5. Assets and operations

5.1. Average duration of an unplanned interruption: drinking water supply – C15

The average duration (minutes) of an unplanned interruption (C15) is the average time a customer is without water supply due to an unforeseen interruption that requires attention by the service provider.

Unplanned interruptions include scheduled interruptions that exceed the time limit given in the original notification. The indicator is a measure of customer service, the condition of the water network and how effectively the network is managed.

The average duration is influenced by the:

- scale of the event causing the interruption
- location of the interruption (for example, the proximity to a repair crew and the depth of the burst pipe)
- service provider's response policy for outlying areas
- number of maintenance and repair staff at the service provider's disposal.

Note that a single event affecting a small number of properties for a long duration can cause large annual variations in this indicator, especially for smaller service providers.

Following the 2020 NPR Framework Indicator Review, from 2024–25, C15 has not materially changed, and its historical data remains valid for comparative analysis (Table 1.1). Very small service providers that were added the NPR Framework, were not required to report on this indicator for the 2024–25 reporting year.

Data on the average duration of an unplanned interruption (water supply) for all active service providers reporting in 2024–25 is presented in Table A9, Appendix A.

5.1.1. Key findings

Table 5.1 shows a summary of average duration of unplanned interruptions by service provider size group. Very small service providers were not required to report data to this indicator for the 2024–25 reporting year. The median average duration of unplanned interruptions increased by 0.2% from 118.1 minutes in 2023–24 to 118.3 minutes in 2024–25 on the national scale. Almost half of the service providers (30 out of 61 reporting service providers) reported an increase in the average duration of unplanned interruptions in 2024–25. Four service providers in New South Wales (Queanbeyan–Palerang Regional Council, Port Macquarie Hastings Council, Clarence Valley Council and Dubbo Regional Council) within the Medium size group and one service provider in Queensland (Central Highlands Regional Council) within the Small size group reported no change from the previous year.

Tweed Shire Council (New South Wales) in the Medium size group reported the longest duration of an unplanned interruption in drinking water supply (265.0 minutes) and Livingstone Shire Council (Queensland) in the Small size group reported the shortest duration (18.1 minutes). Busselton Water (Western Australia) in the Small size group had the largest decrease from the previous year (73.2%, from 161.3 minutes in 2023–24 to 43.2 minutes in 2024–25). Armidale Regional Council

(New South Wales) in the Small size group reported the largest increase (from 16.0 minutes in 2023–24 to 116.0 minutes in 2024–25). It should be noted that the consistency of data reported by this service provider varies depending on the methodology applied. Gladstone Regional Council (Queensland) in the Medium size group also reported the second-largest increase (from 24.4 minutes in 2023–24 to 83.4 minutes in 2024–25)

Table 5.1 Overview of results: Average duration of an unplanned interruption: drinking water supply (minutes)

Service provider size group[b]	Range		No. service providers with increase/decrease from 2023–24		Median[a]		Change in median from 2023–24 (%)
	High	Low	Increase	Decrease	2023–24	2024–25	
Major	206.0	80.0	3	11	138.7	134.2	-3.2
	SA Water	Yarra Valley Water					
Large	257.7	45.0	11	1	102.5	119.8	16.9
	Redland City	Cairns					
Medium	265.0	20.0	8	8	101.0	90.0	-10.9
	Tweed	MidCoast Council					
Small	240.7	18.1	8	11	120.5	114.0	-5.4
	Whitsunday	Livingstone					
All size groups (national)	**265.0**	**18.1**	**30**	**31**	**118.1**	**118.3**	**0.2**
	Tweed	**Livingstone**					

Notes:

[a] Median average duration of an unplanned interruption: water (minutes) for each year is calculated for all active service providers that reported data for C15 in that year.

[b] Very small service providers (serving less than 10,000 connected properties) were not required to report data of average duration of an unplanned interruption for drinking water supply for the 2024–25 reporting year.

5.1.2. Results and analysis – Major size group

Figure 5.1 shows a ranked breakdown of the average duration of an unplanned interruption for the Major size group from 2020–21 to 2024–25. The figure highlights the large year-to-year variation in the indicator for all service providers in the Major size group that can result from a single major mains break. Out of 14 reporting service providers in the Major size group, only three reported an increase in the duration of unplanned interruptions from the previous year with Urban Utilities (Queensland) recording the highest increase of 13.7% (from 117.0 minutes in 2023–24 to 133.0 minutes in 2024–25) and Icon Water Limited (Australian Capital Territory) recording the lowest increase of 3.9% (from 118.1 minutes in 2023–24 to 122.7 minutes in 2024–25).

There are 11 Major service providers that reported decreases in the duration of an unplanned interruption in drinking water supply. Logan City Council (Queensland) experienced the largest decrease of 35.6% from 2023–24, reaching 163.6 minutes. Sydney Water Corporation (New South Wales) and Water Corporation – Perth had the minimum decreases (less than 1%) from 2023–24. SA Water Corporation (South Australia) reported the longest average duration of an unplanned interruption in drinking water supply and a notable (second-largest) decrease of 19.2% (from 255.0 minutes in 2023–24 to 206.0 minutes in 2024–25). TasWater (Tasmania) did not report to this indicator in 2024–25 due to a failure in auditing.

