



PERFORMANCE AUDIT REPORT

18 December 2024

Managing Queensland's regional water quality

Report 7: 2024–25

As the independent auditor of the Queensland public sector, including local governments, the Queensland Audit Office:

- provides professional audit services, which include our audit opinions on the accuracy and reliability of entities' financial statements
- provides insights on entities' financial performance, risk, and internal controls; and on the efficiency, effectiveness, and economy of public service delivery
- produces reports to parliament on the results of our audit work, insights, and advice, and provides recommendations for improvement
- connects our reports to regions and communities with graphics, tables, and other visualisations
- conducts investigations into claims of financial waste and mismanagement raised by elected members, state and local government employees, and the public
- shares wider learnings and best practice from our work with state and local government entities, our professional networks, industry, and peers.

We conduct all our audits and reports to parliament under the *Auditor-General Act 2009* (the Act).

Learn more about our publications on our website at www.qao.qld.gov.au/reports-resources/fact-sheets.

The Honourable P Weir MP
Speaker of the Legislative Assembly
Parliament House
BRISBANE QLD 4000

18 December 2024

This report is prepared under Part 3 Division 3 of the *Auditor-General Act 2009*.



Rachel Vagg
Auditor-General



© The State of Queensland (Queensland Audit Office) 2024.

The Queensland Government supports and encourages the dissemination of its information. The copyright in this publication is licensed under a Creative Commons Attribution-Non-Commercial-No Derivatives (CC BY-NC-ND) 4.0 International licence.



To view this licence visit <https://creativecommons.org/licenses/by-nc-nd/4.0/>

Under this licence you are free, without having to seek permission from QAO, to use this publication in accordance with the licence terms. For permissions beyond the scope of this licence contact copyright@qao.qld.gov.au

Content from this work should be attributed as: The State of Queensland (Queensland Audit Office) *Managing Queensland's regional water quality* (Report 7: 2024–25) available under CC BY-NC-ND 4.0 International.

Cover image is a stock image purchased by QAO.

ISSN 1834-1128

Contents

Report summary	1
1. Audit conclusions	2
2. Recommendations	3
3. Drinking water in Queensland	5
4. Providing safe drinking water	10
5. Regulating drinking water quality	18
Appendices	24
A. Entity responses	25
B. Audit scope and methods	39
C. Water sources in Queensland	42

Acknowledgement

The Queensland Audit Office acknowledges the Traditional and Cultural Custodians of the lands, waters, and seas across Queensland. We pay our respects to Elders past, present, and emerging.

Report summary

Delivering safe drinking water to our taps is a complex process. It requires well-maintained infrastructure (including treatment plants, filters, and pipes), skilled operators, and constant monitoring.

This audit examines how effectively 4 regional and remote councils supply safe drinking water to their communities. It also examines how the Department of Local Government, Water and Volunteers (the department) regulates drinking water quality across the state.

Providing safe drinking water

In regional Queensland, councils are mostly responsible for providing drinking water to their communities.

The 4 councils we audited had water quality management plans, but 3 of them were found to be non-compliant with their plans. Independent audits found issues with monitoring programs, maintenance and inspection activities, record keeping, and reporting water incidents to the regulator. Two of the councils we audited had tested their emergency response plans for responding to high-risk events, such as natural disasters and equipment failure. The other 2 had not.

The 4 councils had measures in place to reduce the risks to the quality of their drinking water. But some of these risks are still higher than the councils would like, creating potential for a hazard to occur. Two councils have had improvement actions for high-risk areas 'pending' for up to 4 years. These pending improvements are a mix of items like maintenance, training, standard operating procedures, and larger infrastructure upgrades. These 2 councils could improve their oversight of these risks, improvement actions, and the recommendations identified by independent audits.

Those charged with governance must be satisfied the council has implemented their management plans and is performing the activities to keep their communities safe. Improved longer-term planning would enable councils to ensure access to a capable workforce and to better manage their infrastructure needs.

Regulating drinking water quality

The department is the main regulator for drinking water. It registers water service providers (which are mostly councils in regional Queensland), approves their management plans, and monitors their compliance, along with delivering support and education to councils.

The department's regulatory program involves assessing council risk and planning, conducting its monitoring and enforcement activities, and reporting on compliance. It also monitors and responds to water incidents reported by councils. The department is yet to effectively balance its need to respond to incidents, to fully deliver its compliance program, and to be timely with reviewing independent audits and councils' annual reports. It has started workforce planning to enable it to better staff these activities and to assist in identifying and addressing potential problems earlier.

The department is aware of the challenges and associated risks many councils face. It has started projects to improve council capability and identify infrastructure needs. However, it had not formalised how it would collaborate with other agencies and across councils. On 1 November 2024, the government redistributed the water regulation and local government functions into the Department of Local Government, Water and Volunteers. This change provides an opportunity for these 2 functions to work more closely together to help coordinate and prioritise resourcing and infrastructure planning.

The department's guidelines for managing drinking water align with the *Australian Drinking Water Guidelines*. However, the department has not mandated the health-based targets in these guidelines due to the potential costs and the issues some councils are facing with infrastructure and staffing. Some larger councils, who have the necessary resources, are voluntarily adopting these targets, as there are many benefits to doing so.



1. Audit conclusions

The Department of Local Government, Water and Volunteers (the department) and councils face complex challenges in providing safe drinking water.

The department and councils are taking steps to ensure communities have access to safe drinking water, but some areas still need improvement. Queensland has not experienced an identified outbreak of waterborne diseases in the last 10 years, but the department and entities must remain ever vigilant. Water incidents and boil water alerts are still common, indicating there are areas where services could be improved.

The 4 councils we audited varied in their ability to consistently meet the standards required by drinking water legislation and to address key risks to their water quality, particularly for the smaller 2 councils. These councils have long outstanding improvement needs, which range from routine maintenance, standard operating procedures, and training staff, to larger more costly needs, like upgrading infrastructure.

Workforce and infrastructure challenges can be a cause or contribute to non-compliances and water incidents. Better planning will help councils to address workforce and infrastructure challenges and more effectively deliver drinking water to the community. Two of the 4 councils need to improve their readiness to respond to high-risk events and oversight of risks, improvement actions, and compliance with their management plans.

The department's oversight and regulation of drinking water providers has increased over the last 10 years. Still, there are areas it can continue to improve to increase the effectiveness of its regulatory program. These include clarifying how it prioritises its regulatory efforts based on risk, better matching its workforce capacity to the demands of responding to incidents, and delivering its compliance program in full. Improving the data it collects from councils could better help the department assess if its activities are helping improve water quality or not.

The department can further support high-risk councils to improve their capabilities and help them in their planning activities. It could strengthen coordination across all levels of government, including by sharing information it has gathered through regulatory activities and projects, such as the Urban Water Risk Assessment project. The recent change merging the government functions overseeing local government and water regulation into the new department presents an opportunity for stronger integration of the department's response and closer collaboration to further enhance council workforce and infrastructure planning.

Addressing these challenges will take time, but is necessary to ensure the continued long-term health and safety of our communities.



2. Recommendations

We have developed the following recommendations for all councils, and for the Department of Local Government, Water and Volunteers.

Chapter 4: Providing safe drinking water

We recommend all councils:

1. assess their record keeping of essential activities for managing drinking water quality to ensure they are
 - maintaining up-to-date standard operating procedures
 - recording maintenance and inspection results
 - developing schedules and timelines for upcoming periodic activities
 - recording verification monitoring (regular water testing) results and analysis of water quality trends
2. ensure appropriate oversight of compliance with management plans, risks to drinking water quality, improvement actions, and recommendations from independent audits
3. assess and address identified capability and expertise gaps
4. test their emergency response plans periodically for high-risk events, and train staff in how to respond.

We recommend that the Department of Local Government, Water and Volunteers:

5. improves coordination with its water regulation and local government functions, and across agencies by developing mechanisms to coordinate and share information, and promote workforce and infrastructure planning with providers
6. develops a pathway for adopting health-based targets by
 - assessing the regulatory impact of fully implementing the targets and the public health risks of not adopting them. This should include identifying the costs and benefits
 - publishing an implementation plan with a timeline and communication strategy – to give councils more clarity for their infrastructure and operational planning.



