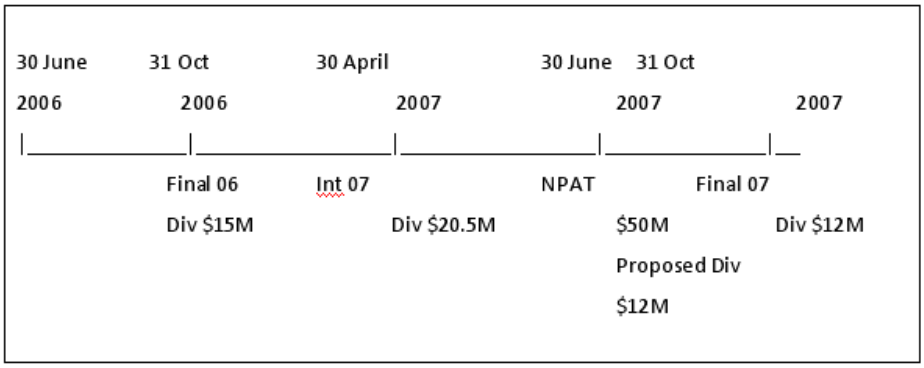
A business has a net profit after tax for the year ended 30 June 2007 of $50 000 000.

The business paid a final dividend for the year ended 30 June 2006 in October 2006 of $15 000 000.

The business paid an interim dividend for the year ended 30 June 2007 in April 2007 of $20 500 000.

The business paid a final dividend for the year ended 30 June 2007 in October 2007 of $12 000 000. This dividend was "proposed" only in the financial statements for the year ended 30 June 2007 as all relevant parties had not agreed as to the amount of the dividend.

This is represented by the following timeline:



The dividend paid for the 2007 financial year would be $15M + $20.5M = $35.5M.

The dividend paid/payable/proposed for the 2007 financial year would be $20.5M + $12M = $32.5M.

Indicator	F22—Net debt to equity ratio
Definition	The ratio of the service provider's net debt for its drinking and non-drinking water, recycled water and wastewater services to its equity for the reporting year.
Intent	The net debt to equity ratio is a measure of how much debt is used by a service provider to run their business. Publicly reporting on financial performance metrics supports transparency and accountability.

	It informs an understanding of the financial health of service providers, customer and community outcomes and insight into affordability. It can also support the assessment of policy and investment decisions and inform regulatory decisions and policy development.
General supporting notes	Data reported for this indicator should represent **all** the services provider's drinking, non-drinking, recycled and wastewater operations and schemes (service areas). **Drinking and non-drinking water** encompass potable (meets drinking water standards), partially treated, and raw (untreated) water but excludes recycled water. **Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Wastewater** is the water used by residential and non-residential customers that is disposed of through the sewerage system. The **net debt to equity ratio** is a measure of how much debt is used by a service provider to run their business. I.e., the ratio quantifies the debt being carried per dollar of equity. **Equity** is a measure of a service provider's total assets minus total debt (liabilities). **Debt** includes: • interest bearing repayable borrowings • non-interest bearing repayable borrowings • interest bearing non-repayable borrowings • redeemable preference shares • finance leases and excludes: • creditors and provisions, but offsetting assets, such as contributions to sinking funds, should not be deducted. **Net debt** is equal to the sum of the service provider's long- and short-term borrowings less the sum of its cash and investments. Pre-payment of debts is included in the investment component of the debt calculation. Commentary can be provided where appropriate, such as to describe higher than expected debt associated with unregulated activities.
Derivation	**F22** = Net debt / (total assets – total liabilities) Net debt = (long term borrowings + short term borrowings) – (cash + investments)

Indicator	**FP_N14—Debt to assets ratio**
Definition	The ratio of the service provider's total debt for its drinking and non-drinking water, recycled water and wastewater services to its regulated asset base value (RAB), or total assets, for the reporting year.
Intent	The debt to asset ratio is a leverage ratio that indicates the percentage of assets that are being financed with debt. Publicly reporting on financial performance metrics supports transparency and accountability. It informs an understanding of the financial health of service providers, customer and community outcomes and insight into affordability. It can also support the assessment of policy and investment decisions and inform regulatory decisions and policy development.

General supporting notes	Data reported for this indicator should represent **all** the services provider's drinking, non-drinking, recycled and wastewater operations and schemes (service areas). **Drinking and non-drinking water** encompass potable (meets drinking water standards), partially treated, and raw (untreated) water but excludes recycled water. **Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Wastewater** is the water used by residential and non-residential customers that is disposed of through the sewerage system. The **debt to asset ratio**, also referred to as the debt ratio, is a leverage ratio that indicates the percentage of assets that are being financed with debt. **Leverage** is the amount of debt a service provider has in its mix of debt and equity. **Equity** is a measure of a service provider's total assets minus total debt (liabilities). **Debt** includes: • interest bearing repayable borrowings • non-interest b earing repayable borrowings • interest bearing non-repayable borrowings • redeemable preference shares • finance leases • pre-payment of debts and excludes: • creditors and provisions, but offsetting assets, such as contributions to sinking funds, should not be deducted. Economically regulated service providers should calculate this indicator as debt / **regulated asset base** (RAB). Service providers who are not economically regulated should calculate this indicator as debt / total assets. The RAB value is the current regulated asset base value for water and wastewater assets. An allocation of the corporate RAB should not be included. Commentary can be provided where appropriate, such as to describe higher than expected debt associated with unregulated activities.

Indicator	FP_N15—Return on assets (ROA)
Definition	The ratio of the service provider's earnings before interest, taxes, depreciation and amortisation (EBITDA) for its drinking and non-drinking water, recycled water and wastewater services to its regulated asset base value (RAB), or total assets, for the reporting year.
Intent	Return on assets (ROA) is a profitability ratio that measures the profits a service provider is generating from its total assets. Publicly reporting on financial performance metrics supports transparency and accountability. It informs an understanding of the financial health of service providers, customer and community outcomes and insight into affordability. It can also support the assessment of policy and investment decisions and inform regulatory decisions and policy development.
General supporting notes	Data reported for this indicator should represent **all** the services provider's drinking, non-drinking, recycled and wastewater operations and schemes (service areas). **Drinking and non-drinking water** encompass potable (meets drinking water standards), partially treated, and raw (untreated) water but excludes recycled water. **Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Wastewater** is the water used by residential and non-residential customers that is disposed of through the sewerage system. **Return on assets** (ROA) is a profitability ratio that measures the profits a service provider is generating from its total assets. Economically regulated service providers should calculate this indicator as earnings before interest, taxes, depreciation, and amortisation (EBITDA) / **regulated asset base (RAB).** Service providers who are not economically regulated should calculate this indicator as **EBITDA** / total assets. **EBITDA** provides a comparison of financial performance (earnings) before the influence of accounting and financial deductions. It is usually disclosed in the service provider's annual financial statements. The RAB value is the current regulated asset base value for drinking and non-drinking water, recycled water and wastewater assets.
Derivation	**Economically regulated service providers** **FP_N15** = **FP_N13** / RAB = [**FP_N13**—Earnings before interest, taxes, depreciation and amortisation] / RAB **Non-economically regulated service providers** **FP_N15 = FP_N13** / total assets = [**FP_N13**— Earnings before interest, taxes, depreciation and amortisation] / Total assets

Indicator	FP_N16—Return on equity (ROE)
Definition	The ratio of the service provider's earnings before interest, taxes, depreciation and amortisation (EBITDA) for its drinking and non-drinking water, recycled water and wastewater services to its total equity for the reporting year.
Intent	Return on equity (ROE) is a profitability ratio that measures the profits a service provider is generating from its total equity. Publicly reporting on financial performance metrics supports transparency and accountability. It informs an understanding of the financial health of service providers, customer and community outcomes and insight into affordability. It can also support the assessment of policy and investment decisions and inform regulatory decisions and policy development.
General supporting notes	Data reported for this indicator should represent **all** the services provider's drinking, non-drinking, recycled and wastewater operations and schemes (service areas). **Drinking and non-drinking water** encompass potable (meets drinking water standards), partially treated, and raw (untreated) water but excludes recycled water. **Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Wastewater** is the water used by residential and non-residential customers that is disposed of through the sewerage system. The **return on equity ratio** (ROE) is a profitability ratio that measures the profits a service provider is generating from its investments. ROE is calculated as earnings before interest, taxes, depreciation and amortisation (EBITDA) divided by total equity. **EBITDA** provides a comparison of financial performance (earnings) before the influence of accounting and financial deductions. It is usually disclosed in the utility's annual financial statements **Total equity** is calculated as the service provider's total assets less debt. Economically regulated service providers should calculate **total equity** as its **regulated asset base (RAB)** less its **debt**. Service providers who are not economically regulated should calculate **total equity** as its total assets less its **debt**. The **RAB** value is the current regulated asset base value for drinking and non-drinking water, recycled water and wastewater assets. An allocation of the corporate RAB should not be included. **Debt** includes: • interest bearing repayable borrowings • non-interest bearing repayable borrowings • interest bearing non-repayable borrowings • redeemable preference shares • finance leases and excludes: • creditors and provisions, but offsetting assets, such as contributions to sinking funds, should not be deducted.

Derivation	**Economically regulated service providers** **FP_N16** = **FP_N13** / (RAB – Debt) = [**FP_N13**— Earnings before interest, taxes, depreciation and amortisation] / (RAB – Debt) **Non-economically regulated service providers** **FP_N16 = FP_N13** / (Total assets – Debt) = [**FP_N13**— Earnings before interest, taxes, depreciation and amortisation] / (Total assets – Debt)

Indicator	**FP_N17— Funds from operations (FFO) to net debt**	**FP_N18— Funds from operations (FFO) to net interest expenses**
Definition	The ratio of the service provider's funds from operations (FFO) for its drinking and non-drinking water, recycled water and wastewater services to its net debt, for the reporting year.	The ratio of the service provider's funds from operations (FFO) for its drinking and non-drinking water, recycled water and wastewater services to its net interest expense, for the reporting year.
Intent	The funds from operations (FFO) to total debt and net interest ratios measure the ability of a service provider to meet its debt and interest payments from its operating revenue alone and therefore provides an indication of financial risk. Publicly reporting on financial performance metrics supports transparency and accountability. It informs an understanding of the financial health of service providers, customer and community outcomes and insight into affordability. It can also support the assessment of policy and investment decisions and inform regulatory decisions and policy development.	
General supporting notes	Data reported for this indicator should represent **all** the services provider's drinking, non-drinking, recycled and wastewater operations and schemes (service areas). **Drinking and non-drinking water** encompass potable (meets drinking water standards), partially treated, and raw (untreated) water but excludes recycled water. **Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Wastewater** is the water used by residential and non-residential customers that is disposed of through the sewerage system. The **funds from operations (FFO)** to total debt ratio is a measure of the ability of a service provider to pay off its debt using net operating income alone. The **FFO** to total interest ratio measures the ability of a service provider to pay off its net interest expenses using net operating income alone. **FFO** is calculated by adding depreciation, amortisation, and losses on sales of assets to earnings and then subtracting any gains on sales of assets and any interest income. **Debt** includes: • interest bearing repayable borrowings • non-interest bearing repayable borrowings • interest bearing non-repayable borrowings	

- redeemable preference shares
- finance leases

and excludes:

- creditors and provisions, but offsetting assets, such as contributions to sinking funds, should not be deducted.

Net debt is equal to the sum of the service provider's long- and short-term borrowings less the sum of its cash and investments.

Pre-payment of debts is included in the investment component of the debt calculation.