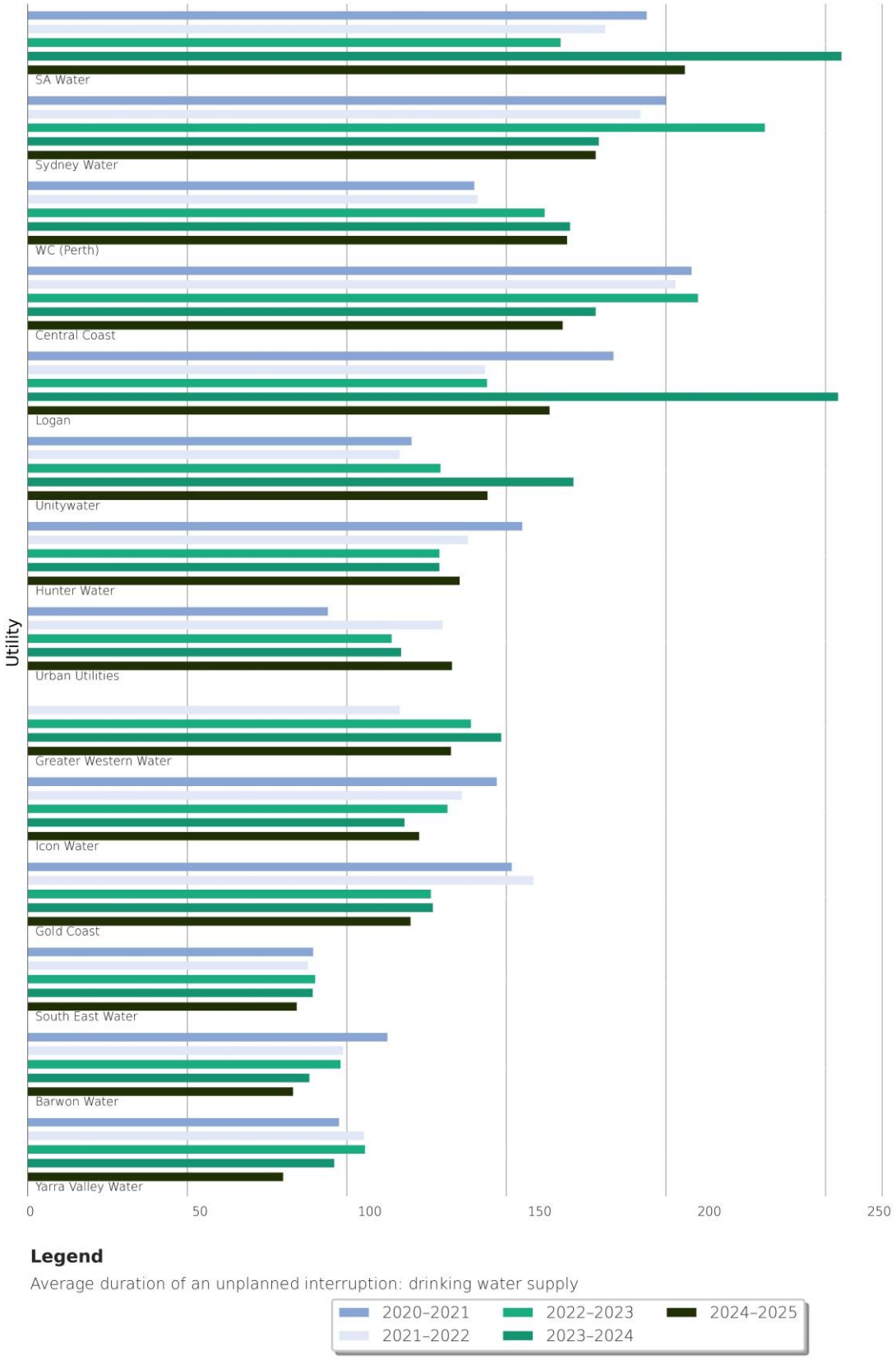

Figure 5.1 Average duration of an unplanned interruption: drinking water supply (minutes) – Major size group

5.2. Number of water main breaks per 100 km of water mains – A8

The number of water main breaks per 100 km of water mains (A8) is the total number of breaks, bursts and leaks in all distribution system mains[20], excluding recycled water systems and excluding breaks associated with headworks and transfer mains. It provides an indication of both customer service and the condition of the network. The number of main breaks is influenced by various factors, including:

- soil type
- rainfall
- pipe material
- age and condition of the network.

Following the 2020 NPR Framework Indicator Review, from 2024–25, the length of recycled water mains is excluded from the total length of water supply mains. A8 is calculated as the ratio of the number of water main breaks to the total length of water mains. With minor or no changes observed in the 2024–25 data for A8, its historical data remains valid for comparative analysis (Table 1.1).

Data on the number of water main breaks per 100 km of water mains for all service providers reporting in 2024–25 are shown in Appendix A, Table A10.

5.2.1. Key findings

Figure 5.2 shows that the national median number of main breaks in 2024–25 increased from 2023–24. The figure highlights a larger range of changes among service providers that have reported, compared to the previous year, as a result of the inclusion of 211 Very small service providers under the NPR Framework.

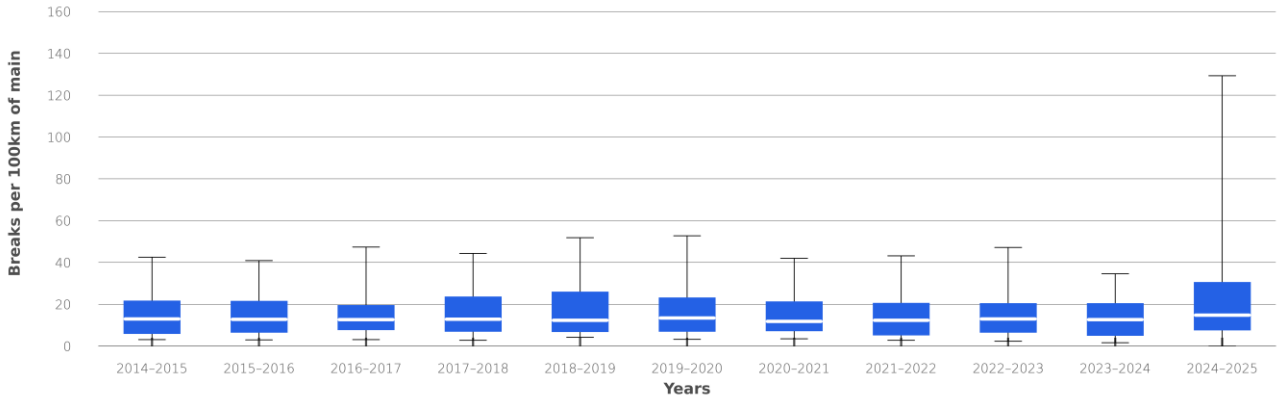

Figure 5.2 Number of water main breaks per 100 km of water mains

Table 5.2 shows a summary of the number of water main breaks per 100 km of water main by service provider size group. The range and median values are compared only across the Major, Medium, Large and Small size groups to maintain the validity of the analysis. Very small service providers are excluded from these comparisons as no historical data is yet available for this size group.