Chapter 5: Regulating drinking water quality

We recommend that the Department of Local Government, Water and Volunteers:

7. improves its risk-based approach to assessing and managing providers by
 - ensuring it completes its annual compliance risk assessment of providers
 - recording more detailed documentation of the sources of information and explanations for the risk rating it gives to each provider when assessing whether they are likely to comply with their legislative obligations
 - aligning its compliance risk assessments and plan to direct and prioritise resources
 - developing further specific actions to manage high-risk providers
8. enhances its workforce planning to ensure it has sufficient resources to deliver its compliance activities, meet the demand for responding to incidents, and review the providers' audit reports and annual reports in a timely manner
9. evaluates its response to non-compliance and assesses the effectiveness of outcomes from its actions
10. enhances the data it collects on drinking water quality and implements a process to monitor and report on water quality
11. improves how it measures its performance and reports externally by
 - developing specific performance measures that align with its water quality outcome in its strategic plan
 - setting clear benchmarks or targets for its performance measures and assessing its performance against these
 - changing its approach to calculating non-compliance in its service delivery statements.

Reference to comments

In accordance with s. 64 of the *Auditor-General Act 2009*, we provided a copy of this report to relevant entities. In reaching our conclusions, we considered their views and represented them to the extent we deemed relevant and warranted. Any formal responses from entities are at [Appendix A](#).



3. Drinking water in Queensland

This chapter provides an overview of the drinking water responsibilities of councils (as water service providers) and state entities. It also details how drinking water is provided and explains what 'water quality' means.

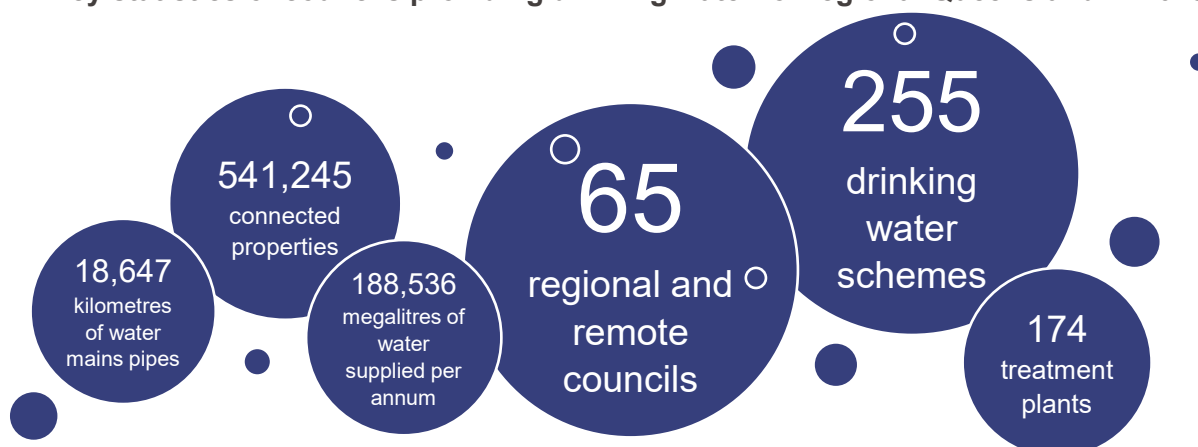
How is drinking water provided in Queensland?

Outside of South East Queensland, 72 providers supply drinking water, and 65 of these are councils. The other providers include 2 water boards, one river commission, 3 government owned corporations, and one private company.

The providers must be registered and have an approved drinking water quality management plan with the regulator, the Department of Local Government, Water and Volunteers. Some councils manage multiple water schemes to supply towns in their local government areas.

The 65 councils operate 255 schemes; 42 of them operate more than one scheme, and of those, 5 manage 10 or more schemes. Figure 3A details key statistics about providing drinking water in regional Queensland.

Figure 3A
Key statistics of councils providing drinking water for regional Queensland in 2023



Note: All data is self-reported by councils except for the number of councils and schemes which is based on the Department of Local Government, Water and Volunteers' data.

Source: Compiled by the Queensland Audit Office from the Department of Local Government, Water and Volunteers' 'Urban Water Explorer' website.

How is drinking water regulated?

As the state's primary regulator of the management of water resources, the Department of Local Government, Water and Volunteers (the department) regulates drinking water under the *Water Supply (Safety and Reliability) Act 2008* (the Act).

Under the Act, the department is responsible for the safety and reliability of drinking water. It does this by:

- registering providers
- ensuring providers comply with the Act – through monitoring and enforcement activities
- delivering support and education to providers.

The Act also gives the department emergency powers to operate drinking water infrastructure if a provider is unable to supply safe drinking water. It can use these powers as a last resort.

The department's *Strategic Plan 2023–27* includes an objective that says: 'Lead water resource management to achieve sustainability and public safety'. It aims to do this by developing and implementing legislation, policies, and programs that provide community confidence and minimise risks to drinking water.

It has a range of approaches for addressing the risks, including collaborating with other departments to assist providers in meeting their funding and capability needs, delivering drinking water programs and projects, and providing policy advice to government.

Queensland Health regulates some aspects of drinking water under the *Public Health Act 2005* and the *Public Health Regulation 2018*. It gives health advice when a drinking water incident (such as an equipment breakdown or identification of contaminants) occurs. It also sets health limits for water quality testing, like *Escherichia coli* (*E. coli*) limits, and has the power to direct providers to take certain actions when there is a risk to public health.

Who we audited

Delivering safe drinking water requires a collaborative effort between councils, the department (as the primary regulator), other agencies including Queensland Health, and advocacy bodies.

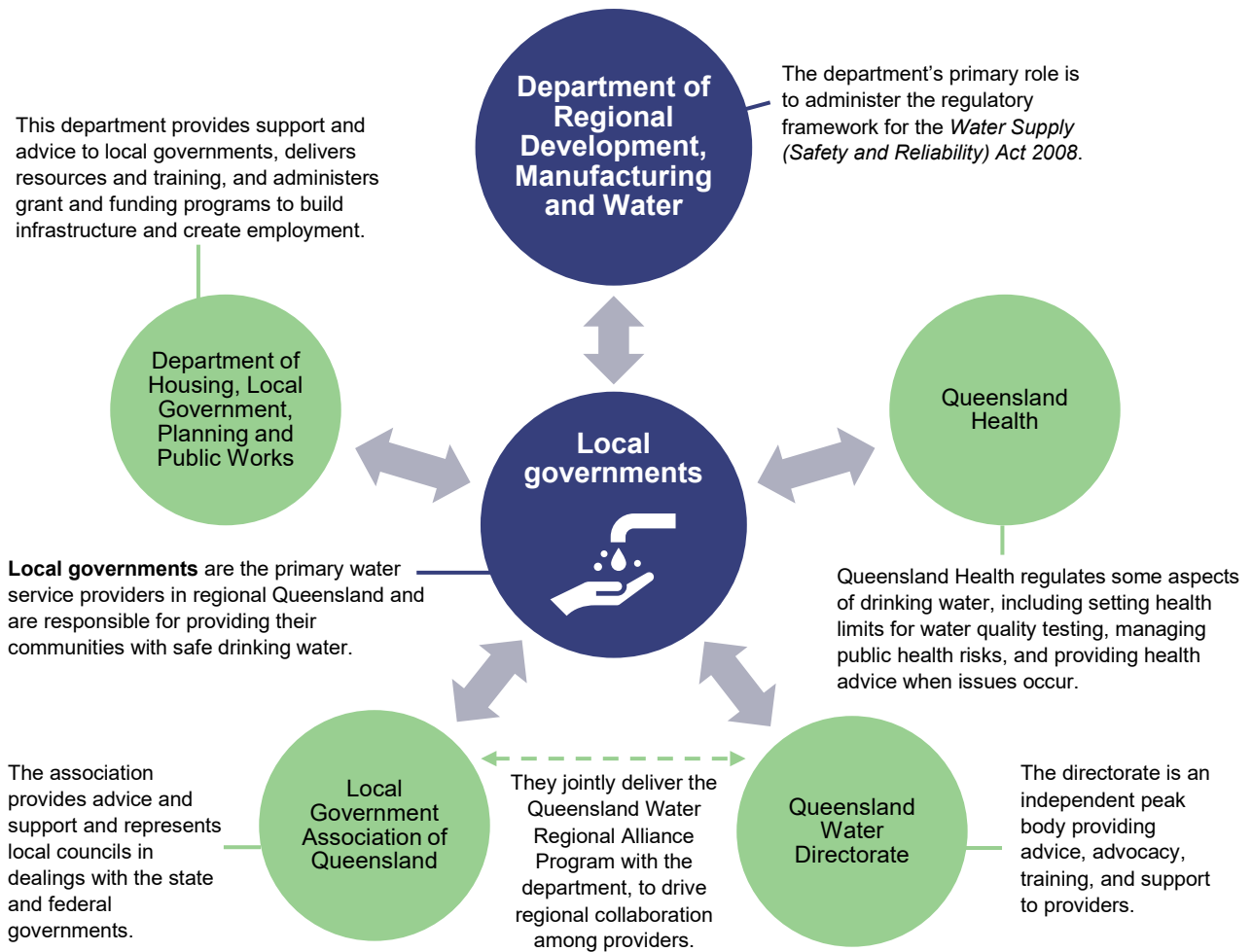
We audited the previously named Department of Regional Development, Manufacturing and Water and 4 councils. The findings in this report reflect the departmental arrangements before 1 November 2024.