8. Public health and environment

8.1 Discharges and emissions

Indicator	IE1—Volume of wastewater only treated to a primary level	E1— Percentage of wastewater only treated to a primary level
Definition	The volume of wastewater only treated to a primary level by the service provider, during the reporting year in megalitres (ML).	The percentage of the total wastewater collected and only treated to a primary level by the service provider, during the reporting year (%).
Intent	Information about comparative treatment levels supports transparency and accountability and provides insight into the impact that service providers have on the environment. Additionally understanding the degree to which wastewater is treated before discharge provides insight into a service provider's capital and operational costs. Indicator IE1 also supports national reporting on Sustainable Development Goal (SDG) 6.	
General supporting notes	**Wastewater** is the water used by residential and non-residential customers that is disposed of through the sewerage system. **Primary wastewater treatment** – Treatment of wastewater by a physical and/or chemical process involving settlement of suspended solids, or other process in which the Biochemical Oxygen Demand (BOD5) of the incoming wastewater is reduced by at least 20% before discharge and the total suspended solids of the incoming wastewater are reduced by at least 50%. [22] The **reported volume** excludes: • wastewater receiving primary treatment that then goes on to receive secondary or tertiary treatment • water treated multiple times due to onsite reuse. Additional information should be provided about the number of partial treatment days due to infrequent wet weather events. Where bypasses were known to have occurred during treatment the service provider should provide their best estimate of the volume receiving this level of treatment.	
Derivation	**E1** = **IE1** / (**W18** – **W18.1** + **W18.2**) x 100 = [**IE1**—Volume of wastewater only treated to a primary level] / ([**W18**—Total volume of wastewater collected] - [**W18.1**—Volume of wastewater exported to other service providers] + [**W18.2**—Volume of wastewater received from other service providers]) x 100	

[22] United Nations Statistic Division, 2020, SDG 6.3.1 Indicator Metadata. United Nations Statistic Division. Accessed 29 October 2021 [https://unstats.un.org/sdgs/metadata/files/Metadata-06-03-01.pdf]

Indicator	IE2—Volume of wastewater only treated to a secondary level	E2—Percentage of wastewater only treated to a secondary level
Definition	The volume of wastewater only treated to a secondary level by the service provider, during the reporting year in megalitres (ML).	The percentage of the total wastewater collected and only treated to a secondary level by the service provider, during the reporting year (%).
Intent	Information about comparative treatment levels supports transparency and accountability and provides insight into the impact that service providers have on the environment. Additionally understanding the degree to which wastewater is treated before discharge provides insight into a service provider's capital and operational costs. Indicator IE2 also supports national reporting on Sustainable Development Goal (SDG) 6.	
General supporting notes	**Wastewater** is the water used by residential and non-residential customers that is disposed of through the sewerage system. **Secondary wastewater treatment** – Post-primary treatment of wastewater by a process generally involving biological treatment with a secondary settlement or other process, resulting in a Biochemical Oxygen Demand (BOD) removal of at least 70% and a Chemical Oxygen Demand (COD) removal of at least 75%. Natural biological treatment processes are also considered under secondary treatment if the constituents of the effluents from this type of treatment are similar to the conventional secondary treatment. [22] The **reported volume** excludes: • wastewater receiving primary treatment that then goes on to receive tertiary treatment • water treated multiple times due to onsite reuse Additional information should be provided about the number of partial treatment days due to infrequent wet weather events. Where bypasses were known to have occurred during treatment the utility should provide their best estimate of the volume receiving this level of treatment.	
Derivation	**E2** = **IE2** / (**W18** – **W18.1** + **W18.2**) x 100 = [**IE2**—Volume of wastewater only treated to a secondary level] / ([**W18** —Total volume of wastewater collected] - [**W18.1**—Volume of wastewater exported to other service providers] + [**W18.2**—Volume of wastewater received from other service providers]) x 100	

Indicator	IE3—Volume of wastewater treated to a tertiary level	E3—Percentage of wastewater treated to a tertiary level
Definition	The volume of wastewater treated to a tertiary level by the service provider, during the reporting year in megalitres (ML).	The percentage of the total wastewater collected and treated to a tertiary level by the service provider, during the reporting year (%).
Intent	Information about comparative treatment levels supports transparency and accountability and provides insight into the impact that service providers have on the environment.	

	Additionally understanding the degree to which wastewater is treated before discharge provides insight into a service provider's capital and operational costs. Indicator IE3 also supports national reporting on Sustainable Development Goal (SDG) 6. [22]
General supporting notes	**Wastewater** is the water used by residential and non-residential customers that is disposed of through the sewerage system. **Tertiary wastewater treatment** – Treatment (additional to secondary treatment) of nitrogen and/or phosphorous and/or any other pollutant affecting the quality or specific use of water: microbiological pollution, colour etc. The different possible treatment efficiencies ('organic pollution removal' of at least 95% for the five-day biochemical oxygen demand (BOD5), 85% for chemical oxygen demand (COD), 'nitrogen removal' of at least 70%, 'phosphorous removal' of at least 80% and 'microbiological removal') cannot be added and are exclusive. The **reported volume** excludes: • water treated multiple times due to onsite reuse. Additional information should be provided about the number of partial treatment days due to infrequent wet weather events. Where bypasses were known to have occurred during treatment the utility should provide their best estimate of the volume receiving this level of treatment.
Derivation	**E3 = IE3 /** (**W18** – **W18.1** + **W18.2**) x 100 = [**IE3**—Volume of wastewater treated to a tertiary level] / ([**W18** —Total volume of wastewater collected] - [**W18.1**—Volume of wastewater exported to other service providers] + [**W18.2**—Volume of wastewater received from other service providers]) x 100

Indicator	**HE_N1—Total greenhouse gas emissions reported under the NGER scheme**
Definition	The total Scope 1 and 2 greenhouse gas emissions reported by the service provider for the reporting year under the National Greenhouse and Energy Reporting (NGER) scheme (t CO2 equivalents).
Intent	Greenhouse gas emissions of service providers are driven by the type and quality of water sources and the level of wastewater treatment provided/required before discharge. Information about emissions supports transparency and accountability and provides insight into the impact that service providers have on the environment.
General supporting notes	The National Greenhouse and Energy Reporting (NGER) scheme, established by the *National Greenhouse and Energy Reporting Act 2007* (NGER Act), is a national framework for reporting information about greenhouse gas emissions, energy production, and energy consumption. [23] Entities are required to report under the NGER scheme where they:

[23] Clean Energy Regulator, National Greenhouse and Energy Reporting scheme.

General supporting notes	i. Operate an individual facility that emits more than 25 kt greenhouse gases (CO2-e) **scope 1** and **scope 2** emissions per annum ii. Have corporate group emissions that are greater than 50 kt greenhouse gases (CO2-e) **scope 1** and **scope 2** emissions per annum. [24] **Scope 1 greenhouse gas emissions** are the emissions released to the atmosphere as a direct result of an activity or series of activities at a facility level. Scope 1 emissions are sometimes referred to as direct emissions [3] **Scope 2 greenhouse gas emissions** are the emissions released to the atmosphere from the indirect consumption of an energy commodity. For example, 'indirect emissions' come from the use of electricity produced by the burning of coal. [3] Only service providers who are required to report their greenhouse gas emissions (GGE) under the National Greenhouse and Energy Reporting (NGER) scheme are required to report HE_N1. The National Greenhouse and Energy Reporting (Measurement) Determination 2008 [25] (Measurement Determination) provides methods, criteria and measurement standards for calculating greenhouse gas emissions. It covers scope 1 and scope 2 emissions and energy production and consumption. The Measurement Determination is updated annually. Reporting service providers should make sure that they use the correct version of the Measurement Determination, corresponding to the year in which they are reporting. The NGER scheme website provides further information on estimating scope 1 and 2 emissions. [26]

Indicator	**HE_N2—Greenhouse gas emissions reduction target/s**
Definition	The adopted GHG emissions target for the service provider.
Intent	Information about emissions supports transparency and accountability and provides insight into the investment that service providers are making into reducing their impact on the environment. Investment in emissions reduction and offsets impact on the finical performance of a service provider.
General supporting notes	The reported text should specify the service providers adopted emissions target/s including the timeframes for their achievement. For example, "Our reduction target is to halve our emissions by 2025 and achieve net-zero by 2030." Where a target relates to the broader operations of a service provider this should be included in the information provided. For example, a council whose target applies across all its operations, not just water and wastewater, should identify the scope of their target. Service providers who do not have an emissions reduction target should report Not **Applicable (NA)** for this indicator.

[24] Clean Energy Regulator, NGER Scheme reporting thresholds.
[25] https://www.legislation.gov.au/Details/F2021C00740
[26] http://www.cleanenergyregulator.gov.au/NGER/Legislation/Measurement-Determination

8.2 Water efficiency and reuse

Indicator	E8—Percentage of biosolids reused
Definition	The percentage of dry weight biosolids reused during the reporting year (%).
Intent	Information about biosolids supports an understanding of the operation of the wastewater treatment plant and how organic solids derived from treatment processes are managed sustainably by the service provider.
General supporting notes	**Biosolids** are primarily organic solids derived from wastewater treatment processes, which can be managed to sustainably utilise their nutrient, soil conditioning, energy or other value. Solids which do not meet these criteria are defined as wastewater sludge. **Biosolids reuse** involves managing biosolids safely and sustainably to beneficially utilise their nutrient, energy, or other values. This may include biosolids beneficially used for agriculture (e.g., fertiliser), soil conditioning, mine rehabilitation, and other applications recognised as reuse. The dry weight of biosolids reused may be greater than the dry weight of biosolids produced if the business is also reusing existing stockpiles. **Total dry weight tonnes of biosolids produced** For mechanical or other wastewater treatment processes where the biosolids are available for reuse within a short time frame (e.g., less than one year) the volumes produced for the financial year should be included. For wastewater treatment processes where the biosolids are *not* available for reuse within a short time frame (e.g., lagoon processes of 10–30 years), the water utility should account for the accumulation of solids for a financial year. It is suggested that the volume accumulated be calculated using one of the following methodologies: • using appropriate sampling techniques, determine the volume of solids entering the lagoon process (or equivalent) in a financial year. After accounting for those solids consumed due to biological activity, determine the total accumulation of solids for the financial year. • assess the existing depth of accumulated solids in all lagoons to determine an average annual rate of accumulation. This average figure should be used. An estimate of volume using the above methodologies is sufficient for reporting against this indicator.

Indicator	W27—The percentage of treated effluent supplied as recycled water
Definition	The percentage of the service providers treated effluent that is reused as recycled water during the reporting year (%).
Intent	Information about effluent reuse supports transparency and accountability and provides insight into the resource efficiency of service providers and the impacts they have on the environment.
General supporting notes	See indicators W20, W21, W15, WR_N3, W23, W25.1, WR_N4, W6, IE1, IE2, IE3
Derivation	**W27** = (**W20** + **W21** + **W15 + WR_N3 + W23 + W25.1 + WR_N4 – W6**) / (**IE1** + **IE2** + **IE3**) x 100 = ([**W20—**Volume of recycled water supplied to residential customers] + [**W21**—Volume of recycled water supplied to non-residential customers] + [**W15—**Volume of recycled water exported to other service providers] + [**WR_N3**—Volume of recycled water supplied for own use] + [**W23**—Volume of recycled water supplied as environmental flows] + [**W25.1**—Volume of recycled water supplied to managed aquifer recharge] + [**WR_N4**—Volume of non-revenue recycled water supplied for beneficial reuse] – [**W6**—Volume of recycled water imported from other service providers]) / ([**IE1**—Volume of wastewater only treated to a primary level] + [**IE2**—Volume of wastewater treated to a secondary level] + [**IE3**—Volume of wastewater treated to a tertiary level]) x 100

8.3 Water quality risk management

Indicator	H1—Water quality risk management guidelines used
Definition	The water quality guidelines (standard) specified in the service provider's licence (or franchise agreement) or required by the health regulatory agency or government against which the service provider measures verification of water quality.
Intent	Risk-based systems and plans demonstrate the service providers commitment to a systematic, thorough and focused approach to the management of drinking water. Understanding the guidelines used in the development of risk-based management plans supports transparency and accountability and informs an understanding of customer and community outcomes.