[20] The figure includes both drinking and non–drinking water mains.

Table 5.2 Overview of results: Number of water main breaks per 100 km of water mains (mains breaks/100 km)

Service provider size group	Range		No. service providers with increase/decrease from 2023–24		Median[a]		Change in median from 2023–24 (%)
	High	Low	Increase	Decrease	2023–24	2024–25	
Major	38.8 Yarra Valley Water	3.5 Unitywater	9	6	18.0	16.8	-6.2
Large	29.6 Coliban Water	2.1 WC (Mandurah)	7	5	15.0	15.9	5.7
Medium	50.4 GWMWater	2.8 Tamworth	15	6	11.6	11.7	0.3
Small	98.2 Southern Downs	0.0 Mount Barker	15	12	10.8	10.1	-6.1
All size groups except Very small[b]	**98.2 Southern Downs**	**0.0 Mount Barker**	**46**	**29**	**12.7**	**12.6**	**-0.4**
Very small	693.6 Blackall–Tambo	0.0 Multiple utilities	-	-	-	16.5	-

Notes:

[a] The median for water main breaks, burst and leaks per 100 km of water mains in each year was calculated using data from all service providers (dual-service and single-service providers) reporting data against A8 in that year.

[b] Service providers in the Very small size group started reporting under the NPR Framework in the 2024–25 reporting year. With no historical data for this size group, range and median values are compared only across the Major, Medium, Large and Small size groups to ensure the validity of the comparative analysis in the 2025 NPR.

The national median value accounting for the Major, Large, Medium and Small size groups slightly decreased by 0.4%, from 12.7 breaks per 100 km of water mains in 2023–24 to 12.6 breaks per 100 km of water mains in 2024–25. In 2024–25, there were decreases in the median value of main breaks per 100 km of water mains for the Major and Small size groups and an increase for the Large size group. The median value remained almost unchanged in the Medium size group.

The largest increase was reported in the Medium size group by Albury City Council (New South Wales) (from 2.9 in 2023–24 to 44.2 breaks per 100 km of water mains in 2024–25), whereas the Small size group reported the largest decrease of 100.0% (from 7.27 in 2023–24 to 0 breaks per 100 km of water mains in 2024–25) in Mount Barker District Council (South Australia).

The median value for the Very small size group was 16.5 breaks per 100 km of water mains in 2024–25. Blackall–Tambo Regional Council (Queensland) reported the highest number of breaks per 100 km (639.6) while several service providers reported zero values. Some of those service providers had no breaks in their water mains (e.g. Coorong District Council in South Australia), and some supply only recycled water for non–residential or own use (e.g. Berri Barmera Council in South Australia). From 2024–25, the length of recycled water mains has been excluded from the total length of water mains, following the 2020 NPR Framework Indicator Review (Table 1.1). Therefore, Very small service providers that supply only recycled water reported no breaks. Additionally, Very small service providers generally have shorter water mains than other size

groups, some with less than 100 km of water mains. For these service providers, this indicator can appear to inflate the number of main breaks.

5.2.2. Results and analysis – Major size group

Figure 5.3 shows a ranked breakdown of the water main breaks for each service provider in the Major size group from 2020–21 to 2024–25.

The Major size group reported a decrease of 6.2% in the number of breaks per 100 km of water mains, with nine out of the 15 Major service providers reporting an increase from 2023–24. Logan City Council (Queensland) reported the largest increase (from 3.5 in 2023–24 to 9.9 breaks per 100 km of water mains in 2024–25), while the Hunter Water Corporation (New South Wales) reported the largest decrease (40.7%; from 22.9 in 2023–24 to 13.6 breaks per 100 km of water mains in 2024–25). Yarra Valley Water Corporation (Victoria) reported the highest number of breaks per 100 km of water mains (38.8), showing an increase of 12.1% from the previous year. Unitywater (Queensland) reported the lowest number (3.5), showing a decrease of 10.4% from 2023–24.

