

Queensland water and sewerage service provider performance comparative report

Financial year 2014–2015

July 2016

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Summary

This publication is the first comparative report released by the Department of Energy and Water Supply. Various entities across Queensland (referred to as service providers) are responsible for the delivery of water and sewerage services, and this report summarises their performance as measured against a range of key performance indicators (KPIs). A comparative report will be released annually.

This first report is based on data submitted by 73 service providers against a set of KPIs for the 2014–15 financial year. The submission of data is mandatory under the *Water Supply (Safety and Reliability) Act 2008*, and data is collected on infrastructure, financial sustainability, customer service, water security and availability. The report aims to provide both service providers and their customers with information on how the provision of their water and sewerage services compares to other service providers around the state. Over time, this report will highlight the performance of individual service providers by benchmarking similar providers, and support improvements in service provider performance and efficiency by continuing to provide transparent data.

As this is the first year of mandatory reporting, this report will provide a summary of water and sewerage services across Queensland, with a minimal number of comparisons. Over time, more detailed comparisons will be made as the framework matures and the volume and accuracy of data becomes more reliable. The regulator will support providers to achieve compliance with these requirements through education, information-sharing and compliance monitoring.

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1. Introduction

The *Queensland service provider performance comparative report: financial year 2014–2015* presents data as reported by 73 service providers. The data is received under a regulatory framework that requires each service provider to report against specific key performance indicators (KPIs) related to their service size and function. Data will be collected for each financial year and is required to be reported by 1 October immediately following the end of the financial year. It is the responsibility of each service provider to ensure the accuracy of the data provided. The regulatory requirements were introduced in 2014 and, hence, this report is based on 1 year of data for the 2014–15 financial year. Given this is the first year of reporting, this report will focus on providing a summary of water and sewerage services across Queensland, with a limited number of comparisons. To facilitate ‘fair’ comparisons, service providers have been grouped (according to their number of connections¹) into three groups as detailed in section 3. Further work is currently being undertaken by the department to group similar service providers using more than just connection numbers as a basis. This will further improve the fairness of comparisons for future reports.

It should be noted that the data in this report has not been audited and the responsibility for providing accurate data rests with individual service providers. While the department gave service providers the opportunity to verify and amend data following the original submission, the data discussed in this report is presented as received.

The KPIs cover a range of measures and are organised into ‘series’. The ‘general’ series of measures includes length of mains, capacity of water treatment plants, volume of water sourced and produced, daily demand and number of connections. Other KPIs capture series measures of water security (including capacity to meet demand and contingency supplies), finance and customer service standards.

2. Performance reporting regulatory framework

In Queensland, service providers are regulated under the *Water Supply (Safety and Reliability) Act 2008* (the Act), which compels service providers to ensure the delivery of safe and reliable water to customers. A thorough review of the Act in 2013, aimed at reducing red tape and regulatory burden, resulted in the removal of a number of provisions in the Act that required service providers to develop and implement:

- strategic asset management plans
- system leakage management plans
- drought management plans
- outdoor water conservation plans.

These planning requirements were replaced by a mandatory performance reporting framework. The framework was developed based on the National Performance Reporting Framework and focuses on collecting data about:

- financial sustainability and viability
- customer service standards
- water demand and availability.

Using this data, the department can then release information that details how a service provider compares with other service providers across the state, and how the industry overall is managing particular aspects of service delivery and sustainability.

The performance reporting framework was introduced into the Act in 2014. Consequently, service providers submitted their first performance report in October 2015 for the 2014–15 financial year. This comparative report is based upon that initial data.

¹ A ‘connection’ means a property that is supplied with water or sewerage services, or both.

3. Queensland water service providers

In Queensland, a large proportion of water and sewerage services are delivered by local government, with a small percentage of state or privately owned providers. The types of services provided include potable and non-potable water, recycled water and sewerage, and local circumstances can influence which services are provided. A total of 76 service providers were required to report against the KPIs. The actual response rate was 96%. There are, however, some gaps in the KPI data because the responding service providers did not provide information for all KPIs.

The following service providers did not report their data or submitted data too late for it to be adequately considered in this report:

- Doomadgee Aboriginal Shire Council
- Mornington Shire Council
- Napranum Aboriginal Shire Council.

The 73 providers that did respond manage 261 individual potable water schemes, 48 non-potable water schemes and 189 sewerage schemes.

There are many factors and challenges that impact service providers and influence their operations and service delivery. Some of these factors cannot be controlled by the service provider and must be taken into account when considering this report.

The challenges faced by service providers include remoteness, climate, weather patterns, access to skilled and experienced staff, population growth and contraction, constrained capital and, in some cases, limited opportunities for economies of scale. These challenges can have significant impacts on the performance of different service providers across a range of indicators. For example, the provision of reasonably priced and good quality drinking water is the aim for all providers; however, this can be more difficult and costly for small and/or remote providers or providers with constrained water sources.

For the purposes of comparing data in this report, service providers have been divided into three groups based on connections alone. Further work is being undertaken to establish groups based on a broader set of characteristics. These newly established groups will enable more appropriate comparisons to be undertaken in future comparative reports.

Table 1: The three groups of service providers with potable water connections

Connections	Service providers	
1. Small service provider (1–1000 connections)	Aurizon Operations Limited	Kowanyama Aboriginal Shire Council
	Aurukun Shire Council	Lockhart River Aboriginal Shire Council
	Barcoo Shire Council	Mapoon Aboriginal Shire Council
	Blackall-Tambo Regional Council	McKinlay Shire Council
	Boulia Shire Council	Department of Infrastructure, Local Government and Planning for Northern Peninsula Area Regional Council
	Bulloo Shire Council	Palm Island Aboriginal Shire Council
	Burke Shire Council	Paroo Shire Council
	Carpentaria Shire Council	Pormpuraaw Aboriginal Shire Council
	Cherbourg Aboriginal Shire Council	Quilpie Shire Council
	Cloncurry Shire Council	Richmond Shire Council
	Cook Shire Council	Torres Shire Council
	Croydon Shire Council	Winton Shire Council
	Diamantina Shire Council	Woorabinda Aboriginal Shire Council
	Etheridge Shire Council	Wujal Wujal Aboriginal Shire Council
	Flinders Shire Council	Yarrabah Aboriginal Shire Council
	Hope Vale Aboriginal Shire Council	
2. Medium service provider (1001–25 000 connections)	Balonne Shire Council	Burdekin Shire Council
	Banana Shire Council	Central Highlands Regional Council
	Barcaldine Regional Council	Douglas Shire Council
	Charters Towers Regional Council	Isaac Regional Council
	Goondiwindi Regional Council	Mt Isa City Council
	Hinchinbrook Shire Council	South Burnett Regional Council
	Longreach Regional Council	Southern Downs Regional Council
	Maranoa Regional Council	Tablelands Regional Council
	Mareeba Shire Council	Western Downs Regional Council
	Murweh Shire Council	Cassowary Coast Regional Council
	North Burnett Regional Council	Gladstone Regional Council
	RTA Weipa Pty Ltd	Gympie Regional Council
	Torres Strait Island Regional Council	Livingstone Shire Council
		Whitsunday Regional Council
3. Large service provider (more than 25 000 connections)	Bundaberg Regional Council	Redlands City Council
	Cairns Regional Council	Rockhampton Regional Council
	Gold Coast City Council	Toowoomba Regional Council
	Logan City Council	Townsville City Council
	Mackay Regional Council	Unitywater
	Queensland Urban Utilities	Wide Bay Water