General supporting notes	**Water quality guidelines** include: • Australian Drinking Water Guidelines 2011 • WHO Guidelines for drinking-water quality 4th ed - 2011 • other relevant state-based acts or regulations. Service providers should include the relevant version of the guidelines, for example, ADWG 2011, Version 3.4 Updated October 2017.

Indicator	**H5—External assessment of risk-based drinking water management plan**
Definition	The risk-based drinking water management plan was externally assessed (yes/no).
Intent	Risk-based systems and plans demonstrate the service provider's commitment to a systematic, thorough and focused approach to the management of drinking water. Reporting on the external assessment of risk-based management plans supports transparency and accountability and informs an understanding of customer and community outcomes.
General supporting notes	**Drinking water** is water intended primarily for human consumption. **Risk-based management plans** are documented systems that require the following types of issues in relation to water quality to be addressed: • corporate commitment to water quality • risk management plans including assessment of the drinking water supply system • preventative measures (including evaluation of multiple barriers and critical control points) • operational procedures • water quality results verification and assessment • management of incidents and emergencies • community and stakeholder liaison and education • system documentation • staff training in water quality • investigative studies and validation of processes • external audit of water quality systems • review and continual improvement of the system. For robustness, these systems should be externally assessed. A service provider may answer ‘yes’ to this indicator when its drinking water management plan has been: • audited by an externally accredited assessor and received certification for ISO 9001, hazard analysis critical control point (HACCP) or assessed against the requirements of the Australian Drinking Water Guidelines (ADWG) • quality assessed by an Exemplar Global certified auditor • assessed by an external assessor against the requirements of the ADWG Framework for Management of Drinking Water Quality.

	Additionally, in order to answer yes the third-party **accredited assessment must** have taken place within the past 12 months, or as specified by the requirements of the risk management system in place, or as specified by the relevant health regulator. The date of this assessment should be provided in the footnote to this indicator. The scope of the quality system detailed in the drinking water management plan **must** cover the service provider's entire drinking water business. If the quality system covers a more limited scope, the service provider **must** note this in an associated footnote and provide a description of the area/s covered. An **accredited assessment** is one carried out by a person(s) external to the organisation and accredited by a certification body such as Exemplar Global or approved by a health regulator. National Association of Testing Authorities (NATA) certification of laboratory analyses is *not* an approved water quality personnel management system. NATA accreditation applies to laboratory analytical work, which comprises a small area of the total water quality management system.

Indicator	**HE_N3—Date of last drinking water quality systems audit**
Definition	The date of the last independent/external/statutory audit of the service provider's water quality systems (dd/mm/yyyy).
Intent	Risk-based systems and plans demonstrate the service provider's commitment to a systematic, thorough and focused approach to the management of drinking water. Reporting on the auditing of water quality management systems supports transparency and accountability and informs an understanding of customer and community outcomes.
General supporting notes	The date of the last drinking water quality systems audit should be provided in dd/mm/yyyy format and the type of assessment should be noted in the corresponding footnote provided.

8.4 Water quality compliance

Indicator	**H3—Percentage of population where microbiological compliance was achieved**
Definition	The percentage of the total population served within the zones of the drinking water supply system where compliance with the microbiological requirements of the water quality guidelines or standard is met during the reporting year (%).
Intent	Reporting on water quality compliance supports transparency and accountability and informs an understanding of customer and community outcomes.
General supporting notes	Generally, the methodology for calculating microbiological criteria used for determining compliance is specified by the health regulator in each jurisdiction and if so, this should be used and noted in the associated footnote. In the absence of a specification, the guidance in the Australian Drinking Water Guidelines (ADWG) should be used as interpreted below. **Microbiological compliance**

	For each water supply zone, at least 100 per cent of routinely monitored samples contain no E. coli per 100ml of water during the 12-month period. [27] Note: The ADWG uses E. coli as the indicator of faecal contamination. For utilities using these guidelines for verification of performance, E. coli is the required assessment indicator. Total coliforms were removed as an indicator of faecal contamination in the 2004 guidelines; however, some water businesses may still have requirements for verification of water quality using the combination of total coliforms and E. coli. If this is the case, compliance against total coliforms and E. coli should be reported and noted in the associated footnote. **Water supply zones** are defined by service providers using criteria such as: • a discrete area of similar water quality, e.g. served by one water treatment plant • an area able to be described by its boundaries • the nature and design of the water supply system (including the location of service reservoirs, pump stations, tanks, and trunk systems) • the source and nature of the source of the drinking supply • the treatment components of the supply system • ADWG Framework for Management of Drinking Water Quality • issues identified in risk-based drinking water quality management plan. **Example** Three zones have populations of 50,000, 75,000 and 100,000 respectively. The zone with a population of 100,000 did not achieve microbiological compliance, however, the other two zones did. The percentage of the population where microbiological compliance was achieved = (50,000 + 75,000) / (50,000 + 75,000 + 100,000) = 55.56%.

Indicator	H4—Percentage of the population where chemical compliance was achieved
Definition	The percentage of the total population served within the zones of the drinking water supply system where compliance with the health-related chemical requirements of the water quality guidelines or standard is met during the reporting year (%).
Intent	Reporting on water quality compliance supports transparency and accountability and informs an understanding of customer and community outcomes.
General supporting notes	**Generally, the methodology for calculating chemical and radiological criteria used for determining compliance is specified by the health regulator in each jurisdiction and if so, this should be used and noted in the associated footnote.** In the absence of such specification, the guidance in the Australian Drinking Water Guidelines (ADWG) should be used as interpreted below. **Health-related physical or chemical compliance** It is neither physically nor economically feasible to test on an ongoing basis for all substances in a water supply system. Each water supply system will have its own key characteristics, and

[27] The ADWG use the indicator E. coli interchangeably with thermo-tolerant coliforms.

based on carrying out a risk assessment of those characteristics, a routine monitoring program for these characteristics will be determined.

It is therefore common for water businesses to monitor regularly for contaminants such as disinfection by-products, whereas a wide range of other non-key characteristics will be monitored only irregularly or when changes in the supply system (e.g., seasonal changes) warrant increased routine monitoring frequency. Some chemical parameters are likely to be monitored in each zone, while others may be monitored in source or treated waters supplying a number of zones.

Chemical contaminants in a water supply system are generally a chronic issue: ingestion must be above a guideline value for a long time before harm is caused. The ADWG therefore suggest that for health-related parameters 'each excursion beyond a guideline value should be a trigger for further action [28], and this generally means more extensive sampling to confirm contaminant levels above the guideline level.

While the ADWG are not definitive, they also state that 'for all health-related characteristics, a reasonable objective is to be confident that the 95th percentile of results over the preceding 12 months should be less than the guideline value'. This means that the upper bound of the 95th confidence interval for the percentile should be less than the guideline value.[29]

For very regularly monitored data (minimum 30 data points), the upper bound of the 95th percentile approximates the 95th percentile value and takes into account an occasional exceedance of the guideline value (which could be due to sampling error, laboratory error).

For contaminants where 30 data points are available, WSAA is therefore adopting the 95th percentile value of a series of monitoring assessments for assessment of verification against the level recommended in the ADWG.

The less the parameter is monitored, the greater the statistical uncertainty of the upper-bound number. For irregularly monitored data points (e.g., fewer than 30 per year), the upper bound of the 95th percentile may be considerably higher than the maximum reading detected.

If this system is used, this may result in water businesses publicly reporting exceedances of guideline levels when no monitored sample value exceeds the guideline limit. This would be very difficult to explain to the public.

There are further uncertainties in using this mechanism for assessment as some of the assumptions about the underlying statistical principles (e.g., as normally distributed data) may not hold and the mechanisms for deriving most guideline values use assumptions that also have significant error in their estimation.

For these reasons stated, for irregularly monitored data points, the maximum value of the data should be used for assessment against the guideline value.

In summary, for health-related chemical and radiological parameters:

- For contaminants sampled 30 or more times during the year, the 95th percentile reading of each health related monitored physical-chemical parameter should be used for assessments against ADWG guideline levels
- For contaminants sampled fewer than 30 times during the year, the maximum reading should be used for assessment of each health related monitored physical-chemical parameter against ADWG guideline levels

[28] Section 6.3.4 *Australian Drinking Water Guidelines 2011*
[29] Section 10.7.1 *Australian Drinking Water Guidelines 2011*

In some jurisdictions, health regulatory agencies will specify to the utility the performance requirements necessary. If this is the case, this should be used rather than the ADWG guidance (the performance requirements must be footnoted in the report).

Chemical compliance should be assessed across each **water supply zone** in a system and reported as a percentage of the total population receiving chemically compliant drinking water.

Water supply zone are defined by service providers using criteria such as:

- a discrete area of similar water quality, e.g. served by one water treatment plant
- an area able to be described by its boundaries
- the nature and design of the water supply system (including the location of service reservoirs, pump stations, tanks, and trunk systems)
- the source and nature of the source of the drinking supply
- the treatment components of the supply system
- ADWG Framework for Management of Drinking Water Quality
- issues identified in risk-based drinking water quality management plan.

Chemical compliance examples

1. Evaluation of disinfection by-product data (12 THM readings in 12 months in ug/L) (295, 250, 209, 222, 214, 211, 138, 143, 87, 93, 90, 200). As there are fewer than 30 readings, the maximum value is taken which is 295 ug/L(micrograms per litre). As 295ug/L exceeds the ADWG limit of 250ug/L. This sample set would be assessed as non-compliant.

Evaluation of disinfection by-product data (32 THM readings in 12 months in ug/L) (295, 250, 209, 222, 214, 211, 138, 143, 87, 93, 90, 200, 209, 222, 214, 211, 138, 143, 87, 93, 90, 200, 209, 222, 214, 211, 138, 143, 87, 93, 90, 200).As there are more than 30 readings in the 12 months, the 95th percentile is taken, which is 234ug/L. As this 234ug/L does not exceed the ADWG limit of 250ug/L, this sample set would be assessed as compliant.

Evaluation of a system with 30 zones shows that there is a failure of THMs in two zones and a failure of selenium in a source water supplying six zones (one of which overlaps with the zone failing THM's), making a total of seven zones failing (five zone with THM's only),

2. one zone with selenium only, and one zone failing both THM's and Selenium).

Percentage of the population example

Three zones have populations of 50,000, 75,000 and 100,000 respectively. The zone with a population of 100,000 did not achieve chemical compliance, however, the other two zones did.

The percentage of the population where chemical compliance was achieved = (50,000 + 75,000) / (50,000 + 75,000 + 100,000) = 55.56%.

Indicator	HE_N4—Number of boil water alerts issued
Definition	The total number of boil water alerts issued by the service provider during the reporting year (alerts)
Intent	Reporting on water quality compliance supports transparency and accountability and informs an understanding of customer and community outcomes.
General supporting notes	**Boil water alerts** are typically issued due to concerns about microbial contamination of supplies and are advisory messages to customers to tell them boil their water before use. Alerts are issued in accordance with jurisdictional guidelines and policies.