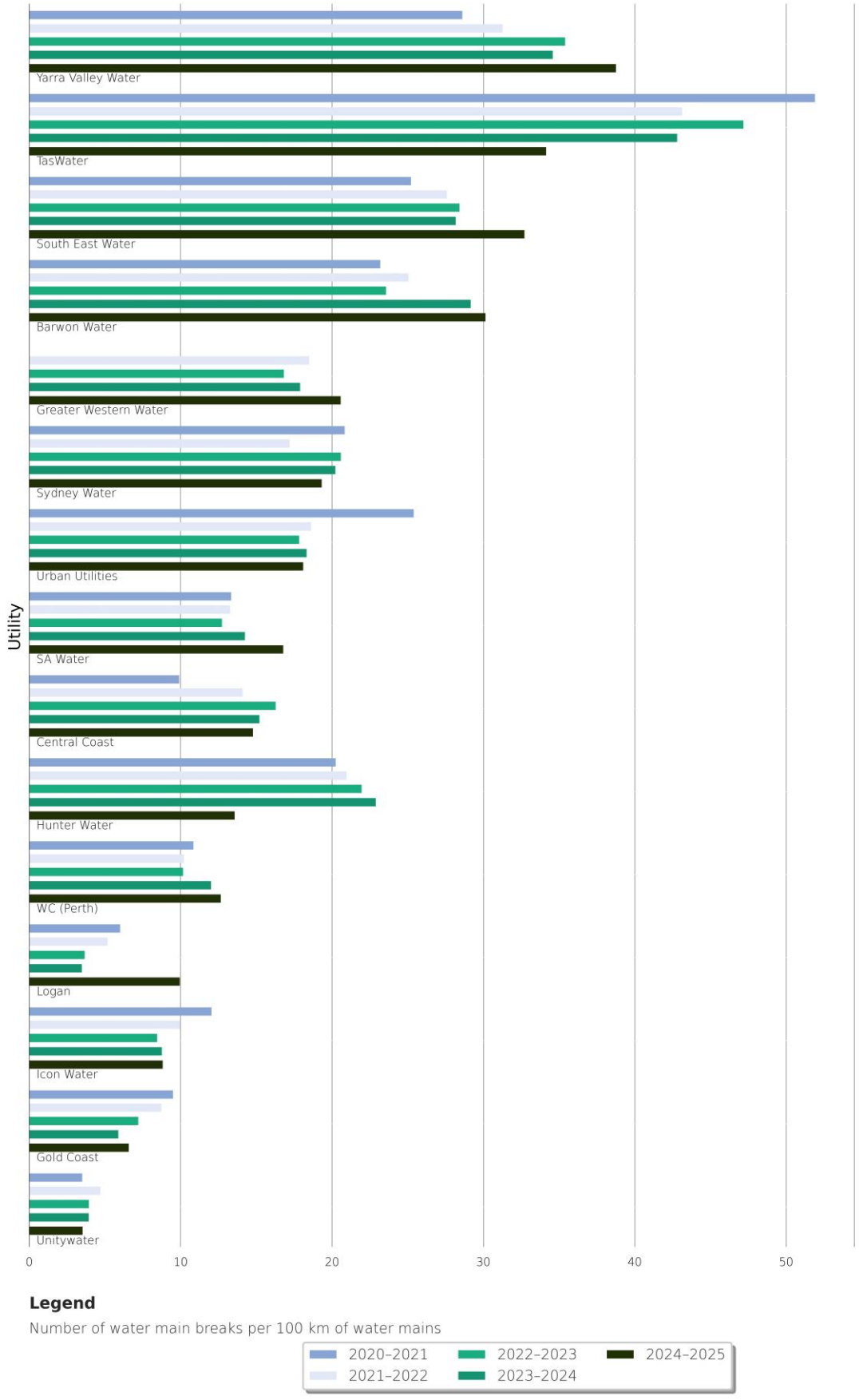

Figure 5.3 Water main breaks per 100 km of water mains – Major size group

5.3. Number of sewerage main breaks, leaks and chokes per 100 km of sewer mains – A14 and number of property connection sewerage breaks, leaks and chokes per 1,000 properties – A15

Indicator A14 reports the number of sewerage breaks, leaks and chokes per 100 km of sewer mains, and A15 reports the number of property connection sewerage breaks and chokes per 1,000 properties. The indicators are presented together to provide a complete picture of sewer system performance as service providers have sewer networks with various configurations.

- Some service providers have a very long property connection (for example, from the customer's sanitary drain to the middle of a road), while others have a very short or no property connection (that is, the sanitary drain may connect straight to the sewer main, which runs down an easement at the back of the property).
- Some service providers do not own[21] or maintain the property connections and therefore do not report on them in accordance with the definition of the indicator.
- Other service providers are responsible for only a portion of property sewer connections and so only report results on those for which they are responsible.

The performance of a sewerage system is influenced by:

- soil type
- pipe material
- sewerage configuration
- age
- tree root intrusion
- management of trade waste
- volume of sewage inflows
- rainfall.

Results reflect both the condition of the network and the level of customer service. For the reasons given above, care should be taken in comparing the performance of service providers against each other using these indicators.

Following the 2020 NPR Framework Indicator Review, from 2024–25, A14 and A15 have not materially changed, and their historical data remains valid for comparative analysis (Table 1.1).

Data on sewerage main breaks, leaks and chokes for all service providers reporting in 2024–25 are presented in Appendix A, Table A11. Property connection sewerage breaks, leaks and chokes for all service providers reporting in 2024–25 are presented in Appendix A, Table A12.

5.3.1. Key findings

Table 5.3 shows a summary of the number of sewerage main breaks, leaks and chokes per 100 km of sewer mains by service provider size group. In 2024–25, there was a median of 16.8 sewerage main breaks, leaks and chokes per 100 km of sewer main considering the Major, Large, Medium and Small service providers, representing a 14% increase from 2023–24 (Table 5.3) with 43 service providers reporting an increase and 32 service providers reporting a decrease. The

[21] For such utilities, the property owner is responsible for the property's sewer connections.

decrease in the median number of sewerage breaks, leaks and chokes was recorded in the Large and Small size groups. The Medium size group recorded the highest increase in the median value. Median value for the Very small size group was 11.7 sewerage main breaks, leaks and chokes per 100 km of sewer main, with Carrathool Shire Council (New South Wales) reporting the highest value. It should be noted that Very small service providers generally have shorter sewer mains than other size groups, some with less than 100 km of sewer mains. For these service providers, this indicator can appear to inflate the number of main breaks.

Across the Major, Large, Medium and Small size groups, Armidale Regional Council (New South Wales) and Water Corporation–Busselton (Western Australia) both from the Small size group respectively reported the highest number (125.5) and the lowest number (1.5) of sewerage breaks, leaks and chokes per 100 km of sewer main.

Table 5.3 Overview of results: Number of sewerage main breaks, leaks and chokes per 100 km of sewer mains (breaks, leaks and chokes/100 km)

Service provider size group	Range		No. service providers with increase/decrease from 2023–24		Median[a]		Change in median from 2023–24 (%)
	High	Low	Increase	Decrease	2023–24	2024–25	
Major	63.0	4.3	9	6	25.8	26.9	4
	TasWater	Unitywater					
Large	45.6	3.0	6	6	13.3	11.8	-11
	Townsville	Redland City					
Medium	91.2	1.6	14	7	10.6	19.2	81
	Albury	Mackay					
Small	125.5	1.5	14	13	15.0	13.6	-10
	Armidale	WC (Busselton) (WW)					
All size groups except Very small[b]	**125.5**	**1.5**	**43**	**32**	**14.8**	**16.8**	**14**
	Armidale	**WC (Busselton) (WW)**					
Very small	435.1	0.0	-	-	-	11.7	-
	Carrathool	Multiple utilities					

Notes:

[a] The median number of sewerage main breaks, leaks and chocks (per 100 km of sewer main) in each year is calculated using data from all service providers (dual-service and single-service providers) reporting data against A14 in that year.