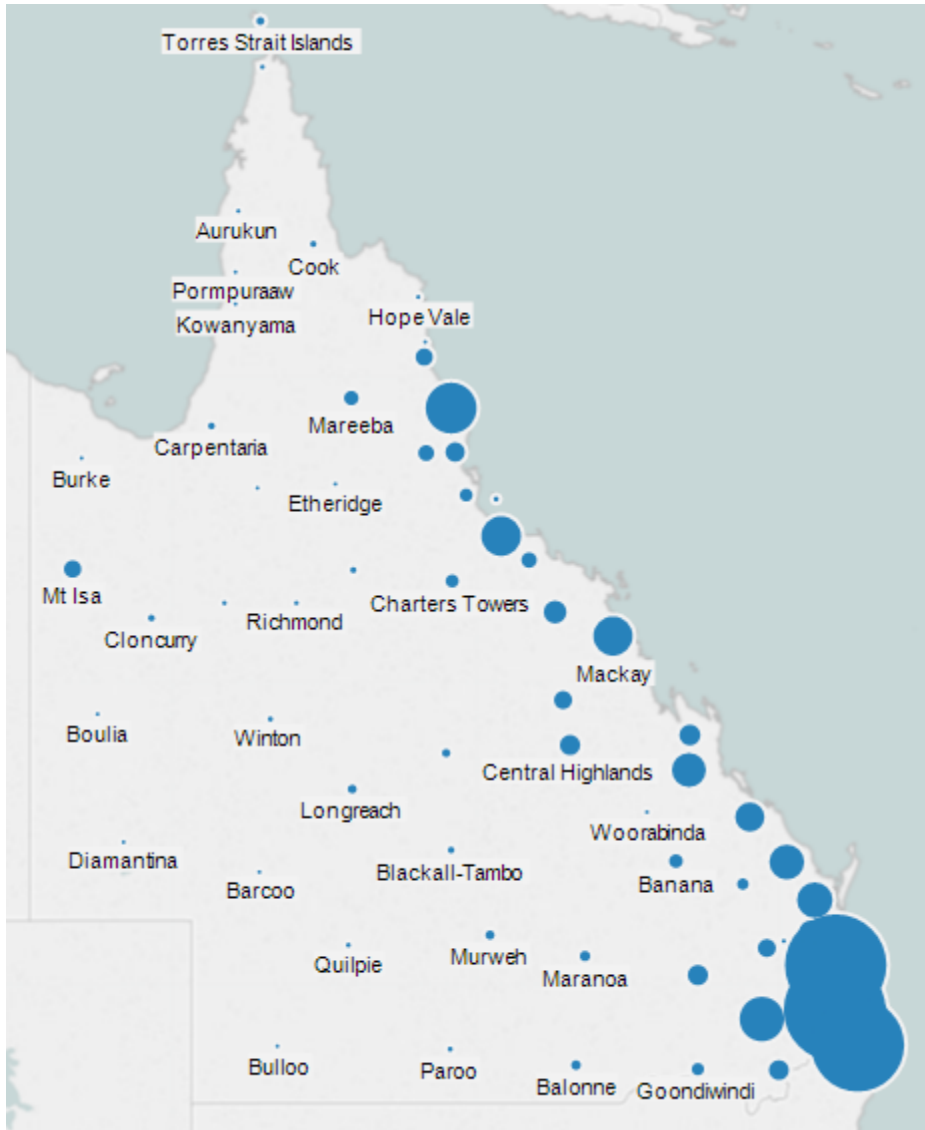


Figure 1: Distribution of service providers across Queensland

4. Overview of sewerage and water services

A number of KPIs in the first series, 'general', collected data on general service delivery in Queensland, including information on:

- infrastructure for providing water or sewerage services (treatment plants, available storage, pipework)
- volumes of water sourced per reporting period by service providers (e.g. from rivers, dams, bores, desalination, recycled water)
- numbers of properties serviced
- volume of water supplied to properties.

The data collected from the first series is also used in combination with other KPIs to consider financial sustainability and the overall capacity for the water service provider to supply sufficient water for the community's needs.

With regards to **sewerage services** in Queensland, 1 501 886 residential properties and 221 913 non-residential properties are serviced by approximately 216 sewerage treatment plants through 22 736 km of pipework.

With regards to **water services** in Queensland:

- 563 362 ML² of water is sourced from lakes, dams, rivers and other surface water supplies for potable and raw/partially treated schemes
- 52 674 ML of water is sourced from bores, aquifers and other ground supplies for potable and raw/partially treated schemes
- 1432 ML of water is sourced through desalination of marine water
- 37 914 ML of recycled water is supplied to properties from reported recycled water schemes
- 564 074 ML of drinking water is produced by water treatment plants
- 350 946 ML of water is supplied to residential properties and 175 505 ML water is supplied to industry, commercial and other non-residential properties through 42 146 km of pipework for potable and raw/partially treated schemes
- 1 715 519 residential properties are connected to a potable water scheme
- 48 656 ML of water is deemed ‘non-revenue water’ (leakage within the system, firefighting, burst pipes etc.)—this is approximately 10% of water supplied to residential and non-residential customers for potable water schemes.

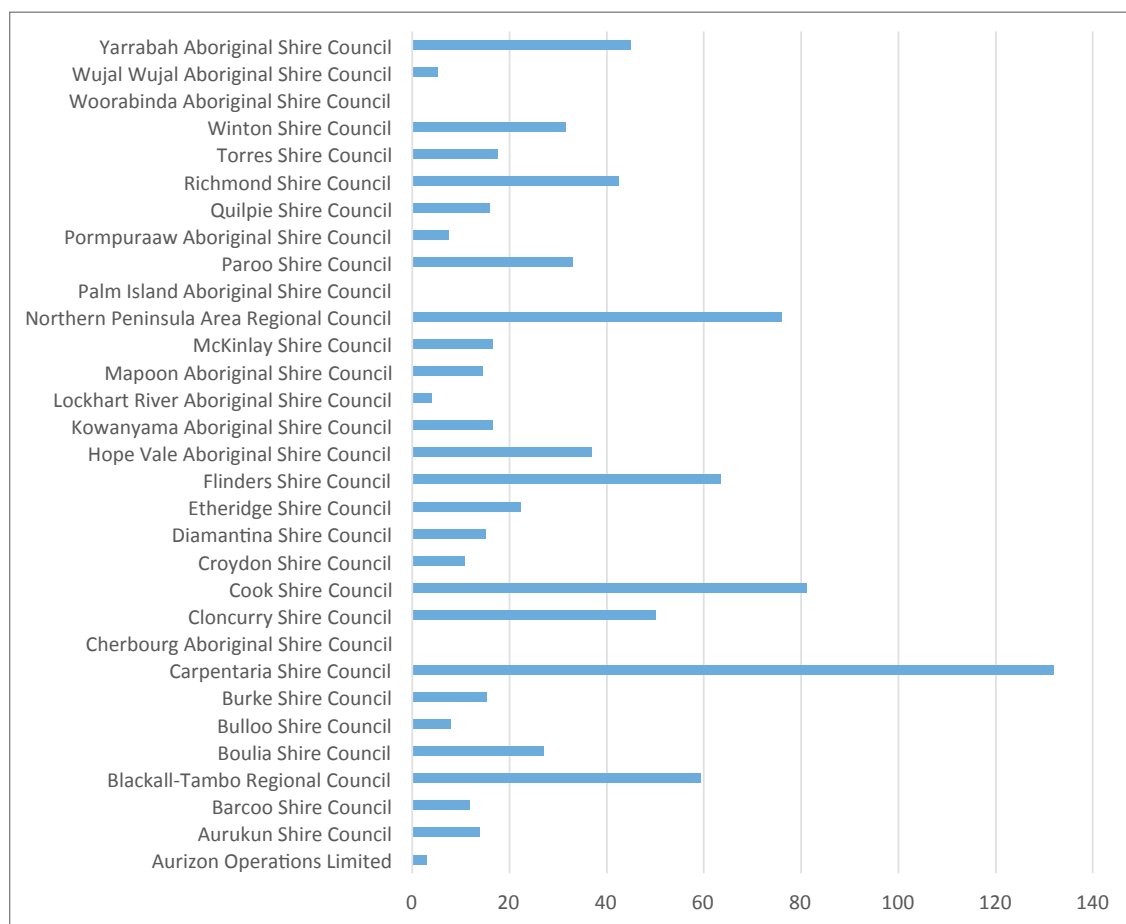


Figure 2: Small service provider—length of water mains (km)