Indicator	HE_N5—Number of do not drink notices issued
Definition	The number of do not drink notices issued by the service provider during the reporting year (notices)
Intent	Reporting on water quality compliance supports transparency and accountability and informs an understanding of customer and community outcomes.
General supporting notes	**Do not drink notices** are typically issued due to a failure to meet chemical compliance of supplies. Notices are issued in accordance with jurisdictional guidelines and policies.

9. Water resources

9.1 Sources and imports

Indicator	W1—Volume of water self-sourced from climate-dependent surface water sources
Definition	The total volume of water self-sourced by the service provider from climate-dependent surface water sources during the reporting year, in megalitres (ML).
Intent	The volume of water sourced and imported from supply sources informs urban water balances prepared by the Bureau of Meteorology. It is part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements. Water balance information provides insight into water security, system resilience, liveability and customer and community outcomes.
General supporting notes	**Drinking and non-drinking water** encompass potable (meets drinking water standards), partially treated, and raw (untreated) water but excludes recycled water. **Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Climate dependent surface water sources** include: • surface water storages (e.g., dams, ponds etc.) • lakes, rivers, creeks, and streams • irrigation channels • stormwater—only volumes harvested for supply as **drinking and non-drinking water** [30] and exclude: • groundwater, including aquifers subject to aquifer recharge (reported under **W2**) • marine (e.g., seas, oceans, straights etc.) or estuarine water bodies (reported under **W3.1**). The **reported volume** includes: • water taken by the service provider for drinking and non-drinking water supply and bulk water exports • water taken by entities operating on behalf of the service provider • any water returned to surface water (also reported separately under **W31**) • unmetered volumes—information on estimates should be included in the associated footnote and excludes: • water purchased or received (i.e., imported) from another service provider such as a bulk water supplier (reported under **W5.3**) • stormwater harvested for supply as recycled water (reported under **WR_N1**).

[30] An example of harvested stormwater that would be included in W1 is the stormwater harvested from Blackmans Swamp Creek by Orange Council. The harvested water is pumped and stored in Suma Park Dam and is used to augment inflow from its catchment.

	The **reported volume** should be the total volume of water **actually** taken, not the volume of water that the service provider was entitled to take. The **reported volume** should be based on the metered inflow of raw water to water treatment plants (WTPs) or the metered extraction of raw water where it is supplied without treatment. If an inflow measurement is not available a WTP outflow measurement can be used. In such cases, this should be documented in the associated footnote.

Indicator	**W2— Volume of water self-sourced from groundwater sources**
Definition	The total volume of water self-sourced by the service provider from groundwater sources during the reporting year, in megalitres (ML).
Intent	The volume of water sourced and imported from supply sources informs urban water balances prepared by the Bureau of Meteorology. It is part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements. Water balance information provides insight into water security, system resilience, liveability and customer and community outcomes.
General supporting notes	**Groundwater sources** include: • aquifers, including those subject to managed-recharge. The **reported volume** includes: • groundwater extracted from bores, springs and wells • water taken by the service provider for drinking and non-drinking water supply and bulk water exports • water taken by entities operating on behalf of the service provider • unmetered volumes—information on estimates should be included in the associated footnote and excludes: • water purchased or received (i.e., imported) from another service provider such as a bulk water supplier (reported under **W5.3**). The **reported volume** should be the total volume of water **actually** taken, not the volume of water that the service provider was entitled to take. The **reported volume** should be based on the metered inflow of raw water to the water treatment plants (WTPs) or the metered extraction of raw water where it is supplied without treatment. If an inflow measurement is not available a WTP outflow measurement can be used. In such cases, this should be documented in the associated footnote.

Indicator	W3.1—Volume of water self-sourced from marine or estuarine water sources
Definition	The net volume of water self-sourced by the service provider from the desalination of marine or estuarine water sources during the reporting year, in megalitres (ML).
Intent	The volume of water sourced and imported from supply sources informs urban water balances prepared by the Bureau of Meteorology. It is part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements. Water balance information provides insight into water security, system resilience, liveability and customer and community outcomes.
General supporting notes	**Marine or estuarine water sources include:** • seas, oceans, straights • estuaries exclude: • climate-dependent surface water sources • saline groundwater. The **reported volume** includes: • water produced by entities operating infrastructure on behalf of the service provider • unmetered volumes—information on estimates should be included in the associated footnote and excludes: • water purchased or received (i.e., imported) from another service provider such as a bulk water supplier (reported under **W5.3**). The **reported volume** should be the total volume of water **actually** produced, not the volume of water taken for desalination (i.e., the reported volume excludes waste brine). The **reported volume** should be based on the metered outflow of treated water from the water treatment plants (WTPs).

Indicator	W5.3—Volume of drinking and non-drinking water, excluding recycled water, imported from other service providers
Definition	The volume of drinking and non-drinking water, excluding recycled water, imported (purchased or received) from other service providers during the reporting year, in megalitres (ML).
Intent	The volume of water sourced and imported from supply sources informs urban water balances prepared by the Bureau of Meteorology. It is part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements. Water balance information provides insight into water security, system resilience, liveability and customer and community outcomes.
General supporting notes	**Drinking and non-drinking water** encompass potable (meets drinking water standards), partially treated, and raw (untreated) water but excludes recycled water. **Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Other service providers** include: • bulk water service providers

	• third-party infrastructure operators and exclude: • entities operating infrastructure on behalf of the service provider e.g., BOOT schemes (see Practice Note 4). The **reported volume** includes: • bulk water purchases • any water that is subsequently exported to another service provider • unmetered volumes—information on estimates should be included in the reported footnote.

Indicator	**WR_N1—Volume of stormwater harvested for supply as recycled water**
Definition	The volume of stormwater harvested by the service provider for supply as recycled water during the reporting year, in megalitres (ML).
Intent	The volume of water sourced and imported from supply sources informs urban water balances prepared by the Bureau of Meteorology. It is part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements. Water balance information provides insight into water security, system resilience, liveability and customer and community outcomes.
General supporting notes	**Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. The **reported volume** includes: • stormwater water that is subsequently exported to another service provider • unmetered volumes—information on estimates should be included in the reported footnote and excludes: • stormwater harvested across a catchment and stored in water storages (e.g., dams) for supply as d**rinking and non-drinking water** (reported under **W1**) • water extracted from aquifers subject to managed recharge.

Indicator	**W6—Volume of recycled water imported from other service providers**
Definition	The volume of recycled water imported (purchased or received) from other service providers during the reporting year, in megalitres (ML).
Intent	The volume of water sourced and imported from supply sources informs urban water balances prepared by the Bureau of Meteorology. It is part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements. Water balance information provides insight into water security, system resilience, liveability and customer and community outcomes.
General supporting notes	**Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Other service providers** include: • bulk water service providers

	• third-party infrastructure operators and exclude: • entities operating infrastructure on behalf of the service provider e.g., BOOT schemes (see Practice Note 4). The **reported volume** includes: • recycled water that is subsequently exported to another service provider • recycled water extracted by sewer mining • unmetered volumes—information on estimates should be included in the reported footnote and excludes: • water extracted from aquifers subject to managed recharge.

Indicator	**W5—Total volume of drinking and non-drinking water, including recycled water, imported from other service providers**
Definition	The total volume of drinking and non-drinking water, including recycled water, imported (purchased or received) from other service providers during the reporting year, in megalitres (ML).
Intent	The volume of water sourced and imported from supply sources informs urban water balances prepared by the Bureau of Meteorology. It is part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements. Water balance information provides insight into water security, system resilience, liveability and customer and community outcomes.
General supporting notes	See indicators **W5.3** and **W6**.
Derivation	**W5** = **W5.3** + **W6** = [**W5.3**—Volume of drinking and non-drinking water, excluding recycled water, imported from other service providers] + [**W6**—Volume of recycled water imported from other service providers]

Indicator	**W7—Total volume of drinking and non-drinking water, excluding recycled water, self-sourced and imported from other service providers**
Definition	The total volume of drinking and non-drinking water, excluding recycled water, self-sourced and imported (purchased or received) from other service providers during the reporting year, in megalitres (ML).
Intent	The volume of water sourced and imported from supply sources informs urban water balances prepared by the Bureau of Meteorology. It is part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements. Water balance information provides insight into water security, system resilience, liveability and customer and community outcomes.

General supporting notes	See indicators **W1**, **W2**, **W3.1**, **W5.3**, **W31**
Derivation	**W7** = **W1** + **W2** + **W3.1** + **W5.3** – **W31** = [**W1**—Volume of water self-sourced from climate-dependent surface water sources] + [**W2**—Volume of water self-sourced from groundwater sources] + [**W3.1**—Volume of water self-sourced from marine or estuarine water sources] + [**W5.3**—Volume of drinking and non-drinking water, excluding recycled water, imported from other service providers] – [**W31**—Volume of drinking and non-drinking water, excluding recycled water, returned to surface water]

9.2 Supply and exports

Indicator	**W8.3— Volume of drinking and non-drinking water, excluding recycled water, supplied to residential customers**
Definition	The volume of drinking and non-drinking water, excluding recycled water, supplied by the service provider to residential customers during the reporting year, in megalitres (ML).
Intent	The volume of water supplied to customers and exported informs an understanding of water usage and is also integral to urban water balances prepared by the Bureau of Meteorology. It is part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements. It underpins the Bureau's National Water Account and reporting on availability and use. There is support for reporting information on supply from alternative sources to provide a holistic picture of water supply.
General supporting notes	**Drinking and non-drinking water** encompass potable (meets drinking water standards), partially treated, and raw (untreated) water but excludes recycled water. **Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Residential customers** are customers who principally utilise supplied water for personal, household, and domestic use. The **reported volume** includes: • all billed, metered and unmetered consumption—metered volumes should be based on customer metering data and information on estimates should be included in the reported footnote.

Indicator	**W9.3—Volume of drinking and non-drinking water, excluding recycled water, supplied to non-residential customers**
Definition	The volume of drinking and non-drinking water, excluding recycled water, supplied by the service provider to non-residential customers during the reporting year, in megalitres (ML).
Intent	The volume of water supplied to customers and exported informs an understanding of water usage and is also integral to urban water balances prepared by the Bureau of Meteorology.

	It is part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements. It underpins the Bureau's National Water Account and reporting on availability and use. There is support for reporting information on supply from alternative sources to provide a holistic picture of water supply.
General supporting notes	**Drinking and non-drinking water** encompass potable (meets drinking water standards), partially treated, and raw (untreated) water but excludes recycled water. Recycled water is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. Own use is water used by the service provider, where the water is supplied without a billing arrangement. Non-residential customers include: • commercial customer—including offices, wholesale and retail trade, and accommodation • industrial customer—including manufacturing, construction, transport, warehouses • institutional customer—including public administration, education and training, health care and social assistance, corrections, and emergency service buildings (e.g., fire stations) • parks and gardens— including sport fields, golf courses and racecourses, except where these facilities are supplied as part of the service provider's own use (reported under WR_N2) • agricultural—including market gardens, turf farms, nurseries • forestry • aquaculture or fishing • mining • other non-residential customers who receive water supplied via billing arrangements and exclude: • other water service providers • water supplied to managed aquifer recharge schemes (reported under W25.1) • environmental releases (reported under W31). **Other water service providers** include: • bulk water authorities and corporations • water corporations • publicly and privately owned and council-run water utilities and exclude: • service providers operating infrastructure on behalf of a water service provider e.g. BOOT schemes. The reported volume includes: • all billed, metered and unmetered consumption—metered volumes should be based on customer metering data and information on estimates should be included in the reported footnote and excludes: • Non-revenue water (unbilled authorised consumption, unauthorised consumption and real and apparent losses).