We have outlined the scope of our audit in [Appendix B](#).

Figure 3B shows the roles and relationships of entities with responsibilities in the drinking water sector before the 1 November 2024 changes.



Figure 3B
Stakeholders in Queensland's drinking water sector before 1 November 2024



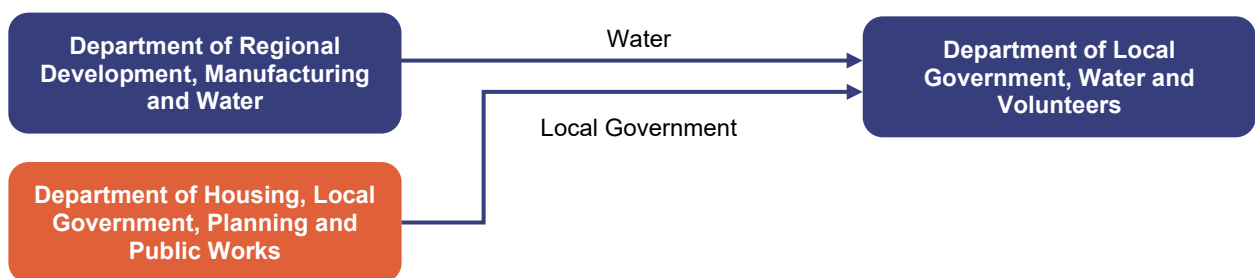
Note: Blue circles show the entities we audited.

Source: Compiled by the Queensland Audit Office.

Our audit did not assess the role or functions of the Department of Housing, Local Government, Planning and Public Works.

On 1 November 2024, the government announced a machinery of government change, which redistributed the functions of water regulation (previously in Department of Regional Development, Manufacturing and Water) and local government (previously in Department of Housing, Local Government, Planning and Public Works) into the Department of Local Government, Water and Volunteers.

Figure 3C
Recent relevant machinery of government changes on 1 November 2024



Source: Compiled by the Queensland Audit Office.



What does 'water quality' mean?

The *Australian Drinking Water Guidelines* (the Australian guidelines) specify several characteristics of quality drinking water. These fall into broad categories of safety and aesthetics, including appearance, taste, and odour. The Australian guidelines set safety limits for microbial, physical, chemical, and radiological characteristics.

DEFINITION

Microbial characteristics refer to **microorganisms** that include bacteria such as *Escherichia coli* (*E. coli*), viruses, helminths (parasitic worms), or protozoa such as *Giardia*. These can be caused by animal waste runoff from the land surrounding the sources of surface water.

Physical characteristics are the appearance, taste, odour, and feel of water. Physical characteristics include turbidity (cloudiness), pH, and temperature. While these are not unsafe, elevated levels can impact on the effectiveness of water treatment processes.

Chemical characteristics include organic compounds and inorganic compounds (such as pesticides).

Radiological characteristics can occur naturally in the environment (for example, uranium, and thorium) or can arise from human activities (for example, medical or industrial).

Exceeding health limits, especially microbial limits, can lead to outbreaks of waterborne diseases. This can have serious health consequences and affect large portions of the community. If water is not safe to consume directly from the tap, a provider may issue a 'boil water alert' as a precautionary measure to protect public health. The alert must remain in effect until the provider, Queensland Health, and the department are satisfied there is no longer a public health concern.

The department's records show that 111 boil water alerts have been issued by 35 providers in regional Queensland over 3 years to 30 June 2024. Of these alerts, providers resolved 108 with an average duration of 62 days.

Queensland has not had an identified major outbreak of waterborne diseases in the last 10 years. However, the risk of diseases is present, requiring proper management of water services or readiness to respond to emergencies, like major weather events.

International incidents serve as a reminder that improper management of water services can have disastrous outcomes. New Zealand's 2016 Havelock outbreak, detailed in the following case study (Figure 3D), is an example.

Figure 3D

Case study 1: Havelock outbreak

Waterborne disease outbreak in New Zealand

The outbreak

In 2016, following a significant rain event, contaminated water entered an unconfined bore (a shallow bore that is not closed off from surface water) in Havelock North (New Zealand). The contamination was likely caused by animal faeces from surrounding farmland flowing into a pond that fed the bore. The contaminated water was pumped into the community, and water testing 7 days later identified *Escherichia coli* (*E. coli*) in the water supply.

In response to the test results, the regional council pumped chlorine through the system, flushed the water network, and issued a boil water notice. Several cases of gastroenteritis had already been diagnosed in the community. It is estimated that 5,500 of the town's 14,000 residents became ill, and 45 were subsequently hospitalised. The district health board linked the outbreak to 4 deaths.

The cause

In 2017, the New Zealand Government's inquiry into the outbreak found the regional council failed to inspect the quality of the bores, assess the risk of contamination, and perform required maintenance, and had inadequate emergency response plans. The inquiry also found the district health board assessor incorrectly assessed the supplier as compliant and failed to have a hands-on approach, given there had been many *E. coli* detections prior to the outbreak.

Source: Compiled by the Queensland Audit Office from the Australian Water Association website.

4. Providing safe drinking water

In this chapter, we report on how 4 regional and remote councils implemented drinking water quality management plans, responded to incidents and hazardous events, managed risk, and improved their performance. The councils were:

- Cherbourg Aboriginal Shire Council
- Fraser Coast Regional Council
- Western Downs Regional Council
- Winton Shire Council.

The 4 councils we audited may not be representative of all councils in Queensland, so the results cannot be extrapolated to all. However, we recommend that all councils consider our findings and recommendations to determine the extent to which they may be relevant to them.

How effective are the councils in implementing their plans for drinking water?

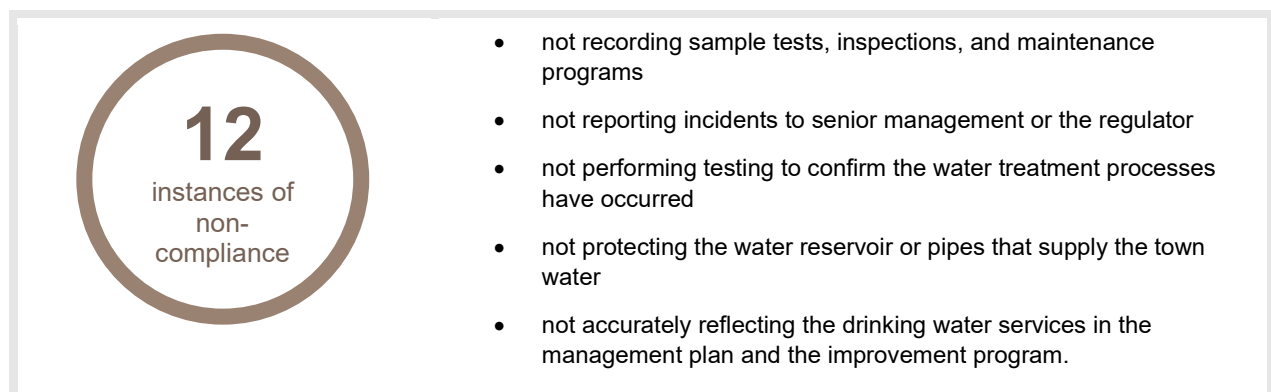
Each of the 4 councils we audited had an approved drinking water quality management plan (management plan). These are risk-based plans on how councils manage the safety of the drinking water they supply to customers, and include details on operational and maintenance procedures, water quality monitoring, and improvement plans.