2 A megalitre (ML) is 1 000 000 litres. An Olympic swimming pool holds 2.5 ML of water.

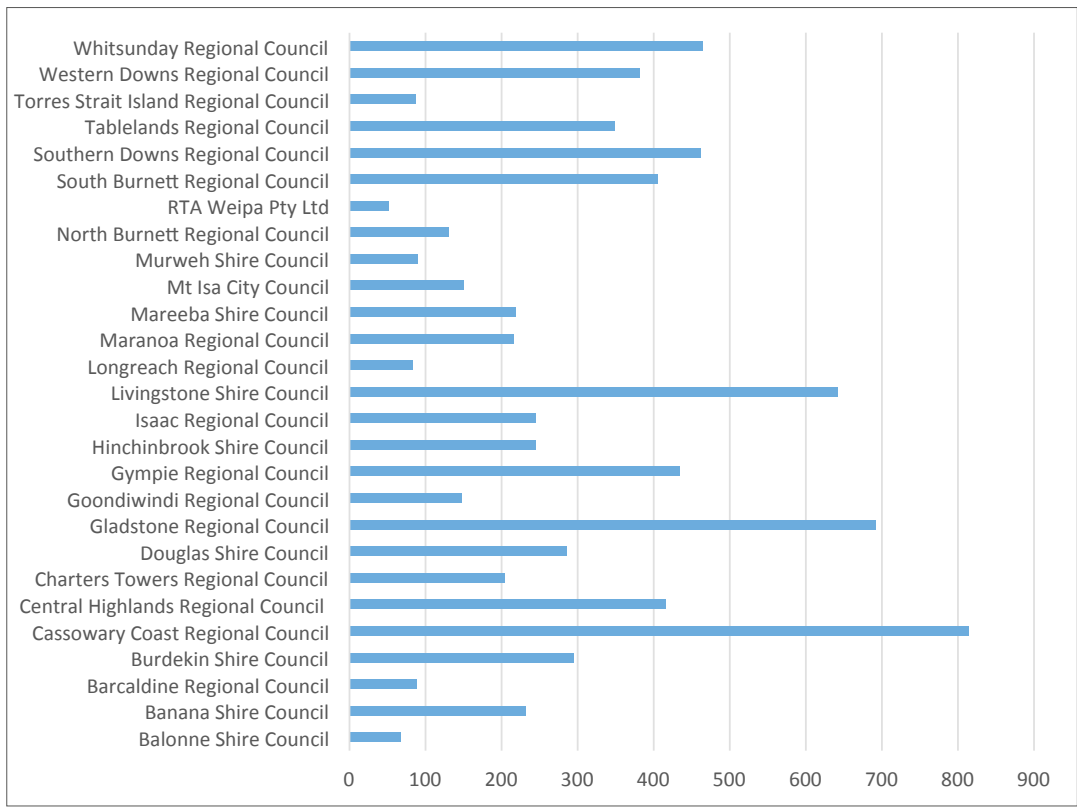


Figure 3: Medium service provider—length of water mains (km)

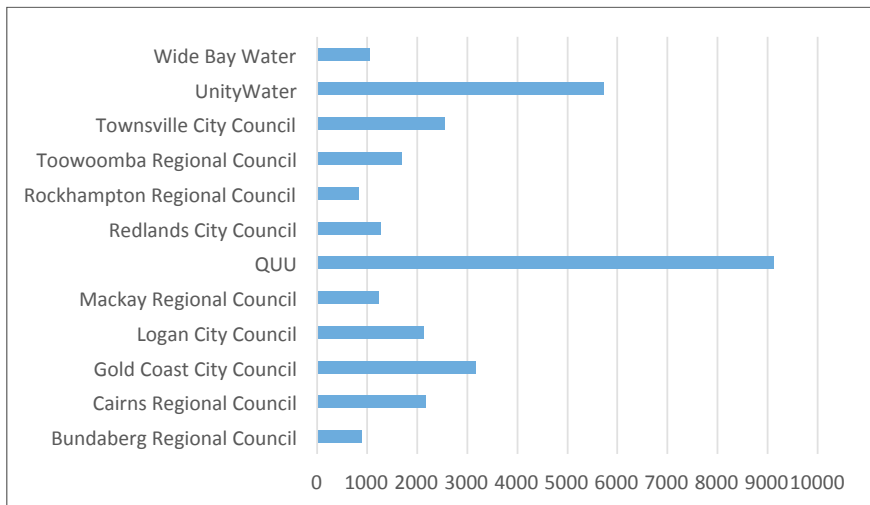


Figure 4: Large service provider—length of water mains (km)

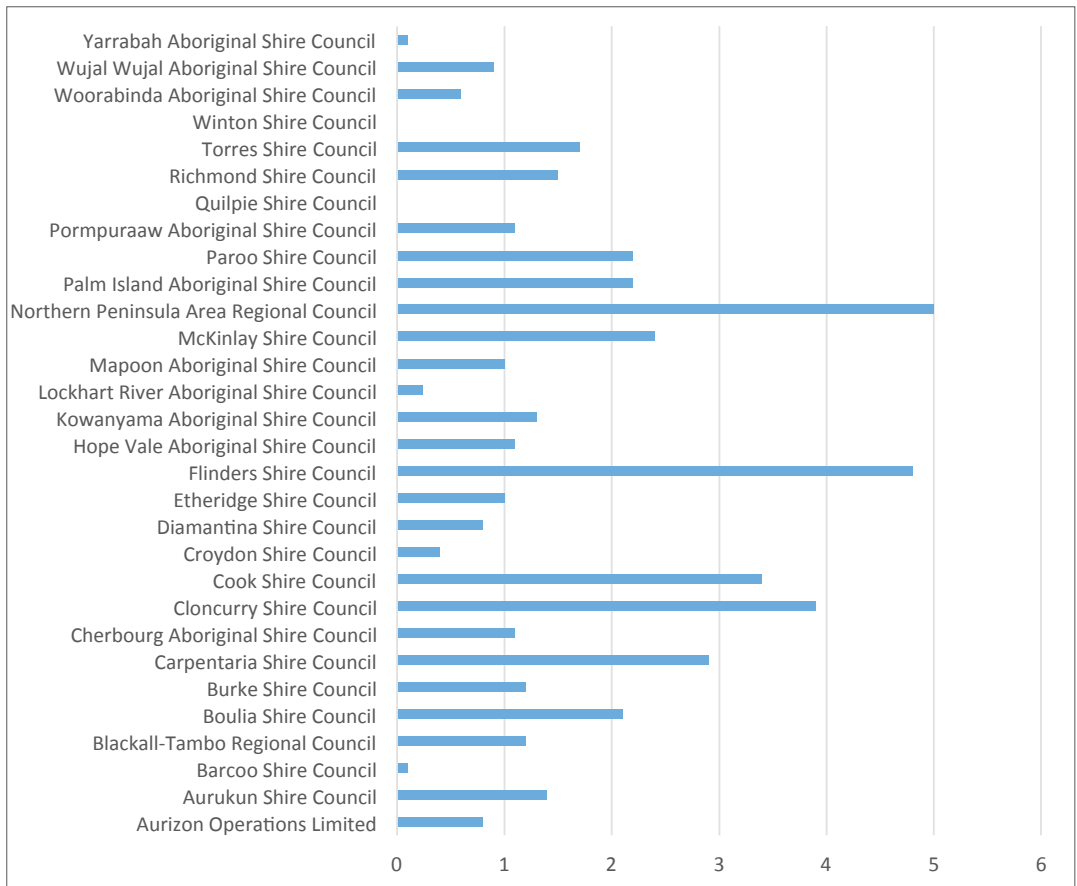


Figure 5: Small service provider—maximum daily demand (ML per day)