[b] Service providers in the Very small size group started reporting under the NPR Framework in the 2024–25 reporting year. With no historical data for this size group, range and median values are compared only across the Major, Medium, Large and Small size groups to ensure the validity of the comparative analysis in the 2025 NPR.

Table 5.4 shows a summary of the property connection sewerage breaks, leaks and chokes per 1,000 properties by service provider size group. The range and median values in both tables are compared only across the Major, Medium, Large and Small size groups to maintain the validity of the analysis. Very small service providers are excluded from these comparisons as no historical data is yet available for this size group.

Table 5.4 Overview of results: Number of property connection sewerage breaks, leaks and chokes per 1,000 properties (breaks, leaks and chokes/1,000 properties)

Service provider size group	Range		No. service providers with increase/decrease from 2023–24		Median[a]		Change in median from 2023–24 (%)
	High	Low	Increase	Decrease	2023–24	2024–25	
Major	33.4 SA Water	0.2 Sydney Water	7	7	3.8	4.2	10
Large	6.5 Townsville	0.5 Gippsland Water	7	4	2.6	3.5	35
Medium	26.9 GWMWater	0.6 Multiple utilities	14	6	3.3	6.1	86
Small	32.3 Armidale	0.2 Mount Barker	12	8	3.4	3.6	6
All size groups except Very small[b]	**33.4** **SA Water**	**0.2** **Multiple utilities**	**40**	**25**	**3.4**	**5.1**	**49**
Very small	112.2 Carrathool	0.0 Multiple utilities	-	-	-	3.4	-

Notes:

[a] The median number of property connection sewerage breaks, leaks and chokes per 1,000 properties in each year is calculated using data from all service providers (dual-service and single-service providers) reporting data against A15 in that year.

[b] Service providers in the Very small size group started reporting under the NPR Framework in the 2024–25 reporting year. With no historical data for this size group, range and median values are compared only across the Major, Medium, Large and Small size groups to ensure the validity of the comparative analysis in the 2025 NPR.

The median of property connection sewerage breaks, leaks and chokes per 1,000 properties across the Major, Large, Medium and Small service providers showed a 49% increase from the previous year. An increase was reported by 40 service providers, and 25 service providers reported a decrease. In 2024–25, all size groups (excluding the Very small group) showed an increase in the median number of property connection sewerage breaks, leaks and chokes per 1,000 properties, with the Medium size group showing the largest increase followed by the Large size group. The median value for the Very small size group was 3.4 property connection sewerage breaks, leaks and chokes per 1,000 properties, with Carrathool Shire Council (New South Wales) reporting the highest value. It should be noted that Very small service providers serve less connected properties than other size groups, some even less than 1,000 properties. For these service providers, this indicator can appear to inflate the number of property connection sewerage breaks, leaks and chokes per 1,000 properties.

Across the Major, Large, Medium and Small size groups, SA Water Corporation (South Australia) from the Major size group, reported the highest number of property connection sewerage breaks, leaks and chokes per 1,000 properties (33.4). Sydney Water Corporation (New South Wales) from the Major size group and Mount Barker District Council (South Australia) from the Small size group both reported the lowest number of property connection sewerage breaks, leaks and chokes per 1,000 properties (0.2).

5.3.2. Results and analysis – Major size group

Figure 5.4 shows a ranked breakdown of the sewerage main breaks, leaks and chokes (per 100 km of sewer mains) for each Major service provider from 2020–21 to 2024–25. Figure 5.5 shows a ranked breakdown of property connection sewerage breaks, leaks and chokes per 1,000 properties.

Six of the 15 Major service providers reported a decrease and nine reported an increase in sewerage mains breaks, leaks and chokes per 100 km of sewer mains. An equal number of service providers (seven) reported an increase or a decrease in the number of property connection sewerage breaks, leaks and chokes per 1,000 properties from 2023–24 to 2024–25.

Compared to the previous year, Icon Water Limited (Australian Capital Territory) reported the largest increase in sewerage breaks, leaks and chokes per 100 km of sewer mains (42.5%, Figure 5.4) and Logan City Council (Queensland) reported the largest increase in property connection sewerage breaks, leaks and chokes per 1,000 properties (63.6%, Figure 5.5). Unitywater (Queensland) reported the largest decrease in both sewerage breaks, leaks and chokes per 100 km of sewer mains (28.3%, Figure 5.4) and property connection sewerage breaks, leaks and chokes per 1,000 properties (30.0%, Figure 5.5).

TasWater (Tasmania) reported the largest number of sewerage breaks, leaks and chokes per 100 km of sewer main (63.0, Figure 5.4) which was 1.3% lower than 2023–24. Unitywater (Queensland) reported the smallest number of sewerage breaks, leaks and chokes per 100 km of sewer main (4.3, Figure 5.4). SA Water Corporation (South Australia) reported the largest number of property connection sewerage breaks, leaks and chokes per 1,000 properties (33.4, Figure 5.5) while Sydney Water Corporation (New South Wales) had the smallest (0.2, Figure 5.5).