Indicator	WR_N2—Volume of drinking and non-drinking water, excluding recycled water, supplied for own use
Definition	The volume of drinking and non-drinking water, excluding recycled water, supplied by the service provider during the reporting year for its own use, where the water was supplied without a billing arrangement, in megalitres (ML).
Intent	The volume of water supplied to customers and exported informs an understanding of water usage and is also integral to urban water balances prepared by the Bureau of Meteorology. It is part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements. It underpins the Bureau's National Water Account and reporting on availability and use. There is support for reporting information on supply from alternative sources to provide a holistic picture of water supply.
General supporting notes	**Drinking and non-drinking water** encompass potable (meets drinking water standards), partially treated, and raw (untreated) water but excludes recycled water. **Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. Own use is water used by the service provider, where the water is supplied without a billing arrangement. The reported volume includes: • treatment process water • on-site use at treatment plants and other offices • supply to parks, gardens recreational facilities • municipal operations (e.g., dust suppression street cleaning) Metered volumes should be based on customer metering data and information on estimates should be included in the reported footnote.

Indicator	W14.3— Volume of drinking and non-drinking water, excluding recycled water, exported to other service providers
Definition	The volume of drinking and non-drinking water, excluding recycled water, exported to other service providers during the reporting year, in megalitres (ML).
Intent	The volume of water supplied to customers and exported informs an understanding of water usage and is also integral to urban water balances prepared by the Bureau of Meteorology. It is part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements. It underpins the Bureau's National Water Account and reporting on availability and use. There is support for reporting information on supply from alternative sources to provide a holistic picture of water supply.
General supporting notes	**Drinking and non-drinking water** encompass potable (meets drinking water standards), partially treated, and raw (untreated) water but excludes recycled water. **Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Other service providers** include: • bulk water utilities • third-party infrastructure operators

	and excludes: • service providers operating infrastructure on behalf of the service provider e.g. BOOT schemes. The **reported volume** includes: • billed metered and unmetered volumes—information on estimates should be included in the reported footnote.

Indicator	**W31—Volume of drinking and non-drinking water, excluding recycled water, returned to surface water**
Definition	The volume of drinking and non-drinking water, returned by the service provider to surface water during the reporting year, in megalitres (ML).
Intent	The volume of water supplied to customers and exported informs an understanding of water usage and is also integral to urban water balances prepared by the Bureau of Meteorology. It is part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements. It underpins the Bureau's National Water Account and reporting on availability and use. There is support for reporting information on supply from alternative sources to provide a holistic picture of water supply.
General supporting notes	**Drinking and non-drinking water** encompass potable (meets drinking water standards), partially treated, and raw (untreated) water but excludes recycled water. **Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. The **reported volume** includes: • water received from other service providers • water that has been subjected to treatment for use and subsequently returned to surface water • unmetered volumes—information on estimates should be included in the reported footnote • environmental releases made from the potable supply system, i.e., after treatment—releases from the potable supply system should be noted in the reported footnote.

Indicator	**W10.1—Volume of non-revenue drinking and non-drinking water, excluding recycled water**
Definition	The volume of non-revenue water associated with the service provider's drinking and non-drinking water, excluding recycled water, supply systems during the reporting year, in megalitres (ML).
Intent	This indicator informs a system water balance of the drinking and non-drinking water, excluding recycled water, systems. It seeks to quantify the total volume of non-revenue water, as defined by the IWA best practice water balance (i.e., the unbilled authorised consumption, apparent losses and real losses.
General supporting notes	**Drinking and non-drinking water** encompass potable (meets drinking water standards), partially treated, and raw (untreated) water but excludes recycled water.

	Recycled water is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Non-revenue water** [31] includes: • unbilled authorised consumption (metered and unmetered supply) • apparent losses—unauthorised consumption and customer metering inaccuracies • real losses—leakage and overflows from mains, service reservoirs and service connections up to the point of the customer meter.

Indicator	**W20—Volume of recycled water supplied to residential customers**
Definition	The volume of recycled water supplied by the service provider to residential customers during the reporting year, in megalitres (ML).
Intent	The volume of recycled water supplied to residential customers informs an understanding of water usage and is also integral to urban water balances prepared by the Bureau of Meteorology. It is part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements. It underpins the Bureau's National Water Account and reporting on availability and use. There is support for reporting information on supply from alternative sources to provide a holistic picture of water supply.
General supporting notes	**Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Residential customers** are customers who principally utilises supplied water for personal, household, and domestic use. The **reported volume** includes: • all billed, metered and unmetered consumption—metered volumes should be based on customer metering data and information on estimates should be included in the reported footnote. • potable water used to top-up the recycled water system • recycled water derived from sewer mining and excludes: • water extracted from aquifers subject to aquifer replenishment using recycled water (reported under **W2**).

Indicator	**W21—Volume of recycled water supplied to non-residential customers**
Definition	The volume of recycled water supplied by the service provider to non-residential customers during the reporting year, in megalitres (ML).
Intent	The volume of recycled water supplied to non-residential customers informs an understanding of water usage and is also integral to urban water balances prepared by the Bureau of Meteorology. It is part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements. It underpins the Bureau's National Water Account and reporting on availability and use. There is support for reporting information on supply from alternative sources to provide a holistic picture of water supply.

[31] Non-revenue water is defined in accordance with the IWA best practice water balance with additions Source: Leak suite library

General supporting notes	**Drinking and non-drinking water** encompass potable (meets drinking water standards), partially treated, and raw (untreated) water but excludes recycled water. Recycled water is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. Own use is water used by the service provider, where the water is supplied without a billing arrangement. Non-residential customers include: • commercial customer—including offices, wholesale and retail trade, and accommodation • industrial customer—including manufacturing, construction, transport, warehouses • institutional customer—including public administration, education and training, health care and social assistance, corrections, and emergency service buildings (e.g., fire stations) • parks and gardens—including sport fields, golf courses and racecourses, except where these facilities are part of the service provider's own use (reported under **WR_N3**) • agricultural—including market gardens, turf farms, nurseries • forestry • aquaculture or fishing • mining • other non-residential customers who receive water supplied via billing arrangements. **Other recycled water service providers** include: • bulk water authorities and corporations • water corporations • publicly and privately owned and council-run water utilities and exclude: • service providers operating infrastructure on behalf of a recycled water service provider e.g. BOOT schemes. The reported volume includes: • all billed, metered and unmetered consumption—metered volumes should be based on customer metering data and information on estimates should be included in the reported footnote • potable water used to top-up the recycled water system • recycled water derived from sewer mining and excludes: • water extracted from aquifers subject to managed aquifer recharge using recycled water (reported under **W2**).

Indicator	**W15—Volume of recycled water exported to other service providers**
Definition	The volume of recycled water exported by the service provider to other service providers, during the reporting year, in megalitres (ML).
Intent	The volume of recycled water exported to other service providers informs an understanding of water usage and is also integral to urban water balances prepared by the Bureau of Meteorology. It is part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements.

	It underpins the Bureau's National Water Account and reporting on availability and use. There is support for reporting information on supply from alternative sources to provide a holistic picture of water supply.
General supporting notes	**Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Other service providers** include: • bulk water utilities • third-party infrastructure operators and excludes: • service providers operating infrastructure on behalf of the service provider e.g., BOOT schemes. The reported volume includes: • billed metered and unmetered volumes—information on estimates should be included in the reported footnote • water extracted by stormwater harvesting and sewer mining and excludes: • water extracted from aquifers subject to aquifer replenishment managed aquifer recharge using recycled water (reported under W2).

Indicator	**WR_N3—Volume of recycled water supplied for own use**
Definition	The volume of recycled water used by the service provider during the reporting year, in megalitres (ML) for its own use.
Intent	The volume of recycled water supplied for own use informs an understanding of water usage and is also integral to urban water balances prepared by the Bureau of Meteorology. It is part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements. It underpins the Bureau's National Water Account and reporting on availability and use. There is support for reporting information on supply from alternative sources to provide a holistic picture of water supply.
General supporting notes	**Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Own use** is water used by the service provider, where the water is supplied without a billing arrangement. The reported volume includes: • treatment process water • on-site use at treatment plants and other offices • supply to parks, gardens recreational facilities • municipal operations (e.g., dust suppression street cleaning) The reported volume includes: • all unbilled billed, metered and unmetered consumption—metered volumes should be based on customer metering data and information on estimates should be included in the reported footnote • potable water used to top-up the recycled water system • recycled water derived from sewer mining.

Indicator	WR_N4—Volume of non-revenue recycled water supplied for beneficial reuse
Definition	The volume of non-revenue recycled water supplied by the service provider for beneficial reuse during the reporting year, in megalitres (ML).
Intent	The volume of non-revenue recycled water supplied for beneficial reuse informs an understanding of water usage and is also integral to urban water balances prepared by the Bureau of Meteorology. It is part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements. It underpins the Bureau's National Water Account and reporting on availability and use. There is support for reporting information on supply from alternative sources to provide a holistic picture of water supply.
General supporting notes	**Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Beneficial reuse** is reuse that although not prescribed by a regulator has an agreed mutual benefit for both the party providing the recycled water and the recipient. • to meet a prescribed environmental flow (reported under **W23**). Beneficial reuse includes: • reuse that delivers social and recreation benefits—E.g., supplies to parks, gardens and waterways not owned by the service provider • reuse to supply irrigated woodlots, pasture etc. that are not owned by the service provider but are harvested and excludes: • recycled water used to irrigate woodlots, pasture etc. that are not harvested, i.e., non-beneficial reuse (reported as a disposal under W29). The reported volume includes: • metered and unmetered volumes—information on estimates should be included in the reported footnote and excludes: • recycled water supplied to customers (reported under **W20** and **W21**) • recycled water supplied to meet a prescribed environmental flow (reported under **W23**).

Indicator	W23—Volume of recycled water supplied as environmental flows
Definition	The volume of recycled water supplied by the service provider as regulator-approved (prescribed) environmental flows during the reporting year, in megalitres (ML).
Intent	The volume of water supplied for environmental flows informs an understanding of water usage and is also integral to urban water balances prepared by the Bureau of Meteorology. It is part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements. It underpins the Bureau's National Water Account and reporting on availability and use. There is support for reporting information on supply from alternative sources to provide a holistic picture of water supply.
General supporting notes	**Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use.

	Environmental flows are released under a specific environmental management plan prepared in conjunction with and/or approved by the appropriate environmental resource regulator. **Beneficial reuse** is reuse that although not prescribed by a regulator has an agreed mutual benefit for both the party providing the recycled water and the recipient. The **reported volume** includes: • environmental flows discharged to waterways (rivers, seas, wetlands etc.) • metered and unmetered volumes—information on estimates should be included in the associated footnote and excludes: • beneficial reuse (reported under **WR_N4**) • accidental or unintentional releases, unless they are incorporated into the environmental flow management regime—clarification should be sought from the State or Territory regulator on any component of unintended releases to be included in environmental flows • water extracted from aquifers subject to managed aquifer recharge using recycled water (reported under **W2**).

Indicator	**W25.1—Volume of recycled water supplied to managed aquifer recharge**
Definition	The volume of recycled water supplied by the service provider to manage aquifer recharge during the reporting year, in megalitres (ML).
Intent	The volume of water supplied for to managed aquifer recharge informs an understanding of water usage and is also integral to urban water balances prepared by the Bureau of Meteorology. It is part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements. It underpins the Bureau's National Water Account and reporting on availability and use. There is support for reporting information on supply from alternative sources to provide a holistic picture of water supply.
General supporting notes	**Recycled water** is water generated from sewage, greywater or stormwater systems and treated to a standard that is appropriate for its intended use. **Managed aquifer recharge** is the intentional recharge of water to suitable aquifers for subsequent recovery or to achieve environmental benefits. The **reported volume** includes: • Metred and unmetered volumes – information on estimates should be included in the reported footnote.