Councils engage independent and certified water specialists to audit the management plans to ensure they accurately describe the water service and comply with conditions. The auditor also assesses whether monitoring data given to the regulator is accurate. The Department of Local Government, Water and Volunteers (the department) requires these audits every 4 years.

All 4 councils were up to date with their audits. These audits identified 12 instances across 3 of the 4 councils not complying with their management plans.

Figure 4A summarises the instances of non-compliance identified by independent audits at Cherbourg Aboriginal Shire Council, Western Downs Regional Council, and Winton Shire Council.

Figure 4A
Types of non-compliance identified in independent audits of 3 councils



Source: Compiled by the Queensland Audit Office from independent audits of drinking water quality management plans at Cherbourg Aboriginal Shire Council, Western Downs Regional Council, and Winton Shire Council.

The department reviews these audits and records the non-compliances. In Chapter 5, we explain the department is taking more than 200 days to review these reports and the types of actions it takes with councils to bring them back into compliance.

Our visits to these councils found some of the issues identified by independent audits have not yet been addressed. At Winton Shire Council, there was a lack of standard operating procedures to help ensure the correct and consistent execution of daily tasks within the drinking water service.

Management plans ensure the safety of drinking water supplied to councils' customers. However, the councils need to follow through on their proposed activities and improve their record keeping. Records management is important for effective drinking water quality systems because it ensures a structured approach, protects knowledge, and shows responsibility for actions.

Recommendation 1

We recommend all councils assess their record keeping of essential activities for managing drinking water quality to ensure they are:

- maintaining up-to-date standard operating procedures
- recording maintenance and inspection results
- developing schedules and timelines for upcoming periodic activities
- recording verification monitoring (regular water testing) results and analysis of water quality trends.

The exception was Fraser Coast Regional Council, whose recent independent audit did not identify any non-compliance. This council undertakes more frequent independent water quality audits as part of obtaining accreditations in quality and safety for its water service. These audits assure those accountable that the council's water operations and systems are functioning properly and in accordance with the management plans approved by the department.

Are the councils effectively managing risks and improving performance?

As part of the department's guidelines for councils' management plans, the councils must:

- identify hazards and hazardous events that may affect the quality of water
- assess the risks posed by the hazards
- demonstrate how they will manage the risks.

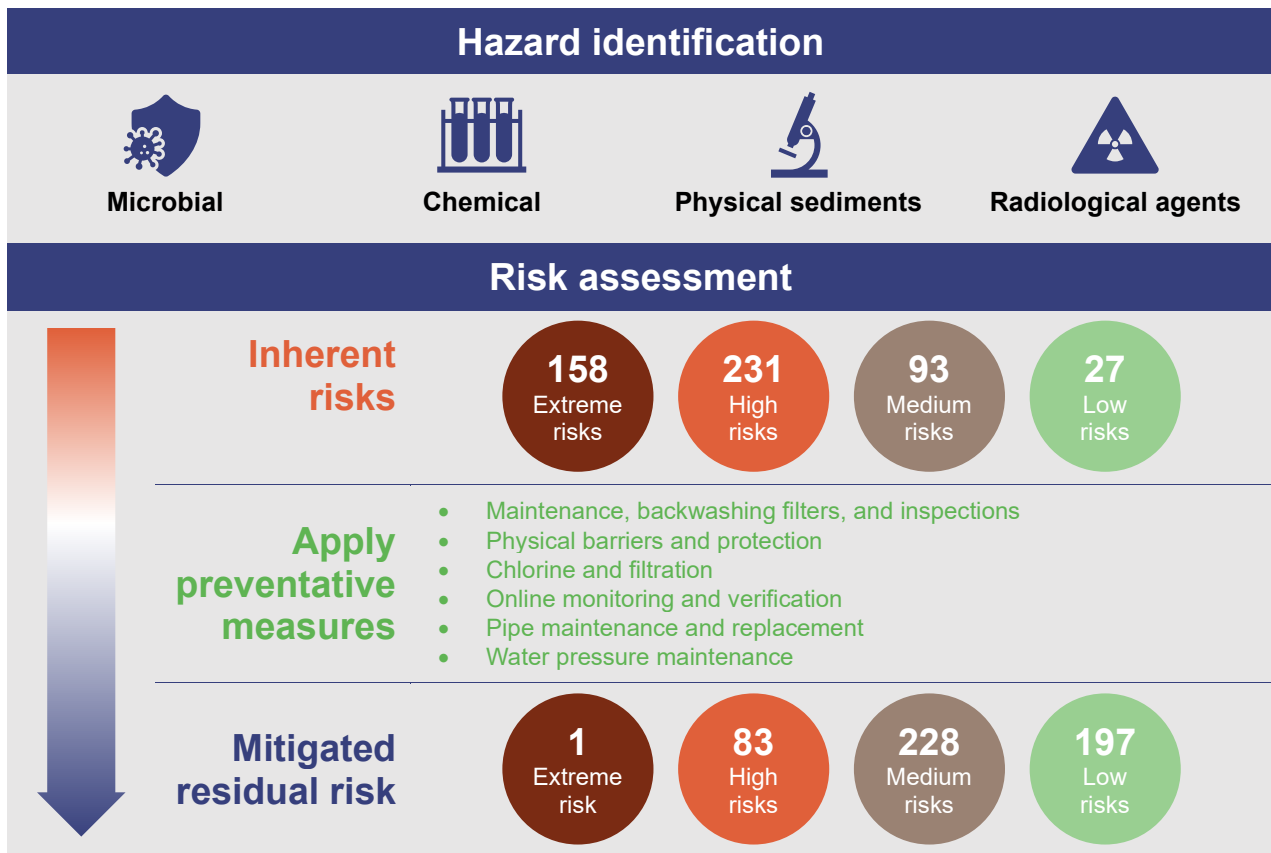
Councils manage the risks posed by the identified hazards and hazardous events either through existing preventative measures or additional proposed measures. Existing measures may include routine maintenance, treatment processes, or restricting access to water catchment areas.

Additional proposed preventative measures may include replacing equipment, undertaking significant infrastructure upgrades, addressing skills gaps, or reviewing and improving monitoring practices. Councils include these measures in their improvement programs, which form part of the management plan.

In their 2022–23 management plans, the 4 councils collectively identified 158 extreme and 231 high inherent risks, reflecting the significant risks and hazards that councils must manage to make their water safe. The inherent risk is the level of risk in place before any control measures are applied.

Figure 4B summarises the risk assessments in the management plans of the 4 councils we audited. It details the types of hazards, the inherent risks they have identified, preventative measures they are able to implement, and the mitigated residual risk level after the preventative measures have been applied.

Figure 4B
Water quality risks from 2022–23 across the 4 councils' management plans



Source: Compiled by the Queensland Audit Office from the drinking water quality management plans of 4 councils.

Councils are responsible for setting their acceptable risk levels (the level of risk that councils are comfortable with) and applying preventative measures to reduce their inherent risks to this level. Cherbourg Aboriginal Shire Council's, Western Downs Regional Council's, and Winton Shire Council's acceptable risk levels are low and medium, whereas Fraser Coast Regional Council only accepts low risks.

After applying preventative measures, the councils had reduced most of their risks into lower categories. However, there were still one extreme and 83 high risks outside the acceptable level. These councils and the department tolerate these risks until they can implement new preventative measures.

In their improvement programs, the councils proposed new preventive measures to further reduce these risks and assigned a priority to implementing those measures. These improvement items need to be implemented to bring this risk down to acceptable levels.