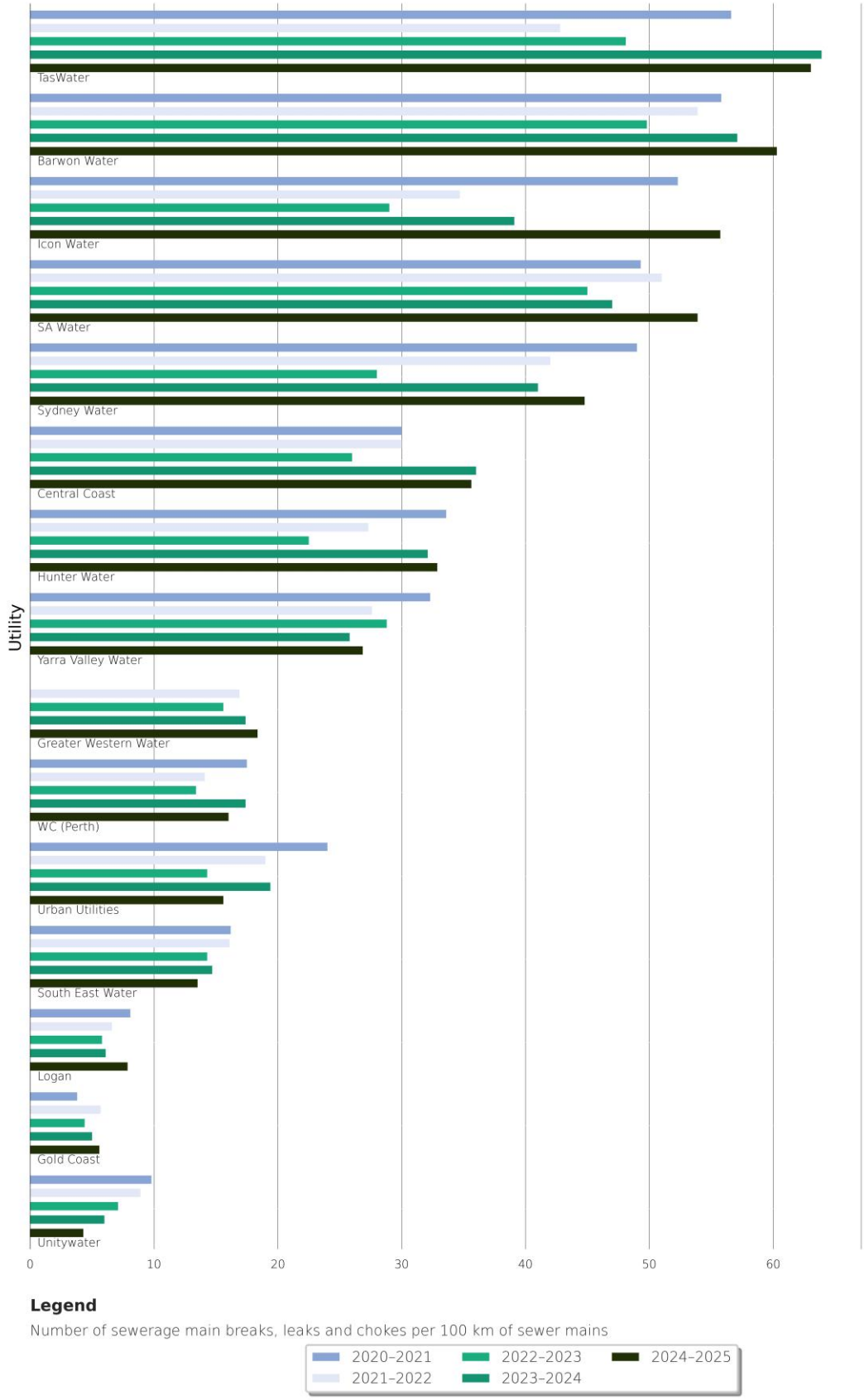

Figure 5.4 Sewerage main breaks, leaks and chokes per 100 km of sewer mains – Major size group