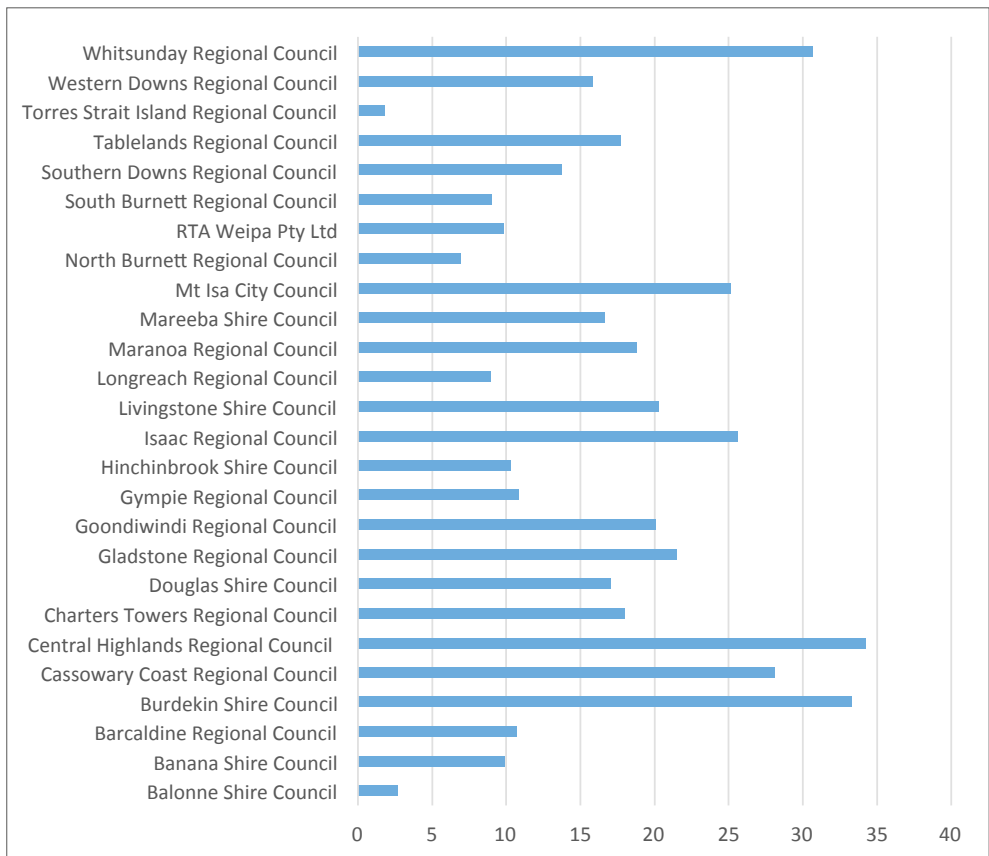


Figure 6: Medium service provider—maximum daily demand (ML per day)

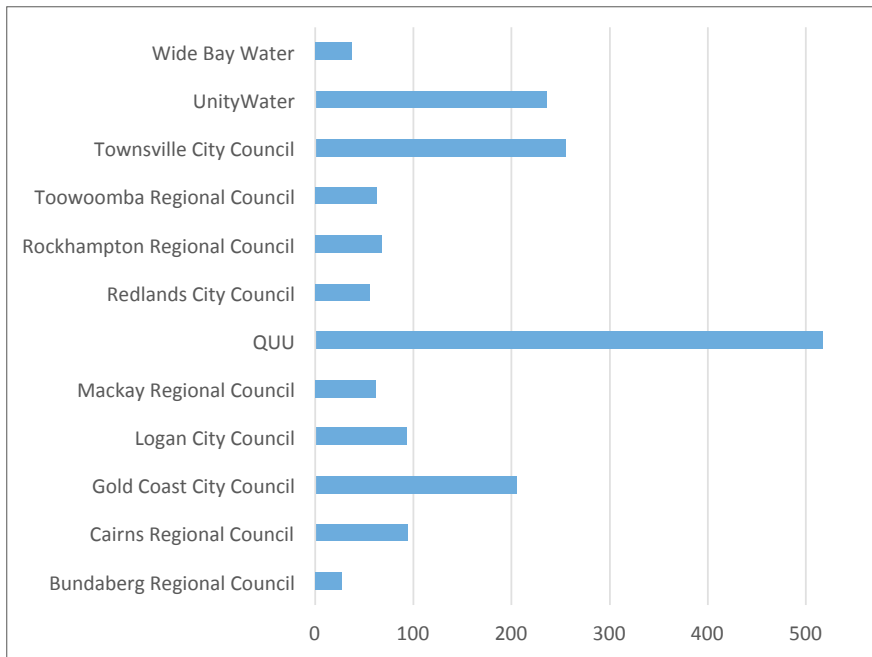


Figure 7: Large service provider—maximum daily demand (ML per day)