Cherbourg Aboriginal Shire Council and Winton Shire Council have improvement actions for high-risk areas that have been 'pending' for up to 4 years. These actions range from undertaking maintenance, developing standard operating procedures, and training staff, to more costly items like upgrading infrastructure. They told us they were unable to fund these actions, and they lacked the resources needed to plan and implement the activities. In October 2024, the Australian Government announced that it would jointly fund \$26 million of Cherbourg Aboriginal Shire Council's upgrades that would address some of these high-risk areas.

Fraser Coast Regional Council and Western Downs Regional Council were more effective at implementing their improvement items for high-risk areas.

Councils report annually to the department on their progress in implementing items in their improvement programs. They publish these reports on their websites, providing transparency to their communities.

Some of the councils need better governance of drinking water risks

The council's executive management is responsible and accountable for effectively managing drinking water services and performing activities to keep its community safe.

Of the 4 councils we examined, Winton Shire Council lacked evidence that its executive management had oversight of drinking water risks, improvement actions, and recommendations from independent audits. Cherbourg Aboriginal Shire Council and Winton Shire Council lacked evidence that their governance groups, such as councillors or audit committees, were monitoring progress of these activities.

Many of the outstanding improvement items and recommendations from independent audits at these councils are not costly to implement, but they are important to ensuring water quality. They include having operating procedures, providing internal training, or performing testing according to their management plans.

Management and governance groups can do more to ensure they are informed, monitoring these items and tracking progress. Audit committees could also assist management oversight of timely resolution of audit issues.

Recommendation 2

We recommend all councils ensure appropriate oversight of compliance with management plans, risks to drinking water quality, improvement actions, and recommendations from independent audits.

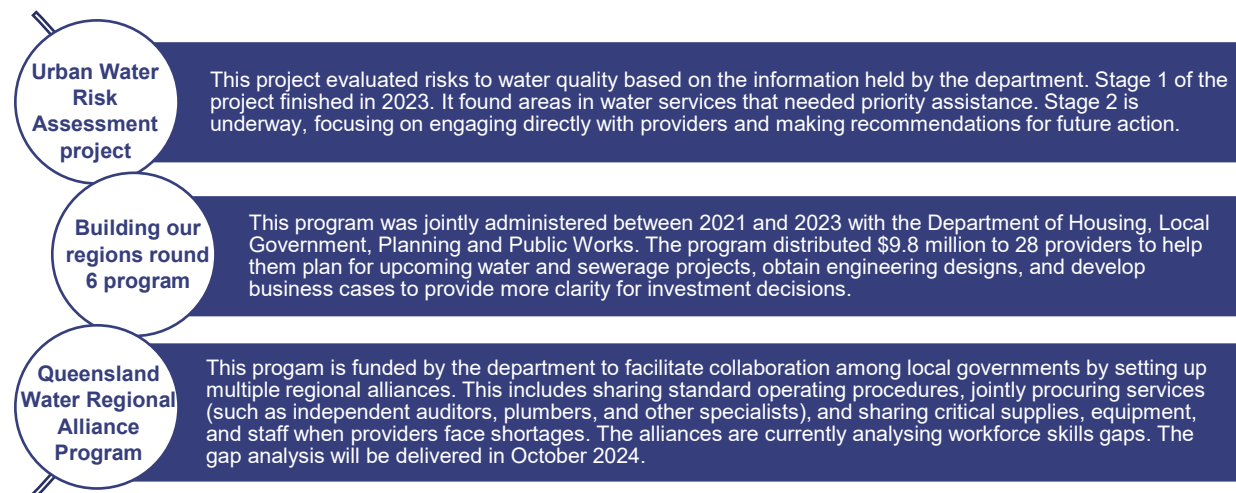
Addressing workforce and infrastructure challenges

Each council needs to have capable staff and well-maintained, fit-for-purpose infrastructure to provide safe drinking water to its community. Developing and retaining access to appropriate expertise, and maintaining infrastructure can be challenging for regional councils. Strengthening workforce and infrastructure planning could address some of the causes of non-compliance found in independent audits and reduce the number of water incidents.

Recognising that regulation alone will not address these issues, the department has started several initiatives to evaluate risks across the sector, improve collaboration, and assist councils with their infrastructure planning.

Figure 4C shows the department's current initiatives for identifying and addressing councils' infrastructure and capability challenges.

Figure 4C
The department's drinking water projects and programs



Source: Compiled by the Queensland Audit Office from Department of Local Government, Water and Volunteers' documents.

We did not audit the effectiveness of these projects and programs. However, feedback from councils, the department, and stakeholders was positive on these initiatives.

Growing workforce capability

Councils need access to appropriately skilled and trained people, as they have a major impact on drinking water quality and public health. The department, councils, and other stakeholders raised concerns with us about the challenges of maintaining workforce capabilities in regional and remote communities. Three of the councils we audited had vacancies in their water operations teams and they relied on consultants to prepare their management plans.

The department has the authority to set out and enforce mandatory qualifications or necessary experience for a service operator working on drinking water. It has not done so because some councils may not be able to meet these requirements. This means that these councils and the department are accepting a higher level of risk. Both Cherbourg Aboriginal Shire Council and Winton Shire Council have identified untrained staff as a high risk.

Currently only 2 registered training organisations provide relevant courses. TAFE Queensland withdrew from the National Water Training Package (the main training package for onsite workers) in 2022. Some courses are only delivered when there are enough participants, leaving potential trainees on a waiting list unable to obtain timely training. Travel is usually required, as training is best delivered face-to-face due to the practical nature of the qualification. The geographical remoteness of some councils increases the costs. Also, some of those councils may only have limited numbers of water operators, making it difficult for them to take time out to attend training.

To support formal training, councils will need to ensure that in-house training gives staff a knowledge base to operate systems, follow the management plan, and make effective decisions. They should understand their skills gaps in applying their management plans and asset management, which is important for long-term planning of their infrastructure needs.

Councils should also seek opportunities to draw on other resources and assist neighbouring councils. The Queensland Water Regional Alliance Program provides a forum for councils to collaborate, share best practices, and address common challenges in regional water management.

Recommendation 3

We recommend all councils assess and address identified capability and expertise gaps.

Better long-term infrastructure planning

In our audit, *Improving asset management in local government* (Report 2: 2023–24), we made several recommendations to improve gaps in asset management across all councils through stronger governance, better data, and improved asset management capabilities. Councillors and senior management need to know key details about their assets when they are making decisions.

Where councils' improvement programs involve large infrastructure upgrades and replacements, they need to include them in their asset management plans, so they can effectively budget and consider funding options. This can also help councils to be better prepared to apply for project funding.

The department told us it provides informal feedback to funding agencies (such as to the previous Department of Housing, Local Government, Planning and Public Works) on local government applications on an ad hoc basis. There was no requirement for it to have input into the funding allocations.

The Urban Water Risk Assessment project provides the department with an opportunity to support councils to develop plans that identify critical infrastructure needs and consider their funding options. Using these plans and information the department has gathered through regulation activities could help inform other funding agencies on what type of grant programs are needed and who has the most urgent needs.

With the recent machinery of government change merging the water regulation and local government functions into one department, there are greater opportunities to leverage these plans, share information, and coordinate more effectively in the newly formed department.

Recommendation 5

We recommend that the Department of Local Government, Water and Volunteers improves coordination with its water regulation and local government functions, and across agencies by developing mechanisms to coordinate and share information, and promote workforce and infrastructure planning with providers.

Most councils are not ready to implement health-based targets

In 2009 the Australian Government's National Health and Medical Research Council (the national council) released a discussion paper introducing health-based targets. The World Health Organisation and the national council endorsed health-based targets for drinking water quality in 2022, when the national council added the targets to the *Australian Drinking Water Guidelines* (Australian guidelines).

DEFINITION

Health-based targets are a quantitative measure of drinking water quality. They involve an assessment of source water risks, treatment requirements, and microbial safety.

Assessing these risks helps in identifying the appropriate barriers and preventative measures required to treat water to make it safe. For example, some microorganisms may require more advanced filtration or additional treatment such as ultraviolet light.

Health-based targets involve:

- defining a benchmark for water safety
- assessing the level of contamination in source water and assigning a source water category
- assessing the level of treatment needed, based on the category of source water
- implementing treatments to ensure the benchmark for safety is met.