Indicator	**W11— Total volume of water supplied to residential and non-residential customers**
Definition	The total volume of drinking and non-drinking water, including recycled water~~,~~ supplied to residential and non-residential customers by the service provider during the reporting year, in megalitres (ML).
Intent	The volume of water supplied to customers informs an understanding of water usage and is also integral to urban water balances prepared by the Bureau of Meteorology. It is part of the

	aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements. It underpins the Bureau's National Water Account and reporting on availability and use. There is support for reporting information on supply from alternative sources to provide a holistic picture of water supply.
General supporting notes	See indicators W8.3, W9.3, W20, and W21.
Derivation	**W11** = **W8.3** + **W9.3** + **W20** + **W21** = [**W8.3**— Volume of drinking and non-drinking water, excluding recycled water, supplied to residential customers] + [**W9.3**—Volume of drinking and non-drinking water, excluding recycled water, supplied to non-residential customers] + [**W20**—Volume of recycled water supplied to residential customers] + [**W21**—Volume of recycled water supplied to non-residential customers] For bulk water service providers, **W11** also includes **W14.3** and **W15**: **W14.3** — Volume of drinking and non-drinking water, excluding recycled water, exported to other service providers **W15** — Volume of recycled water exported to other service providers

Indicator	**W12—Average volume of residential water supplied per property**
Definition	The average volume of drinking and non-drinking water, supplied to residential properties by the service provider during the reporting year, in megalitres per property (ML/property).
Intent	The volume of water supplied to customers and exported informs an understanding of water usage and is also integral to urban water balances prepared by the Bureau of Meteorology. It is part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements. It underpins the Bureau's National Water Account and reporting on availability and use. There is support for reporting information on supply from alternative sources to provide a holistic picture of water supply.
General supporting notes	The **reported volume** includes: • water received from other service providers • metered and unmetered volumes • recycled water • urban stormwater.
Derivation	**W12** = (**W8.3** + **W20**) / **C2** = (([**W8.3**—Volume of drinking and non-drinking water, excluding recycled water, supplied to residential customers] + [**W20**—Volume of recycled water supplied to residential customers]) / [**C2**—Number of connected residential properties: water supply]

Indicator	W26—Total volume of recycled water supplied
Definition	The total volume of recycled water supplied by the service provider during the reporting year, in megalitres (ML).
General supporting notes	See indicators W20, W21, W15, WR_N3, W23, W25.1, WR_N4
Derivation	**W26** = **W20** + **W21** + **W15** + **WR_N3** + **W23** + **W25.1** + **WR_N4** = [**W20**—Volume of recycled water supplied to residential customers] + [**W21**—Volume of recycled water supplied to non-residential customers + [**W15**—Volume of recycled water exported to other service providers] + [**WR_N3**—Volume of recycled water supplied for own use] + [**W23**—Volume of recycled water supplied as environmental flows] + [**W25.1**—Volume of recycled water supplied to managed aquifer recharge] + [**WR_N4**—Volume of non-revenue recycled water supplied for beneficial reuse]

9.3 Production

Indicator	W11.3—Volume of drinking water produced for supply into the urban water supply system
Definition	The volume of drinking water produced or imported by the service provider for supply into the urban water system, during the reporting year, in megalitres (ML).
Intent	Water production information is used for independent validation of the urban water balances prepared by the Bureau of Meteorology. It also informs an understanding of non-revenue water. The volume of water produced for urban supply is part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements. It underpins the Bureau's National Water Account and reporting on availability and use.
General supporting notes	**Drinking water** is water that meets drinking water standards. It is also known as potable water. The **reported volume** is measured at the outflow of treatment plants (e.g., water treatment plants, desalination plants, disinfection plants) or at the beginning of the urban water supply system. It **should not** include distribution system losses and gains.

9.4 Wastewater

Indicator	W16—Volume of wastewater, excluding trade wastewater, collected
Definition	The volume of wastewater, excluding trade wastewater, collected by the service provider during the reporting year, in megalitres (ML).
Intent	The volumes of wastewater collected, transferred, reused and discharged informs urban water balances prepared by the Bureau of Meteorology. The volumes of wastewater collected, transferred, treated, reused and discharged are part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements.
General supporting notes	**Wastewater** [2] is the water used by residential and non-residential customers that is disposed of through the wastewater systems. **Trade wastewater** is liquid waste generated from any industry, business, trade, or manufacturing processes and specifically excludes any wastewater discharged from residential premises. Trade wastewater can be collected via the sewerage network and/or vehicle transport. **Other service providers** include: • bulk wastewater service providers • third-party infrastructure operators and exclude: entities operating infrastructure on behalf of the service provider e.g., BOOT schemes. The **reported volume** includes: • metered and unmetered volumes—information on estimates should be included in the reported footnote • water that has infiltration into the sewerage network-including stormwater ingress and illegal connections • wastewater collected by entities operating infrastructure on behalf of the service provider and third-party collection services and excludes: • transfers between wastewater treatment plants that have already been included in the reported volume • transfers from other service providers, e.g., a utility to utility transfer (reported under **W18.2**). Where a service provider *does not* have metering data or reliable estimates to separate trade wastewater volumes from the volume reported they should: • report the total volume of wastewater, including any volumes of trade wastewater that cannot be separated under **W16** • provide a footnote to W16 identifying that the volume includes trade wastewater

Indicator	W17—Volume of trade wastewater collected
Definition	The volume of trade wastewater collected by the service provider during the reporting year, in megalitres (ML).
Intent	The volumes of wastewater collected, transferred, reused and discharged informs urban water balances prepared by the Bureau of Meteorology. The volumes of wastewater collected, transferred, treated, reused and discharged are part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements.
General supporting notes	**Wastewater** [2] is the water used by residential and non-residential customers that is disposed of through the sewerage system. **Trade wastewater** is liquid waste generated from any industry, business, trade, or manufacturing processes and specifically excludes any wastewater discharged from residential premises. Trade wastewater can be collected via the sewerage network and/or vehicle transport The **reported volume** includes: • metered and unmetered volumes—information on estimates should be included in the reported footnote • trade wastewater collected by entities operating infrastructure on behalf of the or service providers and third-party collection services and excludes: • transfers between wastewater treatment plants that have already been included in the reported total • transfers from other service providers, e.g., a utility to utility transfer (reported under **W18.2**) Where a service provider *does not* have metering data or reliable estimates to separate trade wastewater volumes from the volume reported they should: • report the total volume of wastewater, including any volumes of trade wastewater that cannot be separated under **W16** • provide a footnote to **W16** identifying that the volume includes trade wastewater • report the volume of trade wastewater that can be estimated under **W17** • where trade wastewater is collected but cannot be separated from the total volume the service provider should report their trade wastewater volume **W17** as no data.

Indicator	W18.1— Volume of wastewater exported to other service providers
Definition	The total volume of wastewater exported to other service providers during the reporting year, in megalitres (ML).
Intent	The volumes of wastewater collected, transferred, reused and discharged informs urban water balances prepared by the Bureau of Meteorology. The volumes of wastewater collected, transferred, treated, reused and discharged are part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements.

General supporting notes	**Wastewater** is the water used by residential and non-residential customers that is disposed of through the sewerage system. **Other service providers** include: • bulk wastewater service providers • third-party infrastructure operators and exclude: • entities operating infrastructure on behalf of the service provider e.g., BOOT schemes. The **reported volume** includes: • partially treated effluent • metered and unmetered volumes—information on estimates should be included in the reported footnote. • trade wastewater • transfers not associated with a financial transaction.

Indicator	**W18.2— Volume of wastewater received from other service providers**
Definition	The total volume of wastewater received from other service providers during the reporting year, in megalitres (ML).
Intent	The volumes of wastewater collected, transferred, reused and discharged informs urban water balances prepared by the Bureau of Meteorology. The volumes of wastewater collected, transferred, treated, reused and discharged are part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements.
General supporting notes	**Wastewater** is the water used by residential and non-residential customers that is disposed of through the sewerage system. **Other service providers** include: • bulk wastewater service providers • third-party infrastructure operators and exclude: • entities operating infrastructure on behalf of the service provider e.g., BOOT schemes. The **reported volume** includes: • partially treated effluent • metered and unmetered volumes—information on estimates should be included in the reported footnote. • trade wastewater • transfers not associated with a financial transaction and excludes: • recycled water.

Indicator	W18.3—Volume of wastewater taken through sewer mining
Definition	The volume of wastewater extracted through sewer mining by any service provider, from the service provider's sewerage system during the reporting year, in megalitres (ML).
Intent	The volumes of wastewater collected, transferred, reused and discharged informs urban water balances prepared by the Bureau of Meteorology. The volumes of wastewater collected, transferred, treated, reused and discharged are part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements.
General supporting notes	**Wastewater** is the water used by residential and non-residential customers that is disposed of through the sewerage system. The **reported volume** includes: • wastewater extracted by entities operating infrastructure on behalf of the service provider and third-party operators • metered and unmetered volumes—information on estimates should be included in the reported footnote • extractions not associated with a financial transaction.

Indicator	W18.4— Volume of wastewater inflow to wastewater treatment plants
Definition	The volume of wastewater inflows to the service provider’s wastewater treatment plants during the reporting year, in megalitres (ML).
Intent	The volumes of wastewater inflow to the treatment plants is part of the urban water balances prepared by the Bureau of Meteorology and it is part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements.
General supporting notes	**Wastewater** is the water used by residential and non-residential customers that is disposed of through the wastewater systems. A **wastewater treatment plant** (WWTP) is a facility receiving raw or partially treated wastewater for treatment and discharge to a receiving environment (e.g., an ocean or river). The **reported volume** includes: • trade waste • wastewater collected by the service provider or entities operating infrastructure on behalf of the service provider and third-party collection services and excludes: • wastewater supplied to other service providers or infrastructure operators • wastewater transferred to treatment plants owned or operated by the service provider but outside of the reporting region • wastewater extracted for sewer mining. The **reported volume** should be based on the metered inflow to WWTPs. Where inflow meters are not available the method for estimating inflows should be noted in the associated footnote.

Indicator	W18.5— Volume of treated effluent outflow from wastewater treatment plants
Definition	The volume of treated effluent discharged from the service provider's wastewater treatment plants during the reporting year, in megalitres (ML).
Intent	The volumes of wastewater discharged informs urban water balances prepared by the Bureau of Meteorology. It is also part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements.
General supporting notes	**Effluent** is the liquid discharged following a wastewater treatment process. A **wastewater treatment plant** (WWTP) is a facility receiving raw or partially treated wastewater for treatment and discharge to a receiving environment (e.g., an ocean or river). The **reported volume** includes: • treated effluent that is subsequently disposed of (also reported under W29) • treated effluent returned to the wastewater system • treated effluent that is recycled, either directly or with further treatment • losses during treatment processes • unmetered volumes—information on estimates should be included in the associated footnote and excludes: • onsite usage (reported under W21). The **reported volume** should be based on the metered outflows at the outlet of WWTPs. Where outflow meters are not available the method for estimating outflows should be noted in the associated footnote.