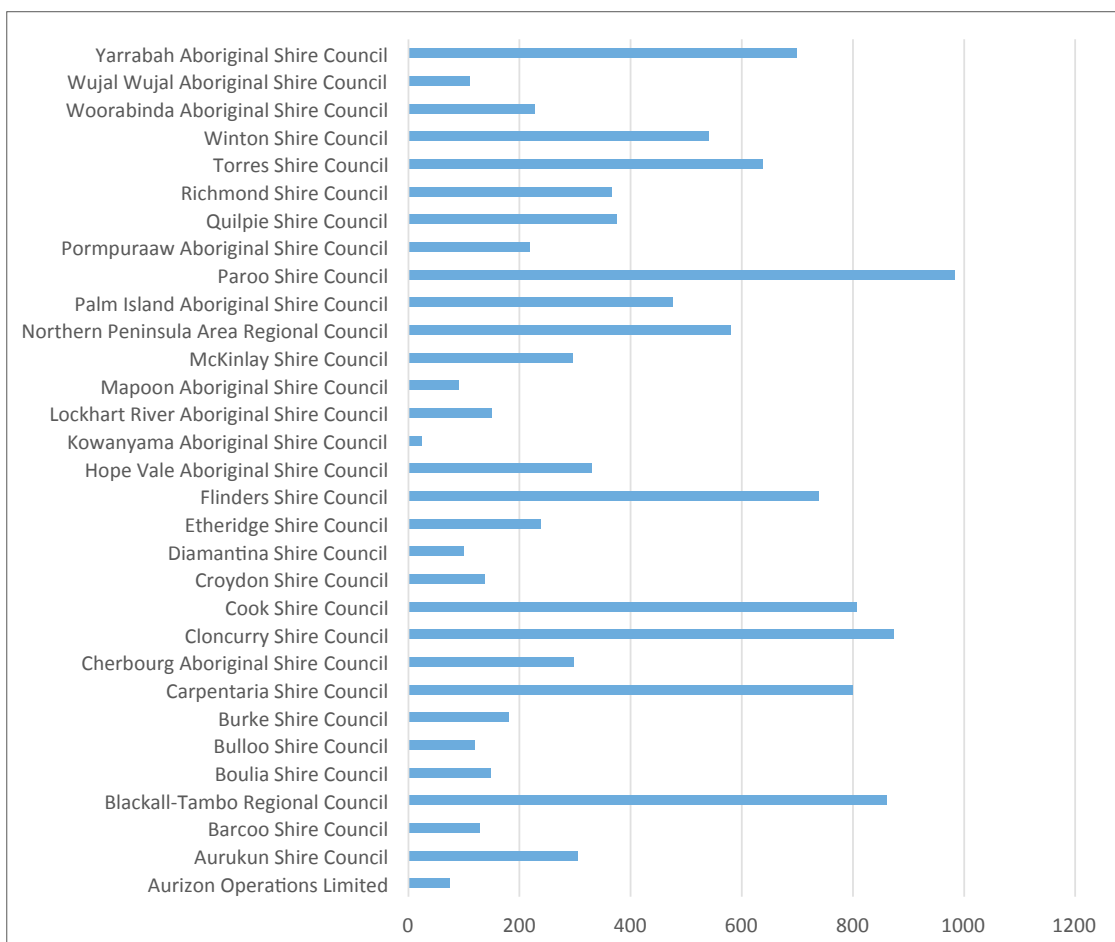


Figure 8: Small service provider—connected residential properties

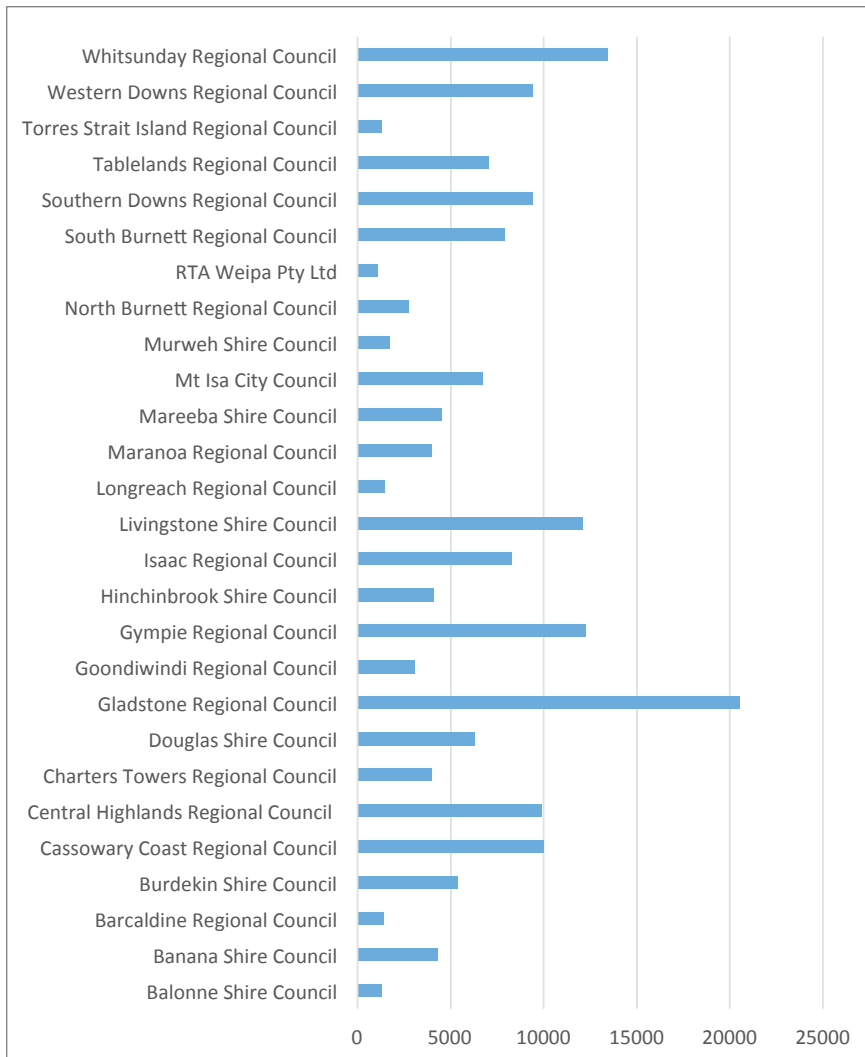


Figure 9: Medium service provider—connected residential properties

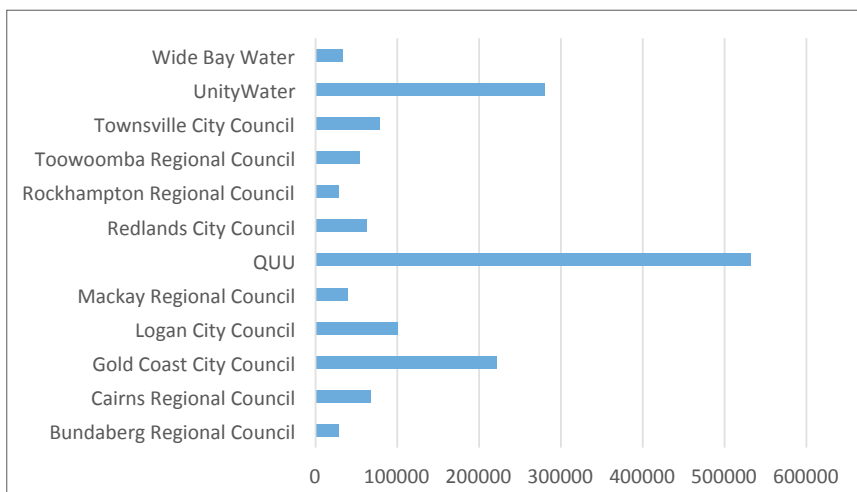


Figure 10: Large service provider—connected residential properties



Figure 11: Seqwater major assets

Water service providers are responsible for operating and maintaining their water and sewerage mains—the shortest water mains were reported as 100 m by McKinlay Shire Council (Oorindi scheme) and the longest reported as 9112.5 km by Queensland Urban Utilities. Outside South East Queensland, the longest water mains were reported as 2554 km by Townsville City Council.

Across Queensland, a total of 617 468 ML of water was sourced from water sources (excluding recycled water) for potable and raw/partially treated schemes to supply homes and businesses—564 074 ML of which was water that had been treated for potable use. This is equivalent to the volume of 225 629 Olympic-size swimming pools.

In South East Queensland, Seqwater is the bulk water provider. Seqwater sourced a total of 294 581 ML (49% of state total) from its various water supply sources, from which it produced 292 160 ML of potable water (52% of state total).

Seqwater has a treatment plant capacity of 1435.5 ML per day (46% of state total). The South East Queensland grid supplies 1 198 516 or 70% of Queensland’s residential connections and 77 803 or 60% of non-residential connections.

A total of 41 545 km (which is equivalent to driving from Brisbane to Cairns approximately 25 times) of water mains transported water to 1 715 519 residential and 128 509 non-residential water connections for potable water schemes. The data suggests the maximum daily demand for water across Queensland was 2219 ML (equivalent to 887 Olympic-size swimming pools).

4.1 Water demand and availability

The second series of KPIs provides data on water security and how service providers ensure the customer’s water supply for the short and long term. Given the climatic variability in Queensland, service providers must commit to long-term planning to ensure the ongoing continuity of their supplies to customers. The water security KPIs provide valuable information regarding water demand, water restrictions and water security, both now and in the future.

Queensland’s climate can vary greatly from one year to the next. For an extended period of time during the reporting year, over 80% of Queensland was drought-declared, with some areas having experienced a number of years of failed wet seasons. Climate variability places continuing pressure on providers to guarantee water supplies for their customers. Service providers take responsibility for providing access to safe, secure and reliable water supplies, and must therefore ensure that their water sources can reliably provide a sufficient volume of water to meet anticipated demand—both now and into the future. This includes identifying strategies and contingencies to manage restrictions and severe water shortages where necessary.

4.2 Capacity to meet water demand for the next reporting year

Of the reported 254 potable water schemes, 181 indicated that they are able to meet water demand for the next reporting year. Croydon, Ilfracombe, Mulgildie and Northern Peninsula Area potable water schemes reported that they are unable to meet the water demand for the next reporting year. A response was not provided by water service providers for a total of 69 potable water schemes.

Water service providers have contingency plans for when demand starts to become greater than the ability to supply (due to depleting water supplies, little to no rainfall, unreliable supply). This may include an emergency water supply or the ability to switch between water sources (i.e. surface water and bore water). Further information can be found on the Queensland Government website at www.qld.gov.au/environment.

4.3 Water supply situation at the time of reporting

The 73 service providers that reported against KPIs operate a total of 261 potable water supply schemes. Data was reported for 249 schemes and suggests that 226 of these schemes have 12 months or more supply available. There were 10 schemes identified as having between 6 and 12 months of water supplies remaining, and a further 13 reported having less than 6 months of supplies remaining.

Additionally, Kowanyama and Palm Island schemes were reported as having less than 6 months of water remaining and no available contingency supplies.