After initiating an independent review in 2019 to assess potential issues with implementing the targets, the department decided against formally adopting them in 2022. The review found that many councils would struggle to implement the targets due to the capital investment required to address shortfalls in their existing treatments of microorganisms. The review also raised concerns about the ability of some councils to acquire the technical expertise for assessing their performance against the targets.

While the department communicated its decision to not adopt the targets to councils through workshops and at a conference, some councils are confused about the longer-term direction, given that the targets have been incorporated into the Australian guidelines. The department has also included minor aspects of the targets' risk assessment in the 2022 update to its guidelines for drinking water quality management plans (which councils must complete).

Some larger and medium councils (with more resources than other providers) are already planning for future infrastructure that enables them to meet the targets. They have assumed that they will eventually be adopted. Both Fraser Coast Regional Council and Western Downs Regional Council have factored health-based targets into their planning.

The department anticipates that smaller councils will require substantial support and investment to achieve the benchmark standard for water safety. It is also concerned that the transition to the targets could divert resources from managing current operations, leading to unintended outcomes.

It has not yet assessed the regulatory impact or identified the costs and benefits of fully implementing the targets and the public health risks of not adopting them. An impact assessment could also consider the options for implementing the targets. The department will also need to develop a clear implementation plan and time frame for fully adopting the targets.

Recommendation 6

We recommend that the Department of Local Government, Water and Volunteers develops a pathway for adopting health-based targets by:

- assessing the regulatory impact of fully implementing the targets and the public health risks of not adopting them. This should include identifying the costs and benefits
- publishing an implementation plan with a timeline and communication strategy – to give councils more clarity for their infrastructure and operational planning.

In October 2024, the National Health and Medical Research Council commenced consultation on proposed changes to guideline values to polyfluoroalkyl substances (PFAS). These synthetic materials have properties which impact the environment and health of the public if consumed in drinking water.

The proposed changes, which are based on expert health advice and research, are intending to set lower limits for permissible PFAS levels detected in drinking water. While not yet mandatory, a change to these limits could require providers to assess whether their existing systems will meet the new standards if they are implemented. Consultation on the PFAS guidance closed on 22 November 2024.

How effectively do the councils respond to incidents?

Councils must report all incidents, such as an equipment breakdown or identification of contaminants, to the department. Reporting incidents promotes a culture of continuous improvement and safety.

DEFINITION

Incidents can have a potentially adverse impact on drinking water quality, and they must be reported to the department. They include:

- a detection of *Escherichia coli* (*E. coli*)
- an exceedance of a health guideline value in the *Australian Drinking Water Guidelines* (Australian guidelines)
- a detection of a water quality characteristic with no health guideline value in the Australian guidelines
- an event that the service provider cannot manage within its existing processes and/or that may impact on the health of consumers.

Non-compliance occurs when a provider does not report an incident, fails to comply with requirements in the *Water Supply (Safety and Reliability) Act 2008*, or acts outside the processes defined in its approved drinking water quality management plan.

Cherbourg Aboriginal Shire Council, Western Downs Regional Council, and Winton Shire Council did not report all recorded incidents to the regulator between July 2021 and June 2023. These included incidents identified in councils' independent audit reports and by the department from reviewing annual reports or water quality testing.

Cherbourg Aboriginal Shire Council and Winton Shire Council did not follow the requirements of their management plans when responding to incidents. In some cases, they have not taken corrective actions to resolve the incidents, such as preparing standard operating procedures and providing training. This contributed to the department issuing Cherbourg Aboriginal Shire Council with an infringement notice following a repeat of an incident where council had not taken corrective actions.

The councils need to test their preparedness to respond to incidents

Effective incident response plans, required by legislation, allow for a timely, coordinated, and controlled response, which is crucial to minimising potential public harm.

All 4 councils have incident response plans, but Winton Shire Council and Cherbourg Aboriginal Shire Council have not tested their plans. This means they do not know how well they will work, and they may not be as prepared as they could be to respond in an emergency.

For example, Cherbourg Aboriginal Shire Council's treatment plant recently malfunctioned and drained its water reserves. The water operators did not respond to alarms, and the council was unaware of the loss of supply until the hospital notified the council that it had run out of water. Appropriate testing of response plans may have minimised the impact of this event.

Testing of incident response plans can also improve council preparedness to respond to water quality impacts from severe weather events. Councils must prepare for these events, to enable them to respond quickly and reduce the risk of harm to the communities they serve.

Recommendation 4

We recommend all councils test their emergency response plans periodically for high-risk events, and train staff in how to respond.



5. Regulating drinking water quality

In this chapter, we detail how the Department of Local Government, Water and Volunteers (the department) identifies and manages risk. We assessed how the department plans and prioritises its work to ensure the safety of drinking water services. We assessed how effectively it manages incidents and monitors and reports on its performance and the quality of drinking water.

Before the *Water Supply (Safety and Reliability) Act 2008* (the Act) was enacted, Queensland Health regulated drinking water under the *Public Health Act 2005*. However, this legislation did not have a regulatory framework to manage drinking water service providers (providers).

Since 2008, the department has gradually increased its oversight and regulation of providers. Two key components of this regulation are approving the drinking water quality management plans (management plans) produced by providers and holding providers accountable for complying with their plans.

Figure 5A outlines the timeline of key changes to drinking water regulation.

Figure 5A
Timeline for key changes to drinking water regulation

2008	<i>Water Supply (Safety and Reliability) Act 2008</i> (the Act) was enacted, establishing a regulatory framework for new and existing water service providers.
2011–2015	Providers must have an approved drinking water quality management plan. This was implemented in a staged approach with education and support from the department.
2016–2018	Providers required to have an independent audit against their responsibilities under the Act.
2020	The department developed and implemented a risk assessment framework.
2019–2021	The department increased regulatory compliance enforcement and implemented an information management system to manage non-compliance and incidents.

Source: Compiled by the Queensland Audit Office from Department of Local Government, Water and Volunteers.

Does the department use risk to prioritise regulatory efforts?

The department has developed a process to assess the risk that providers will not comply with their legislative obligations. However, the department does not sufficiently document the rationale behind the assessments, and it is unclear how it uses the risk assessment to prioritise activities in its compliance program.

The department plans to evaluate providers annually and allocates risk ratings based on a set of targeted questions that consider the likelihood and consequence of public harm. However, it did not complete the 2022–23 risk assessment. Instead, it commenced the 2023–24 risk assessment, which is yet to be finalised.

Figure 5B summarises the criteria that the department uses to determine the providers' risk.

Figure 5B
Criteria used to assess provider risk

Compliance with management plans and legislative requirements	Staff training and capability	Incidents and non-compliance	Maintenance and infrastructure
<ul style="list-style-type: none"> The management plan is implemented effectively, and it is an accurate representation of the water service. Reporting requirements are met. 	<ul style="list-style-type: none"> Training and support are available for operators. The provider has qualified staff. Suitable information systems are used for trend analysis. 	<ul style="list-style-type: none"> Annual Escherichia coli (E. coli) values are met. There is nil history of non-compliance. Providers are prepared for incidents. There is nil history of incidents reoccurring. 	<ul style="list-style-type: none"> Infrastructure is suitable to manage hazards. Maintenance is effective. Barriers in water treatment are effective. Source water risk is low.

Source: Compiled by the Queensland Audit Office from the Department of Local Government, Water and Volunteers' compliance risk assessment.

In its most recently completed risk assessment in 2021–22, the department identified 15 out of 72 regional providers as high risk. It is unclear how the department uses the risk assessment to prioritise activities in its compliance program. The risk assessment needs to be updated to ensure the department is prioritising its resources to areas with the greatest risk.

The department aims to help move high-risk providers into a lower risk category through targeted support and monitoring activities. It could help clarify how it prioritises these high-risk providers by developing specific support plans targeted to the providers' individual needs.

The department's risk assessment applies a risk rating to each provider. However, it does not document its justifications for the ratings. Doing so would provide transparency and ensure assessments are applied consistently. It could also provide information about providers' changing risk profiles.

Recommendation 7

We recommend that the Department of Local Government, Water and Volunteers improves its risk-based approach to assessing and managing providers by:

- ensuring it completes its annual compliance risk assessment of providers
- recording more detailed documentation of the sources of information and explanations for the risk rating it gives to each provider when assessing whether they are likely to comply with their legislative obligations
- aligning its compliance risk assessments and plan to direct and prioritise resources
- developing further specific actions to manage high-risk providers.