Indicator	W29—Volume of effluent discharged
Definition	The total volume of effluent discharged by the service provider during the reporting year, in megalitres (ML).
Intent	The volumes of treated wastewater discharged informs urban water balances prepared by the Bureau of Meteorology. It is also part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements.
General supporting notes	**Effluent** is the liquid discharged following a wastewater treatment process The **reported volume** includes: • metered and unmetered volumes—information on estimates should be included in the reported footnote • Wastewater treated to any level that is discharged to surface water bodies (e.g., rivers, lakes, dams), land (e.g., evaporation ponds, woodlots, etc), and marine environments (e.g., seas, oceans, estuary, etc.) • Untreated wastewater that is discharged because of breakage, malfunction, or flow volumes exceeding system capacity. and excludes: • treated effluent that is supplied as recycled water to residential and non-residential customers (reported under W20 and W21) • treated effluent that is supplied as recycled water for the service provider’s own use (reported under WR_N3)

	• treated effluent that is discharged as approved environmental flows (reported under W23) • treated effluent that is supplied to managed aquifer recharge (reported under W25.1) • treated effluent that is discharged for beneficial reuse (reported under WR_N4).

Indicator	W30— Volume of wastewater losses and spills
Definition	The volume of treated and untreated wastewater losses and spills from the service provider's urban wastewater system during the reporting year, in megalitres (ML).
Intent	The volumes of wastewater collected, transferred, reused and discharged informs urban water balances prepared by the Bureau of Meteorology. The volumes of wastewater collected, transferred, treated, reused and discharged are part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements.
General supporting notes	**Wastewater** [2] is the water used by residential and non-residential customers that is disposed of through the wastewater systems. A **wastewater treatment plant** (WWTP) is a facility receiving raw or partially treated wastewater for treatment and discharge to a receiving environment (e.g., an ocean or river). The **reported volume** includes: • system overflows upstream of the wastewater treatment plant (WWTP) • WWTP bypasses (e.g. wet weather flows) • evaporation and exfiltration losses • sludge removal.

Indicator	W18—Total volume of wastewater collected	W19— Average volume of wastewater collected per property
Definition	The total volume of wastewater collected by the service provider during the reporting year, in megalitres (ML).	The average volume of wastewater collected by the service provider, during the reporting year, in megalitres per property (ML/property)
Intent	The volumes of wastewater collected, transferred, reused and discharged informs urban water balances prepared by the Bureau of Meteorology. The volumes of wastewater collected, transferred, treated, reused and discharged are part of the aligned Category 7 Water regulations information collected through the alignment of the NPR and Category 7 requirements.	
General supporting notes	See indicators **W16**, **W17**, **W18** and **C8.**	
Derivation	**W18** = **W16** + **W17** = [**W16**—Volume of wastewater, excluding trade wastewater, collected] + [**W17**—Volume of trade wastewater collected]	
	W19 = **W18** / **C8** = [**W18**—Total volume of wastewater collected] / [**C8**—Total number of connected properties: wastewater]	

9.5 Restrictions

Indicator	WR_N5—Number of days spent at level 1 restriction	WR_N6—Number of days spent at level 2 restriction	WR_N7—Number of days spent at or greater than level 3 restriction
Definition	Total number of days spent at level 1 restriction during the reporting year (days).	Total number of days spent at level 2 restriction during the reporting year (days).	Total number of days spent at or greater than level 3 restriction during the reporting year (days).
Intent	Restrictions information provides insight into water security outcomes, resilience, liveability and customer outcomes.		

10. Practice Notes

10.1 Practice Note 1: Alignment of the water resource indicators with the Bureau's Category 7 Urban water information requirements.

In response to the findings and recommendations of the Commonwealth's Interagency Working Group on the provision of water information to the Commonwealth, the Bureau undertook a review of its urban water information requirements to remove duplication and streamline data provision.

The *Water Amendment (Water Information) Regulations 2017* *was* enacted on the 23 March 2017. The amendment simplified the data requirements of the *Water Regulations 2008* Category 7 (information about urban water management) and increased the transparency of the linkages between the data collected by the Bureau and its water information products and services.

The amended Category 7 requirements are aligned with the NPR's water resource indicators (W indicators). The details for providing information under Category 7 are set out in the Urban Water Management Information Requirements and further explanatory material on the Category 7 requirements can be found in the Category 7 Reporting Handbook.

Service providers named in Persons Categories F and M in the Regulations will meet their regulatory obligations by providing their W indicators to the urban national performance reporting framework.

Service providers named in Persons Category L are required to provide a more detailed set of information about urban water management (U codes).

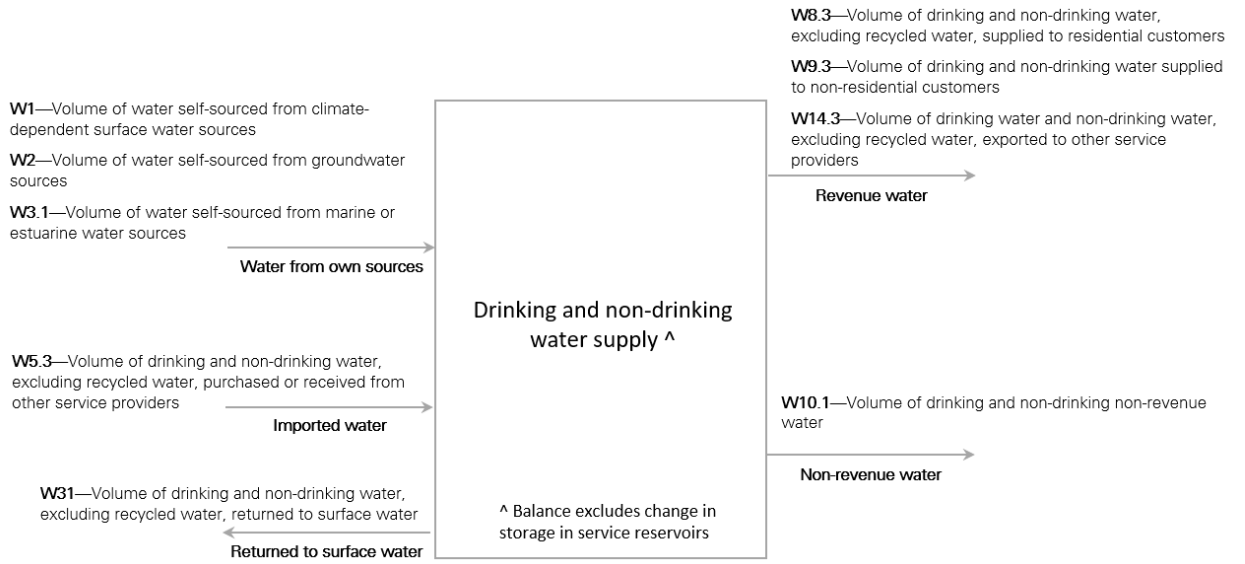
U code data is a superset of the water resource indicators and contains additional, disaggregated, information as well as metadata and contextual information relating to urban water management. Where reporting boundaries are consistent, a service provider can use their U code data to generate their W indicators. For further information on how to do this please contact water@bom.gov.au.

10.2 Practice Note 2: The urban water supply system

The drinking and non-drinking water supply system is a system used for the collection, transmission, treatment, storage and distribution of water extracted from water sources and supplied to consumers including, residential properties, commercial premises and industrial operations.

The conceptualisation of the system for the provision of drinking and non-drinking water supply information is shown in Figure PN2-1. The figure illustrates the inflows and outflows of the system for which information is collected.

Figure PN2.1
Drinking and non-drinking water supply system



Wastewater system conceptual balance

The wastewater system is a system used for the collection, transmission, treatment, storage and disposal of wastewater collected by a service provider. This includes residential properties, commercial premises and industrial operations.

The conceptualisation of the urban wastewater system for the provision or urban wastewater information is shown in Figure PN2.2. The figure illustrates the inflows and outflows of the system for which information is collected. While recycled water is reported separately to the wastewater system, the figure depicts the recycled water system to demonstrate the interconnectivity of the two systems.

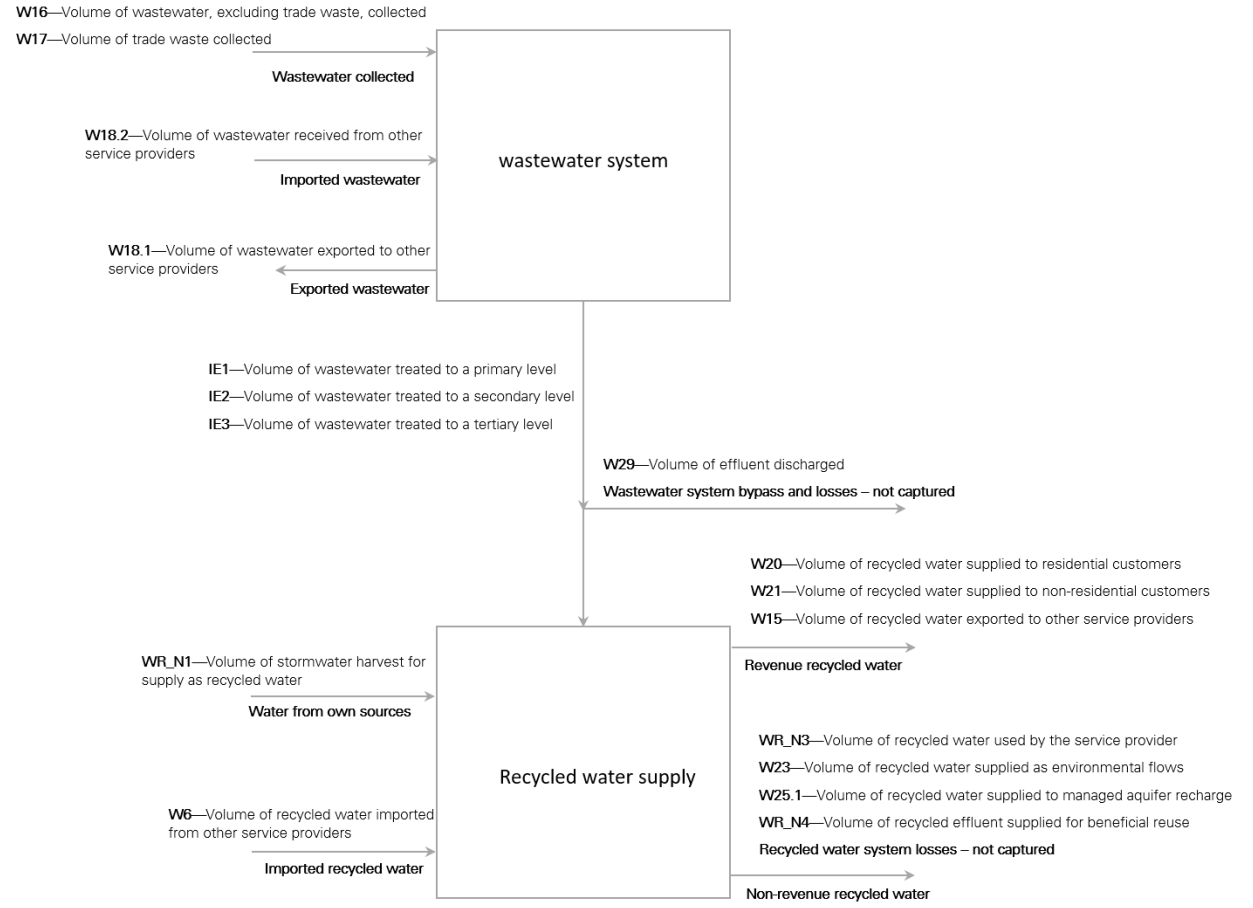
Recycled water conceptual balance

The recycled water system is a system used for the collection, transmission, treatment, storage and supply of recycled water collected by a utility.