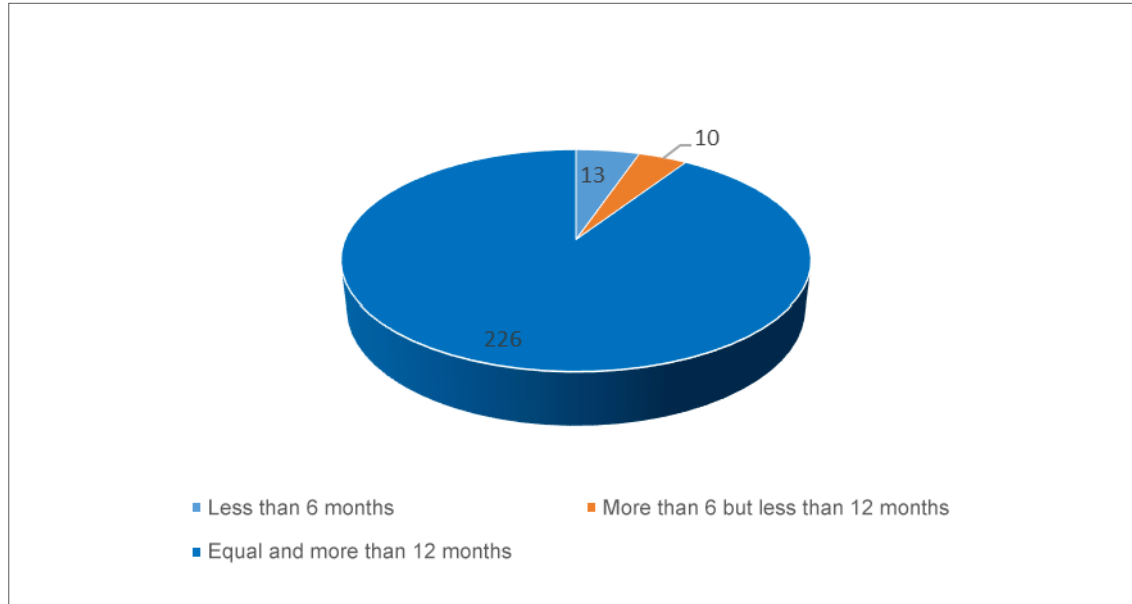


Figure 12: Months of water supply remaining

4.4 Future water demand for next reporting year

With regards to the KPIs looking at total anticipated demand for the next reporting period, service providers reported data for 253 schemes. Overall, there is an estimated 13% increase in demand, rising from 584 686 ML to 661 563 ML for potable water schemes (when comparing the estimated demand in 5 years' time with the current reporting period).

Small and medium water service providers have reported that the majority of future water demand will be in relation to growth—population and industrial/agricultural. Yarrabah and Julia Creek potable water schemes were reported as having an anticipated rise in water demand by 400% or greater. Mount Isa City Council's expectation of their water demand is that it will triple in the next 5 years.

In larger communities, the expected rise in future water demand is more subdued. Toowoomba and Townsville have reported water demand growth greater than 10% across their schemes in the next 5 years, while Cairns has estimated water demand growth greater than 20% across their schemes.

Seqwater accounts for approximately half the total urban water demand within Queensland and is anticipating approximately 14% water demand growth (equivalent to approximately 43 000 ML) in the next 5 years.

4.5 Capacity to meet future water demand in 5 years' time

Service providers reported data for 255 potable water schemes against KPIs looking at anticipated capacity to meet water demand 5 years from now. Data suggests that 245 of these schemes have sufficient capacity to meet their anticipated demand. Croydon, Ilfracombe, Mulgildie, Rocky Point, Evans Landing, Kowanyama, Northern Peninsula Area, Palm Island and Mapoon potable water schemes (9) have reported not having sufficient capacity, and Lockhart River Aboriginal Shire Council did not provide a response.

Of these 9 schemes, 7 have a planned supply system response in place to accommodate the anticipated rise in water demand. The remaining 2 schemes, Kowanyama and Palm Island, reported not having sufficient capacity to meet anticipated demand in 5 years' time and not having a planned supply system response in place.

4.6 Water restrictions

Water restrictions play an important role in managing water demand—41% of service providers reported having water restrictions in place during the reporting period. Restrictions ranged from limiting outdoor water use to imposing water usage limits. Of the 9 schemes reported as having insufficient capacity to meet future demand in 5 years' time, 6 have reported having water restrictions in place

4.7 Financial sustainability

The third series of KPIs provides data on service provider financial sustainability for water and sewerage services. Ideally, service providers should aim, at a minimum, to achieve cost recovery for their services. Service providers do, however, face a number of challenges in delivering affordable water and sewerage services to their customers while ensuring appropriate operation and maintenance of their systems. It must be recognised that the economies of scale for some providers, particularly those in remote locations or supplying very small schemes, are such that cost recovery may never be achieved.

Figure 13 shows the operating expenditure (Opex) per property (water and sewerage) for each service provider using a remoteness indicator from 1 to 5, where 5 indicates that the location is very remote. For each category of remoteness, a median Opex value is indicated by the grey line, and the shaded areas represent 1 and 2 standard deviations from the median. In the more remote areas there is a wide variation in Opex per property, indicating the diversity within these areas.

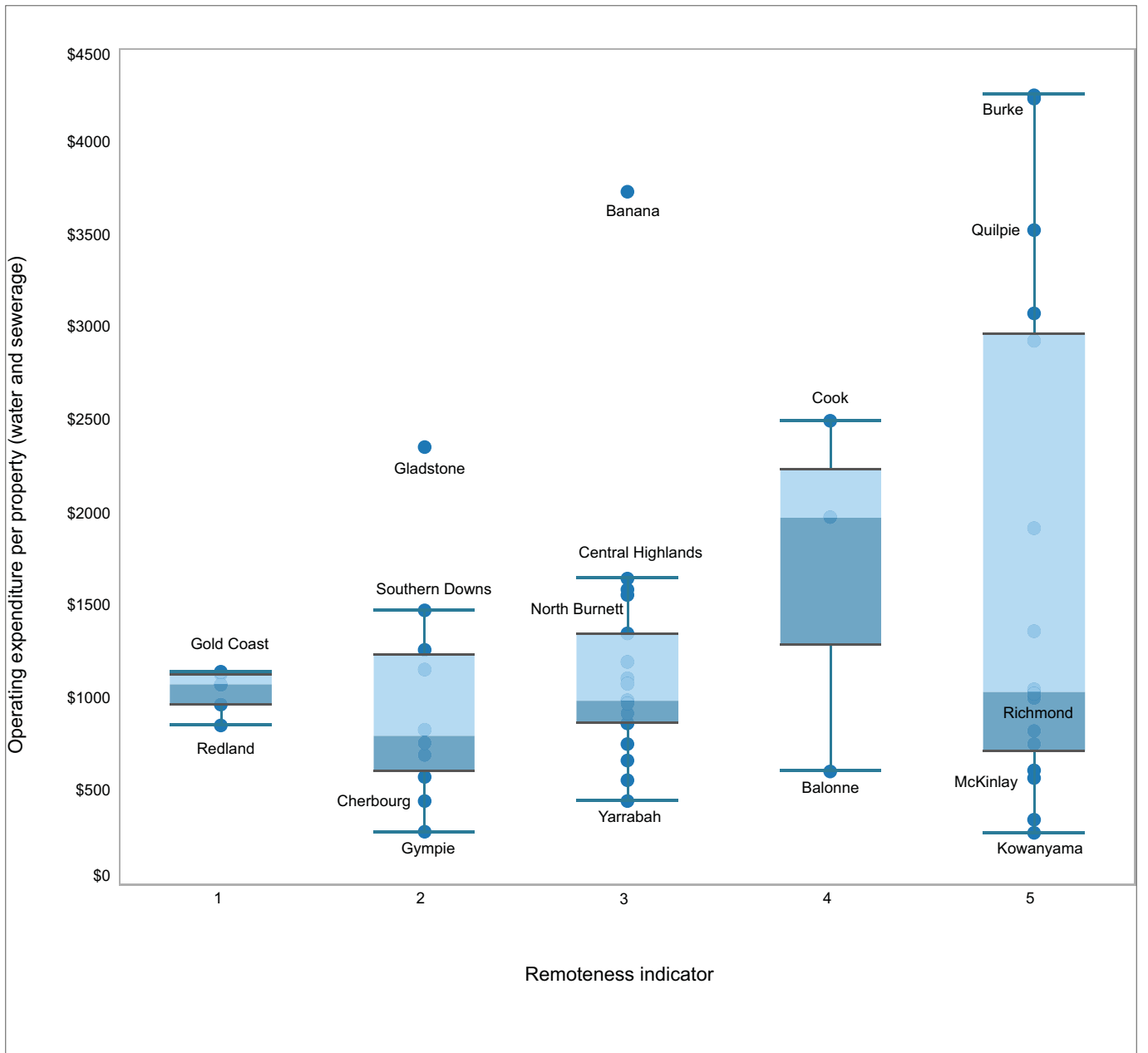


Figure 13: Operating expenditure per property vs remoteness by service provider

4.8 Customers

The fourth series of KPIs provides data on water and sewerage charging and customer standards. Data is collected on KPIs for billing, mains breaks, incident response times, interruptions and customer complaints. Most service providers in Queensland, outside South East Queensland, are required to develop a customer service standard that sets minimum standards for activities, such as response times for incidents and interruptions, the number of expected mains breaks and the like.