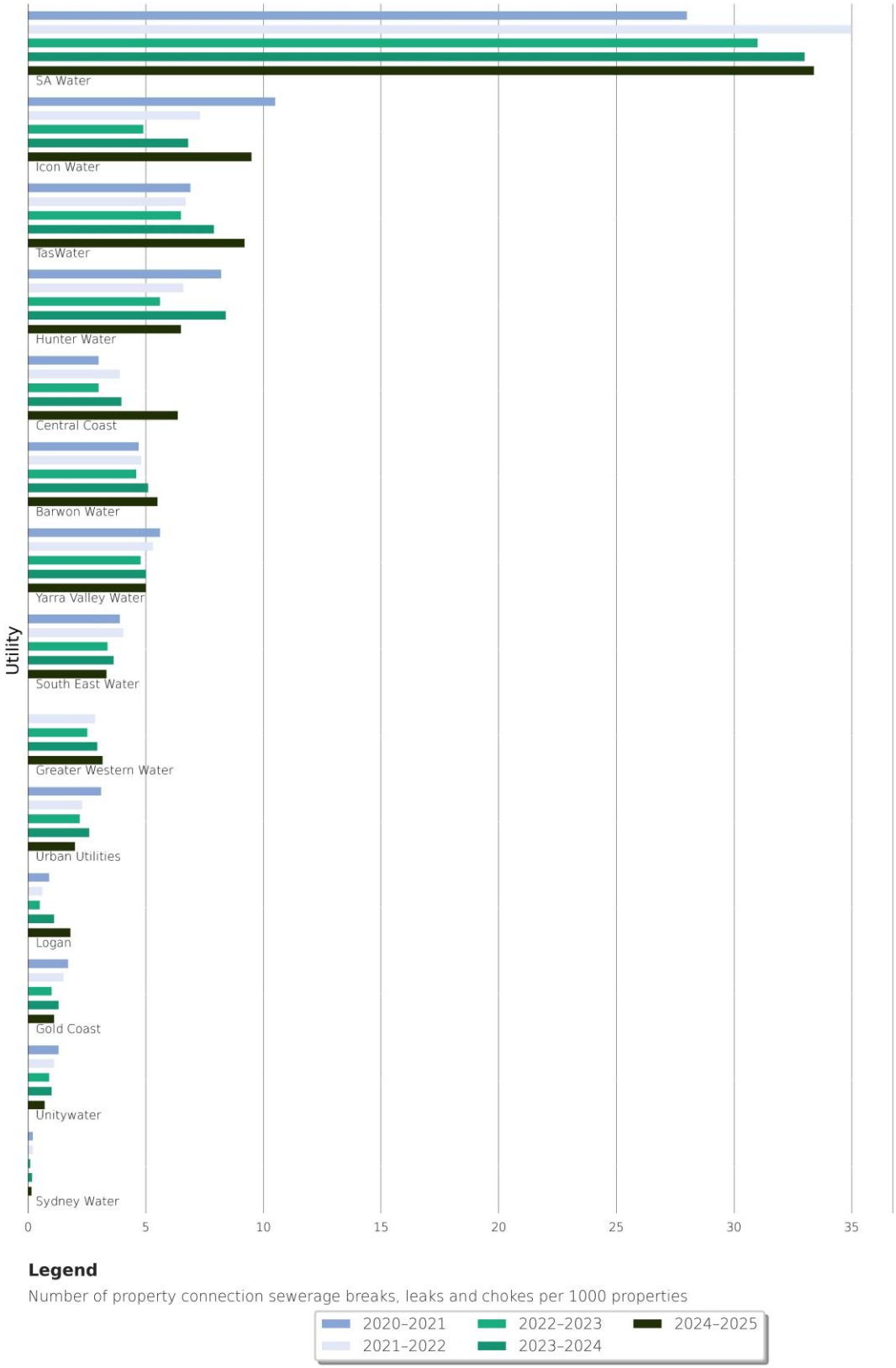

Figure 5.5 Property connection sewerage breaks, leaks and chokes per 1,000 properties – Major size group

5.4. Real losses, per service connection, from the drinking water supply system – A10

'Real' losses (A10) are leakages and overflows from water mains, service reservoirs and service connections before the customer meter (L/service connection/day). This indicator excludes metering errors, unauthorised consumption (apparent losses), and unbilled authorised consumption (for example, water used for firefighting). Performance of this indicator may be influenced by the condition of mains, infrastructure and water pressure.

Real losses are estimated using a range of assumptions, including assumed errors in metered water deliveries, estimates of unmetered components, and metering of night flows, and may not be as accurate as other indicators (such as water main breaks) when comparing service providers.

Following the 2020 NPR Framework Indicator Review, from 2024–25, A10 has not materially changed, and its historical data remains valid for comparative analysis (Table 1.1).

Real loss data for all service providers reporting in 2024–25 is presented in Appendix A, Table A13.

5.4.1. Key findings

Table 5.5 shows a summary of the real losses by service provider size group. Very small service providers were not required to report data to this indicator for the 2024–25 reporting year.

Table 5.5 Overview of results: Real losses, per service connection, from the drinking water supply system (L/service connection/day)

Service provider size group[b]	Range		No. service providers with increase/decrease from 2023–24		Median[a]		Change in median from 2023–24 (%)
	High	Low	Increase	Decrease	2023–24	2024–25	
Major	100.0	39.0	5	8	69.0	62.7	-9
	Greater Western Water	Icon Water					
Large	237.0	32.0	4	8	78.5	72.0	-8
	P&W (Darwin)	Toowoomba					
Medium	287.3	1.3	8	11	75.7	59.6	-21
	Mackay	Albury					
Small	475.0	7.2	13	11	104.5	124.0	19
	Cassowary Coast	Western Downs					
All size groups (national)	**475.0**	**1.3**	**30**	**38**	**75.9**	**72.0**	**-5**
	Cassowary Coast	**Albury**					

Notes:

[a] The median real losses (L/service connection/day) for each year are calculated using data from all service providers (dual-service and single-service providers) reporting data against A10 in that year.

[b] Very small service providers (serving less than 10,000 connected properties) were not required to report data of real losses, per service connection, from the drinking water supply system for the 2024–25 reporting year.

From 2023–24 to 2024–25, the national median across all size groups decreased by 5% to 72.0 L/service connection/day. An increase was reported by 30 service providers, and 38 service providers reported a decrease.

As in previous years, Cassowary Coast Regional Council (Queensland) in the Small size group reported the highest real losses among all service providers (475.0 L/service connection/day in 2024–25), with a 3.8% increase from the previous year. High losses for this service provider are due to long mains, long periods of wet weather creating difficult conditions for leak detection, and aging infrastructure. Albury City Council (New South Wales) in the Medium size group reported the lowest real losses across the country, at 1.3 L/service connection/day, representing also the largest decrease of 96.0% from the previous year.

Figure 5.6 shows a box-and-whisker plot of the real losses for all service providers reporting A10 for a given reporting year from 2014–15 to 2024–25. The figure highlights a slightly larger range of changes among reporting service providers compared to the previous year. The median for 2024–25 has decreased by 5% from 2023–24. Only the Small size group reported an increase (19%) in the median value with the Medium size group reporting the largest decrease 21% from 2023–24.