The conceptualisation of the recycled water system for the provision of urban recycled water information is shown in Figure PN2.2. The figure illustrates the inflows and outflow of the

system for which information is collected. While the wastewater system is reported separately to the recycled water system, the figure depicts the wastewater system to illustrate the interconnectivity of the two systems.

Figure PN2.2
Wastewater and recycled water systems



10.3 Practice Note 3: Infrastructure Leakage Index (ILI)

The infrastructure leakage index (ILI) is the ratio of a utility's current annual real losses (CARL) to its unavoidable annual real losses (UARL) within the potable water supply system during the reporting year.

While the ILI is subjective in nature it is useful for understanding trends in leakage and has been adopted for state and national comparisons (metric benchmarking) and has also been adopted by the International Water Association (IWA) as the preferred indicator for international comparisons. The ILI applies only to the potable supply system.

Typically, the ILI is calculated using standard software packages. These packages include:

- Benchloss: available through the Water Service Association of Australia
- CheckCalcs or PIFastCalcs: available through the Wide Bay Water Corporation
- System Leakage Management Plan (SLMP): available through the Queensland Water Directorate – Queensland only

The software used to calculate the ILI often provides the ability to report both operational and financial water loss performance indicators. Indicators A9, A10 and A11 refer only to real losses.

ILI = CARL / UARL

Where ILI is the infrastructure leakage index

CARL is the current annual real losses (L/service connection/day)

UARL is the unavoidable annual real losses (L/service connection/day)

Estimating current annual real losses

To estimate CARL a utility may elect use the default values presented in Table PN3-1.

These defaults represent best practice for Australian conditions.

If a utility chooses to utilise values other than these defaults it must satisfy an auditor that the values used in the estimate of the utilities CARL are not excessive and that they are within the error band of ±25%. As a minimum, for under-registration of retail meters, the utility must provide the auditor with a profile of the meter fleet, including age and type and the sampling regime used to determine meter accuracy.

Unavoidable annual real losses (UARL) are a theoretical reference value representing the technical lower limit of leakage that could be achieved if all of today's best technology could be successfully applied. [32]

The **UARL** should be based on average system pressure measurements in the pressurised distribution system up to the point of customer metering.

UARL = (18 x Lm + 0.8 x Nc) x P

Where Lm = mains length (km),

[32] American Water Works Association (2012). IWA/AWWA Water Audit Method.

Nc = number of service connections

P = average system pressure (m)

Service connections

The number of **service connections** is *not* the same as the number of metered accounts or **connected properties**.

The number of service connections can be taken as being the number of metered accounts, minus the total of any sub-meters (after master meters, e.g., to shops and flats), plus the estimated number of unmetered service connections (e.g., fire service connections).

It is *not* acceptable to use the total connected properties value (C4) for calculating the infrastructure leakage index.

Table PN3.1 Default values for the calculation of the Current Annual Real Loss			
Parameter	**Comments**	**Default value**	**Additional notes**
Total potable water supplied	The total volume of potable water supplied is equal to the total volume water sourced for potable supply less the bulk potable water exports		
Unbilled unmetered authorised consumption	Any unmetered authorised consumption for which a bill is not issued to the consumer (e.g., process water at water treatment works, hydrants for mains flushing, fire services, etc.).	0.5% of water supplied	The default for unbilled unmetered authorised consumption does not include any allowance for process water at water treatment works, which should normally be metered.
Unauthorised consumption	Generally, this refers to illegal use. The water utility should be consistent across reporting years in calculating its CARL and, where appropriate, have supporting documentation to verify assumptions for the purpose of auditing.	0.1% of Water Supplied	
Under-registration of retail meters	Under registration refers to the error associated with flow metering and the underestimation of the volume of water delivered to a utility's customers.	Residential meters = 2.0% of residential metered consumption Non-residential meters = 2.0% of non-residential metered consumption	
Service connections	The number of service connections can be taken as being the number of metered accounts, minus the total of any sub-meters (after master meters, e.g., to shops and flats), plus the estimated number of unmetered service connections (e.g., fire service connections).		It is not acceptable to use the total connected properties value (C4) for calculating real losses performance indicators.

10.4 Practice Note 4: Build, Own, Operate, and Transfer (BOOT) schemes

Public Private Partnerships (PPPS) are collaborations between the public and private sectors to fund and develop public infrastructure projects.

Build, Own, Operate, and Transfer (BOOT) schemes are a form of PPP. Under a BOOT scheme the contract between the government and the private sector corporation specifies that the asset will be transferred to government after a defined period.

For the purposes of the National Performance Framework BOOT schemes should be treated as if they are owned and operated by the water utility.

Including BOOT schemes in operating costs

The costs associated with BOOT schemes should be reported according to accounting standards.

The utility should extract all capital costs from the operating cost of the BOOT and add the equivalent (likely to be estimated) replacement cost and depreciation values where appropriate in the survey reported values.

Operating costs for water utilities with one or more BOOT plants are divided into:

a) operating costs for the BOOT scheme/s
b) all other (non-BOOT) operating costs
c) depreciation associated with all non-BOOT assets.

Item (a) represents the payment made by the water business to the BOOT operator (usually a contractor).

This charge is made up of three components, which are determined by the BOOT operator, and may be able to be sourced from the original contract: the BOOT operator's operating costs, depreciation of the BOOT asset, and return on assets for the BOOT asset. These three components are dealt with as follows:

the BOOT operator's operating costs are added to item (b) above to make the total operating costs for the water utility

the depreciation of the BOOT asset is added to item (c) above to form the input to current cost depreciation, used in total costs.

The return on assets for the BOOT asset is used to determine the asset's value through back-calculation. This asset value is then added to the water businesses written down replacement cost of fixed assets. The return on assets for the BOOT asset is not included in the water utility's return on assets data.

10.5 Practice Note 5: The IWA Water Balance

The IWA Best Practice Water Balance is commonly used within the industry and has broad acceptance. Contextualising the water resources indicators within the IWA water balance framework is intended to aid in a shared understanding of the water resource indicators. See Figure PN5.1 (below).

Figure PN5.1
International Water Association (IWA) Water Balance with Additions

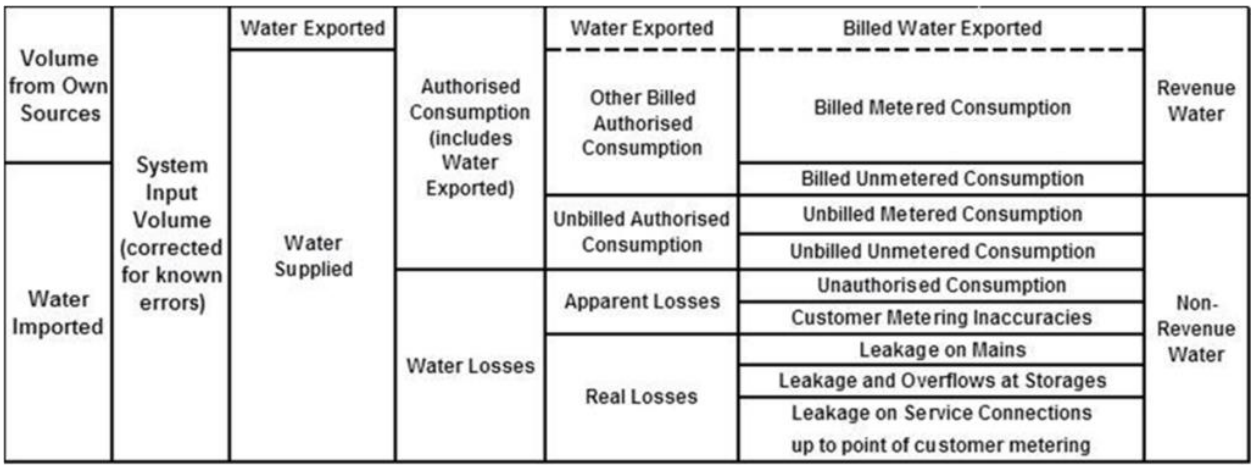


Table PN5.1 (below) summarises the IWA water balance classification of the sources and imports, supply and exports and production water resources indicators.

Table PN 5.1
International Water Association (IWA) Water Balance classifications

	Indicator	IWA Water balance classification
Sources and imports	**W1**—Volume of water self-sourced from climate-dependent surface water sources	Volume from own sources – drinking and non-drinking
	W2—Volume of water self-sourced from groundwater sources	Volume from own sources – drinking and non-drinking
	W3.1—Volume of water self-sourced from marine or estuarine water sources	Volume from own sources – drinking and non-drinking
	W5.3—Volume of drinking and non-drinking water, excluding recycled water, imported from other service providers	Water imported – drinking and non-drinking
	W6—Volume of recycled water imported from other service providers	Water imported – recycled
	WR_N1—Volume of stormwater harvested for supply as recycled water	Volume from own sources - recycled
	W5—Total volume of drinking and non-drinking water, including recycled water, imported from other service providers	Water imported – drinking, non-drinking and recycled

Table PN 5.1 International Water Association (IWA) Water Balance classifications		
	Indicator	**IWA Water balance classification**
	W7—Total volume of drinking and non-drinking water, excluding recycled water, self-sourced and imported from other service providers	System input volume – drinking and non-drinking
Supply and exports	**W8.3**—Volume of drinking and non-drinking water, excluding recycled water, supplied to residential customers	Other billed authorised consumption (i.e., billed metered and unmetered consumption) – drinking and non-drinking
	W9.3— Volume of drinking and non-drinking water, excluding recycled water, supplied to non-residential customers	Other billed authorised consumption (i.e., billed metered and unmetered consumption) – drinking and non-drinking
	WR_N2—Volume of drinking and non-drinking water, excluding recycled water, supplied for own use	Unbilled authorised consumption (i.e., unbilled metered and unmetered consumption)—a component of non-revenue water – drinking and non-drinking
	W14.3—Volume of drinking and non-drinking water, excluding recycled water, exported to other service providers	Water exported – drinking and non-drinking
	W31—Volume of drinking and non-drinking water, excluding recycled water, returned to surface water	System input volume correction – drinking and non-drinking
	W10.1— Volume of non-revenue drinking and non-drinking water, excluding recycled water	Non-revenue water – drinking and non-drinking
	W20—Volume of recycled water supplied to residential customers	Other billed authorised consumption (i.e., billed metered and unmetered consumption) – recycled water
	W21—Volume of recycled water supplied to non-residential customers	Other billed authorised consumption (i.e., billed metered and unmetered consumption) – recycled water
	W15—Volume of recycled water exported to other service providers	Water exported – recycled water
	WR_N3—Volume of recycled water supplied for own use	Unbilled authorised consumption (i.e., unbilled metered and unmetered consumption)—a component of non-revenue water – recycled water
	WR_N4— Volume of non-revenue recycled water supplied for beneficial reuse	Unbilled authorised consumption (i.e., unbilled metered and unmetered consumption)—a component of non-revenue water – recycled water
	W23—Volume of recycled water supplied as environmental flows	Unbilled authorised consumption (i.e., unbilled metered and unmetered consumption)—a component of non-revenue water – recycled water
	W25.1—Volume of recycled water supplied to managed aquifer recharge	Unbilled authorised consumption (i.e., unbilled metered and unmetered consumption)—a component of non-revenue water – recycled water
	W11—Total volume of urban water supplied	Water supplied – drinking, non-drinking and recycled water
	W26—Total volume of recycled water supplied	Water supplied – recycled water
Production	**W11.3**—Volume of drinking water produced for supply into the urban water supply system	Water supplied – drinking

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