Customer service standards must be developed in consultation with customers, reviewed every 5 years and placed on the service provider's website. Data reported for customer service standards enables each service provider to demonstrate their compliance with their own standards. A number of customer service standard KPIs also provide information on the status of the infrastructure supplying services. For example, a high number of mains breaks over a number of reporting years may indicate that the infrastructure is ageing and should be replaced.

Each service provider in Queensland has their own charging arrangements in place for the services they provide. Some service providers only have fixed charge arrangements, while others have a two-part tariff consisting of fixed and usage charges. Factors that influence how services are charged and the amount that is charge include:

- the types of services provided (e.g. sewerage and water, just sewerage or just water)
- the cost of operation and maintenance of water and sewerage assets
- usage or consumption
- bulk water charges
- the location and size of the scheme (e.g. how many properties are serviced and where they are located)
- the type of water and wastewater treatment utilised
- the types of connections and how they are categorised within the scheme.

When looking at the information presented on water charges, it is important to remember that service providers that only use a fixed charge system are more likely to be in the higher cost portion of the graphs, as compared to those that use a two-part tariff. The data reported for an annual bill and a typical bill is likely to provide a more accurate comparison.

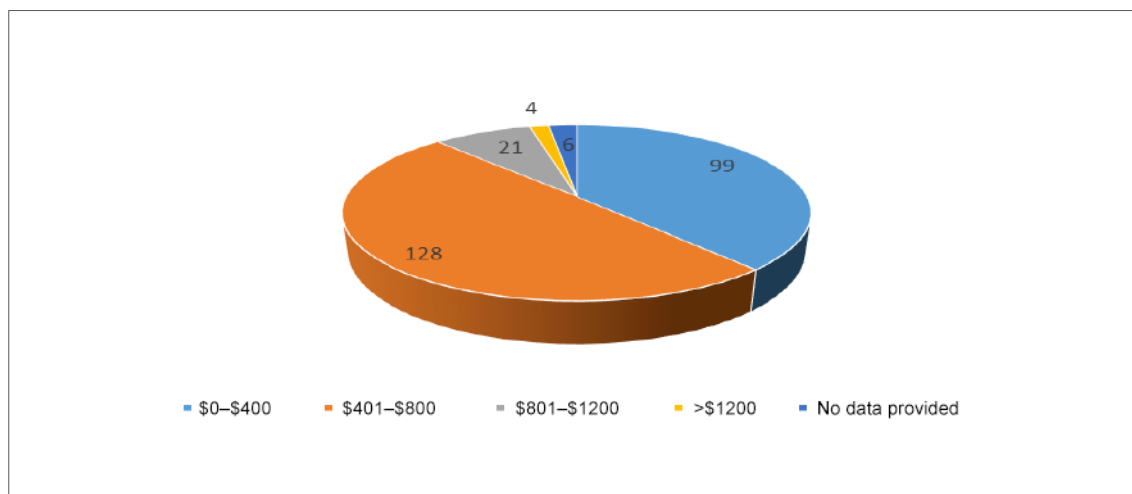


Figure 14: Fixed water supply charge per year for potable water schemes

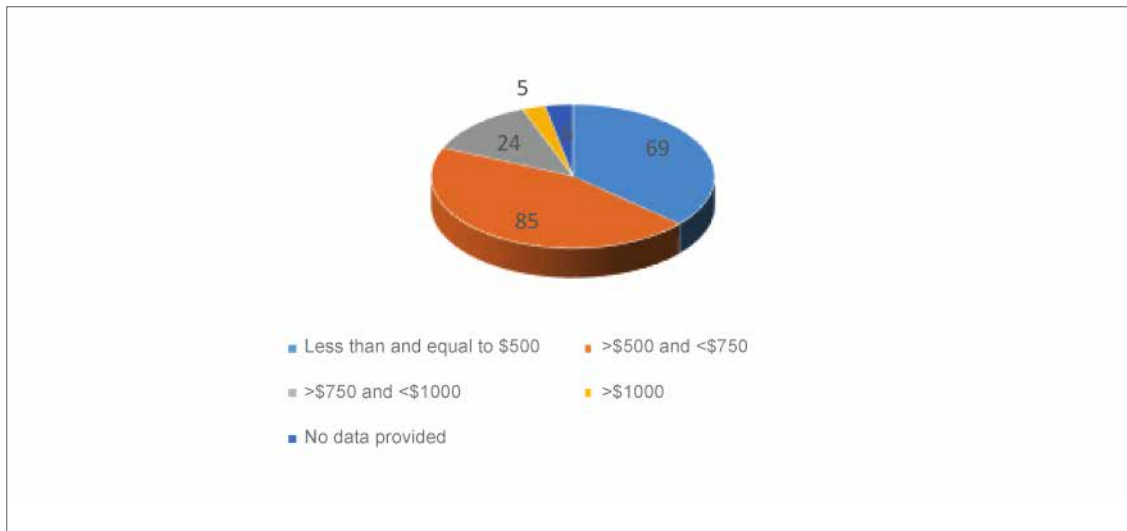


Figure 15: Fixed sewerage supply charge per year for sewerage schemes

Reported data suggests that close to 88% of the potable water schemes in Queensland have fixed water charges of less than \$800 per year. Aurukun Shire Council has the highest fixed water charges per year at \$1324, but data was not received for 6 potable water schemes, namely Bulloo Shire Council, Winton Shire Council, Woorabinda Aboriginal Shire Council, Pormpuraaw Aboriginal Shire Council, Mapoon Aboriginal Shire Council and Lockhart River Aboriginal Shire Council. This data also excludes bulk water service providers.

For sewerage schemes in Queensland, close to 81% have fixed sewerage charges of less than \$750 per year.

Fixed charges for sewerage services for 24 schemes is between \$750 and \$1000 per year, and 5 schemes charge more than \$1000 per year. Aurukun Shire Council has the highest fixed sewerage charges per year (i.e. \$1519), but no data was reported for 6 schemes operated by the following service providers:

- Bulloo Shire Council (Thargomindah Sewerage)
- Lockhart River Aboriginal Shire Council (Lockhart River)
- Mapoon Aboriginal Shire Council (Mapoon)
- Pormpuraaw Aboriginal Shire Council (Pormpuraaw)
- Winton Shire Council (Winton Sewerage).

4.8.1 Annual water and sewerage bill

The typical residential bill demonstrates the actual amount that customers pay for their water and/or sewage services, while the 200 kL annual bill attempts to ‘standardise’ billing information to allow for comparisons across service providers, given the variability in charging structures.

As mentioned above, the information reported by service providers for ‘annual bill based on 200 kL per annum’ and ‘typical residential bill’ KPIs varies depending on the whether the service provider provides both water and sewage services to their customers or only provides a water service, in addition to other considerations (such as the level of consumption by customers, which varies significantly across the state).

Data suggests that 31% of service providers’ annual bills for 200 kL is \$1200.