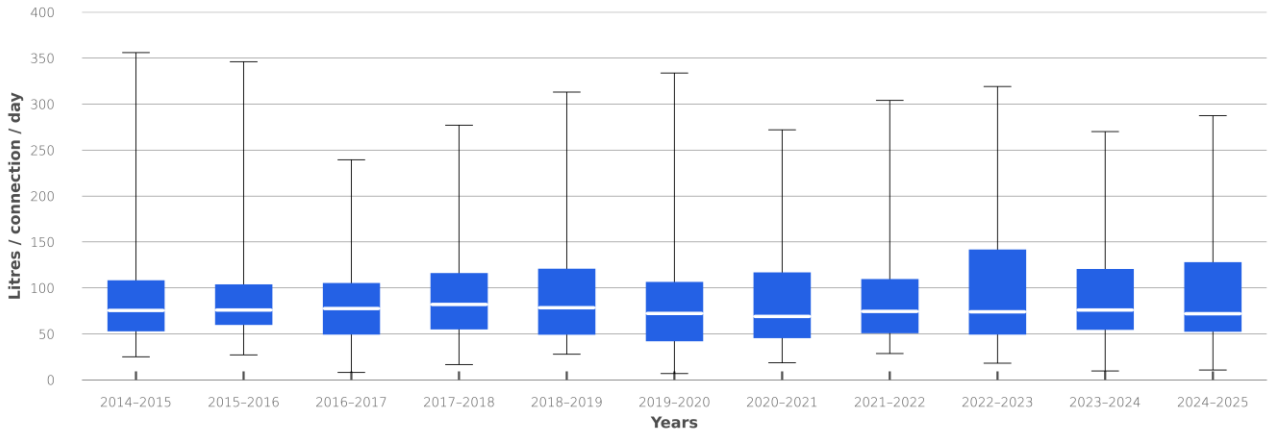

Figure 5.6 Real losses, per service connection, from the drinking water supply system (L/service connection/day)

5.4.2. Results and analysis – Major size group

Figure 5.7 shows a ranked breakdown of the real losses per annum for each Major service provider from 2020–21 to 2024–25. Five service providers reported an increase in real losses from 2023–24, while South East Water Corporation (Victoria) remained unchanged. Logan City Council (Queensland) reported the highest increase (53.7%; from 39.3 L/service connection/day in 2023–24 to 60.4 L/service connection/day in 2024–25). Conversely, Icon Water Limited (Australian Capital Territory) reported the highest decrease (40.9%; from 66.0 L/service connection/day in 2023–24 to 39.0 L/service connection/day in 2024–25). This decrease is primarily due to continued efforts to enhance meter reader performance, reduce estimated reads (particularly for Key Account Customers), improve data accuracies in meter and billing system, expedite defective meter replacements, and upgrade synchronisation of meter installation and replacement information across systems. TasWater (Tasmania) did not report to this indicator in 2024–25 due to a failure in auditing.

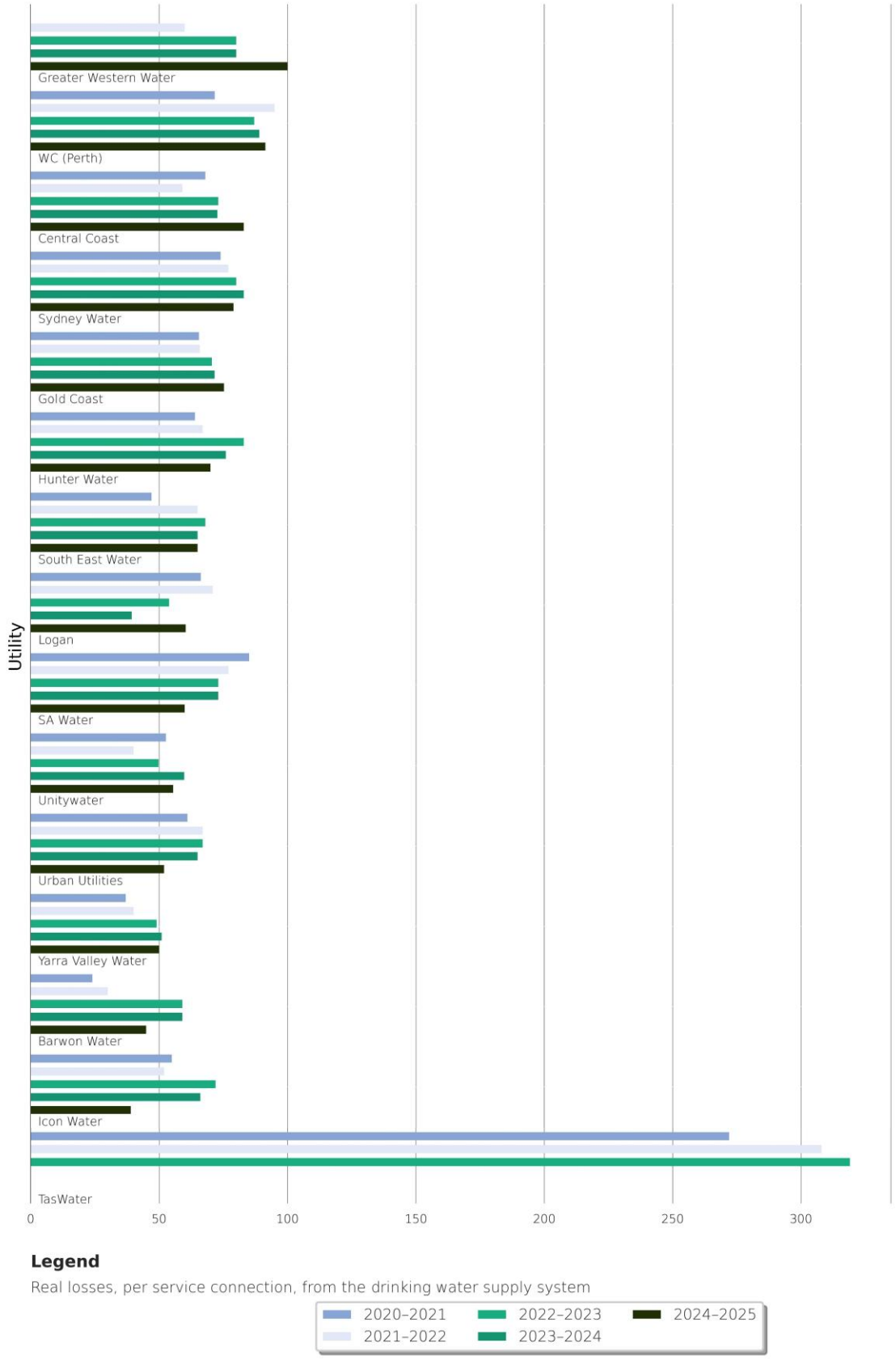

Figure 5.7 Real losses, per service connection, from the drinking water supply systems (L/service connection/day) – Major size group