Does the department plan its work and monitor compliance?

The department outlines its planned compliance activities for drinking water regulation in its annual work plan, with a milestone or performance target for each activity. The work plan is an internal document which includes a range of proactive and reactive activities.

In 2022–23, the department achieved its targets in 18 out of the 27 planned compliance and support activities. These included but were not limited to several stakeholder engagement activities to educate and support providers, performing its 2021–22 compliance risk assessment, performing 15 support and 5 targeted compliance visits to providers, and undertaking 3 safe drinking water assessments. The department also mostly achieved its targets for assessing applications for providers' management plans within 3 months and issuing notices within 10 business days.

However, it was only able to meet its target to take compliance action in 34 out of 57 (60 per cent) cases and review incident investigation reports within 10 business days in 76 of the 209 (36 per cent) reports received. Responding to the high number and severity of incidents from natural disasters impacted its ability to meet these targets. The department also had several other targets not met, including updating its guidelines, reviewing its escalation tool, and following up on actions from past safe drinking water assessments.

Natural disasters are a variable the department cannot fully control but are a regular enough occurrence that should be factored into its planning. It is appropriate for the department to prioritise responding to emergent incidents and instances of non-compliance that present immediate or higher risks to water quality, over its planned activities. The need for the department to immediately react to these sorts of issues is not new. It is also likely to continue, given the number of high-risk providers and providers with unmitigated risks in their management plans.

The department has a target to visit each of the 83 providers over a 3-year period. However, it will not achieve this target as it only plans to visit 15 providers per year (covering 45 providers over 3 years). In the last 3 years, the department did not visit or inspect 37 providers, and 6 of these were assessed as high risk in the department's most recent assessment.

Key activities are not included in the compliance plan

The department's compliance plan does not include targets for timely review of independent audit reports and annual management plan reports. Councils must give these reports to the department to show their compliance with legislation.

- **Independent audits** are the key source of external assurance of a council's compliance with the legislation. These reports include action items and recommendations.
- **Annual management plan reports** list actions the councils have taken to implement their management plans and act on outcomes from independent audits, water testing results, incidents, and complaints from customers.

Reviewing these reports takes the department some time. For example, depending on the contents of these reports, the department may need to act before it can finalise the review. This can include obtaining more information from the council or taking compliance actions.

Even taking this into account, the department is taking a long time to review them. In 2022–23, the department received 15 audit reports. Based on the department's data, it took an average of 251 days to finalise the review of 9 reports, and 6 report reviews are still not finalised. In addition, there are 3 out of 5 reviews from independent audits from 2023–24 still to be finalised.

The department also received 83 annual reports in 2022–23. It took an average of 219 days to review 55 reports, and it has not finished its review of the remaining 28 reports. In addition, there are 66 out of 83 reviews of annual reports from 2023–24 still to be finalised.

Improving workforce planning

In June 2023, the department had approximately 16 full-time equivalent staff in its water supply regulation team. Based on the staff it has, it was not able to fully deliver its compliance program. While responding to incidents affects the department's capacity to perform these activities, incorporating this into its planning considerations will be necessary if it is to maximise its effectiveness.

In 2023, the department started a project to identify the staff resources needed for it to effectively deliver on its legislated responsibilities and its annual compliance program. In June 2024, the water supply regulation staff had increased from 16 to approximately 18 full-time equivalents. Enhancing its workforce planning will also help to address the backlog of reports from independent audits and annual reports.

Recommendation 8

We recommend that the Department of Local Government, Water and Volunteers enhances its workforce planning to ensure it has sufficient resources to deliver its compliance activities, meet the demand for responding to incidents, and review the providers' audit reports and annual reports in a timely manner.

Does the department act on non-compliance?

Regulatory actions to address non-compliance should be proportionate to the identified public health risks and should deter future instances of non-compliance. The department has a range of regulatory actions to use at its discretion. These include taking:

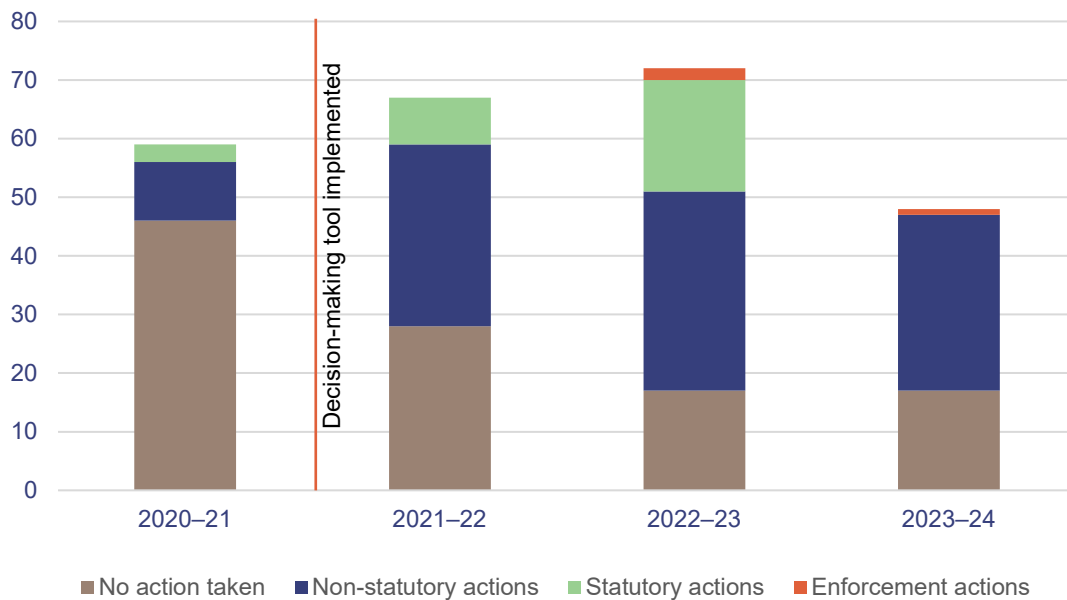
- no action, or taking informal action by speaking directly with the provider
- formal, non-statutory action such as sending reminder letters and warning letters
- statutory action such as making requests for information or issuing notices (show cause, compliance, or direction).

The department can also issue enforcement actions, such as penalty infringements, and it can prosecute when warranted.

In 2021, the department implemented a decision-making tool to guide its escalation of actions against non-compliant providers. It has since used a greater range of regulatory actions available to it to address non-compliance.

Figure 5C summarises the department's actions in response to non-compliance between 2020 and 2024.

Figure 5C
Total number of actions taken in response to non-compliance between 2020–21 and 2023–24



Source: Compiled by the Queensland Audit Office using data from the Department of Local Government, Water and Volunteers.



From 2020–21 to 2023–24, the department responded to 246 instances of non-compliance, 90 per cent of which involved small and medium providers. Of these instances, 76 were classified as having the potential for harm (that is, they could impact on the safety of drinking water). For those with a potential for harm, the department:

- took no action for 13 instances
- issued warning letters for 40 instances
- took other statutory and non-statutory actions for 22 instances (including performing investigations or inspections or issuing compliance, direction, show cause, or requests for information notices)
- issued an infringement notice in one instance.

In one case, a small provider supplied untreated water directly to the town's reservoir due to a power outage that shut down the treatment plant. The water operator was on leave and unable to respond to the outage. The department identified further issues with this provider's results from its water testing. The provider had 4 instances of non-compliance in one year, yet the department took no formal action in 2 instances and issued warning letters for the other 2 instances.

Since the *Water Supply (Safety and Reliability) Act 2008* (the Act) came into effect, the department has issued fines to 4 providers who failed to comply with the conditions of their management plans. While the department has increased the number of actions it has taken since introducing its decision-making tool, it should evaluate if its actions in response to non-compliance are effective at bringing providers into compliance. This should include where it decides to take no action.

Recommendation 9

We recommend that the Department of Local Government, Water and Volunteers evaluates its response to non-compliance and assesses the effectiveness of outcomes from its actions.

Does the department respond well to incidents?