Unfortunately, almost 11% of the service providers did not provide information on billing, including the following service providers:

- Bulloo Shire Council
- Lockhart River Aboriginal Shire Council.
- Mapoon Aboriginal Shire Council
- Palm Island Aboriginal Shire Council
- Pormpuraaw Aboriginal Shire Council
- Woorabinda Aboriginal Shire Council
- Winton Shire Council.

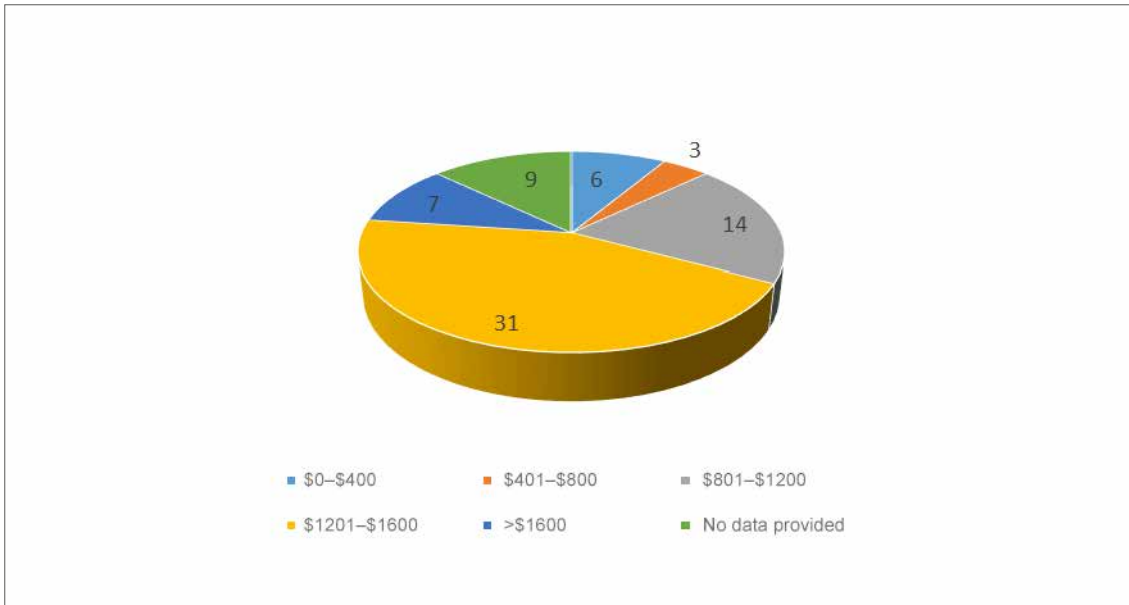


Figure 16: Annual bill based on 200 kL per annum water consumption

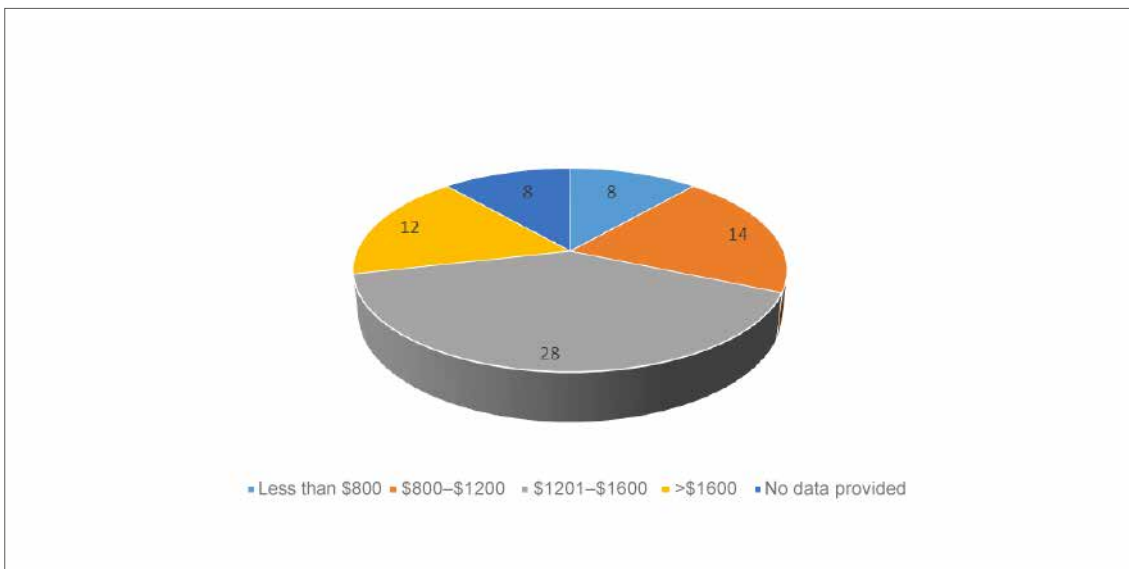


Figure 17: Typical residential annual water and sewerage bill

4.8.2 Customer service

One of the KPIs provides data on ‘average response time for water incidents (bursts and leaks)’.

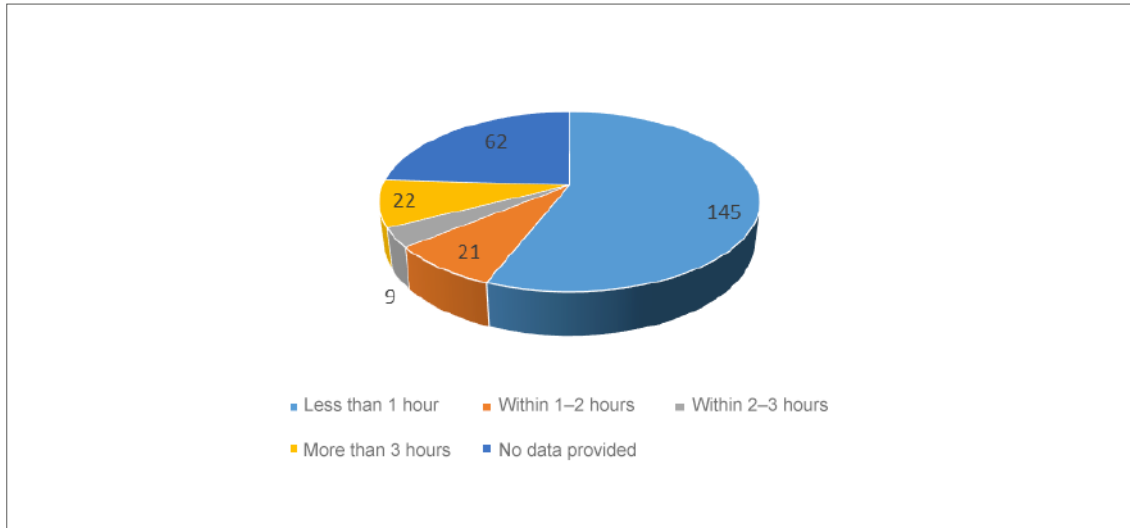


Figure 18: Average response time to water incidents (bursts and leaks) for potable water supply schemes

Of the 197 schemes for which data was reported, 145 (73%) have a water incident response time of less than 1 hour. There are 22 schemes that have response times of greater than 3 hours. There are 62 schemes for which no data was received.

5. Reporting in the future

As a general comment, Water Planning and Regulation (the Regulator) has noted that, for a number of service providers, interpreting some of the Queensland Government KPIs proved difficult. In response to this issue, the Regulator set up a Performance Reporting Steering Committee. The committee is made up of representatives from the Department of Energy and Water Supply, the Queensland Water Directorate (Qldwater) and the following service providers:

- Barcoo Shire Council
- Cairns Regional Council
- Charters Towers Regional Council
- Gold Coast Water
- Gympie Regional Council
- Mackay Regional Council
- Mount Isa Regional Council
- Queensland Urban Utilities
- Seqwater
- Toowoomba Regional Council
- Townsville Regional Council

The goal of the steering committee is to facilitate better understanding of Queensland Government KPIs, and address any anomalies between the National Performance Reporting Indicators and Queensland Government KPIs.

It is hoped that the outcomes achieved by the steering committee will significantly reduce the time and effort needed by service providers to produce and submit their required data, and improve the quality and reliability of that data.