Managing incidents is a key part of providing safe drinking water, such as responding to algae outbreaks or equipment failures. Councils are ultimately responsible for managing and reporting them, but the department plays a key regulatory role in ensuring that councils have responded appropriately and are taking steps to prevent similar incidents.

The department has an effective process for recording and responding to reported incidents. It appropriately escalates, within the department, those incidents that are high risk, and reports those with a risk of public harm directly to the relevant public health unit at Queensland Health. In 2023–24, the department recorded 318 incidents (2022–23: 224).

The department monitors the incidents until the councils resolve them. It logs the incidents in the compliance system and tracks the councils' actions through incident investigation reports (which the council must submit). In some instances, the department also performed site visits and investigations when it determined further actions were required. While the department's process for recording and monitoring the incidents is effective, it takes a long time to review the investigation reports submitted by providers. This increases the risk that the department may not be aware if providers have responded appropriately.

The department maintains records about whether each incident resulted in a boil water alert. Some incidents may lead to a report of non-compliance if the council has not acted in accordance with its approved plan for managing drinking water quality.

Does the department effectively monitor and report on water quality?

One of the department's strategic objectives relates to minimising risks to drinking water and achieving public safety outcomes. However, it does not collect the data it needs to measure this, despite having the regulatory authority to require providers to supply it.

Providers have the primary responsibility to monitor water quality trends and report incidents to the regulator. They supply their testing results to the department in annual reports. These reports summarise the number of tests that exceed a safety or aesthetics limit (characteristics of drinking water specified in the *Australian Drinking Water Guidelines*).

But the department cannot use the reports to monitor trends or identify potential emerging problems, as it does not require the providers to supply the underlying data. Providers are already collecting this information and requesting it could offer the department insights into whether water quality is improving or not. It could also streamline the process of verifying reporting requirements and give the department enhanced confidence tests were performed, which is a common area of non-compliance.

Recommendation 10

We recommend that the Department of Local Government, Water and Volunteers enhances the data it collects on drinking water quality and implements a process to monitor and report on water quality.

The department's external reporting needs to be improved

The department reports externally on its performance in its annual compliance report and its annual service delivery statement. Its measures in the annual compliance report could be improved with specific and time-bound targets to drive performance towards goals. For example, the report describes outputs, such as the number of completed compliance inspections, rather than the outcomes of the work and whether they were delivered efficiently and effectively.

The department also reports in service delivery statements on the percentage of providers compliant with regulatory requirements, such as submitting their independent audits and annual reports on time. In 2022–23, the department reported that 98 per cent of providers were compliant.

The department calculates the percentage on a quarterly basis, which complies with the approved methodology. However, providers only submit annual reports once a year and independent audits every 4 years. It means a provider could be counted as compliant 4 times, despite only being due to provide its annual report once.

If the methodology included all types of non-compliance and was calculated annually, the department's service delivery statement would have shown that 59 per cent of providers were fully compliant in 2022–23, instead of the 98 per cent it reported. This type of performance measure would provide a more accurate reflection of the challenges regional and remote providers face with meeting their legislative requirements.

The department's internal quarterly reports on its regulatory activities allow for adequate monitoring of non-compliant providers and ongoing incidents. It appropriately oversees these until they are resolved.

It also uses these reports to track progress of its planned support and compliance activities.

Recommendation 11

We recommend that the Department of Local Government, Water and Volunteers improves how it measures its performance and reports externally by:

- developing specific performance measures that align with its water quality outcome in its strategic plan
- setting clear benchmarks or targets for its performance measures and assessing its performance against these
- changing its approach to calculating non-compliance in its service delivery statements.

Appendices

A.	Entity responses	25
B.	Audit scope and methods	39
C.	Water sources in Queensland	42



A. Entity responses

As mandated in Section 64 of the *Auditor-General Act 2009*, the Queensland Audit Office gave a copy of this report with a request for comments to the Director-General, Department of Local Government, Water and Volunteers and to the 4 regional councils we audited:

- Cherbourg Aboriginal Shire Council
- Fraser Coast Regional Council
- Western Downs Regional Council
- Winton Shire Council.

This appendix contains their detailed responses to our audit recommendations.

The heads of these entities are responsible for the accuracy, fairness, and balance of their comments.



Comments received from Director-General, Department of Local Government, Water and Volunteers

Our ref: CTS 21093/24

6 December 2024

Mr Darren Brown
Assistant Auditor-General
Queensland Audit Office
53 Albert Street
BRISBANE QLD 4000

Email: QueenslandAuditOffice@qao.qld.gov.au



Department of
**Local Government,
Water and Volunteers**

Dear Mr Brown *Dear Mr*

Thank you for your email of 20 November 2024 regarding the proposed Queensland Audit Office's report to Parliament titled "*Managing Queensland's Regional Water Quality*".

The Department of Local Government, Water and Volunteers (the department) formerly the Department of Regional Development, Manufacturing and Water acknowledges the findings and accepts the recommendations made within the report relevant to the department.

Based on discussions between our agencies during the conduct of the audit, the department has taken initial steps towards delivering on the recommendations of the audit. This includes recruiting three additional temporary positions to grow the specialist regulatory skillsets required to address the recommendations. As set out in the enclosure to this letter, because of these additional resources, I am pleased to advise that actions to deliver on the recommendations have commenced.

The department is aware that the audit also reviewed and made recommendations about the performance of drinking water service providers in Queensland. The department will ensure that the implementation of department-specific recommendations is complementary to the actions of drinking water service providers to ensure overall improvements for communities.

I am confident that the actions being undertaken by the department and by water service providers will effectively address the suite of recommendations and further contribute to safe and reliable drinking water for the Queensland community.

If you require any further information, please contact [REDACTED]

[REDACTED] who will be pleased to assist.

Yours sincerely

A handwritten signature in black ink, appearing to read "L Dobe".

Linda Dobe
Director-General

Enc

1 William Street
Brisbane QLD 4000
GPO Box 2247 Brisbane
Queensland 4001 Australia
Telephone 13 QGOV (13 74 68)
Website www.rdmw.qld.gov.au
ABN 51 242 471 577

Responses to recommendations



Department of Local Government, Water and Volunteers

Managing Queensland's regional water quality

Response to recommendations provided by [redacted] Department of Local Government, Water and Volunteers on 3 December 2024.

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
<p>We recommend that the Department of Local Government, Water and Volunteers:</p> <p>5. improves coordination with its water regulation and local government functions, and across agencies by developing mechanisms to coordinate and share information, and promote workforce and infrastructure planning with providers</p>	Agree	Ongoing	<p>The department has established a team within its Strategic Water Initiatives Group to connect to other funding agencies across government and with the Commonwealth. The regulator and this funding team meet regularly to share information and ensure best pathways for service providers who have significant infrastructure challenges to apply for funding.</p> <p>The department will continue to develop collaborative processes to deliver improvements that support water service providers.</p>
<p>6. develops a pathway for adopting health-based targets by:</p> <ul style="list-style-type: none"> assessing the regulatory impact of fully implementing the targets and the public health risks of not adopting them. This should include identifying the costs and benefits publishing an implementation plan with a timeline and communication strategy – to give councils more clarity for their infrastructure and operational planning 	Agree	Commence regulatory assessment by Q2 2025 and then ongoing	<p>The department acknowledges that the Regulatory Impact Assessment process is a meaningful way to understand the cost, benefits and risks associated with the introduction of health-based targets. Should a decision be made to mandate health-based targets, an implementation plan including a timeline and communications strategy will be published and shared with service providers.</p>



Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
<p>7. improves its risk-based approach to assessing and managing providers by:</p> <ul style="list-style-type: none"> ensuring it completes its annual compliance risk assessment of providers recording more detailed documentation of the sources of information and explanations for the risk rating they give to each provider when assessing whether they are likely to comply with their legislative obligations aligning their compliance risk assessments and plan to direct and prioritise resources developing further specific actions to manage high-risk providers 	Agree	Commenced November 2024 and fully implement ongoing practices by 30 June 2025	<p>To deliver on these two recommendations of improved balance and sufficient resourcing, the Department is undertaking workforce planning to assess future resourcing requirements to meet emerging demands, including further actions to manage high risk service providers in a timely manner.</p> <p>Additional temporary resources have commenced work in this area and have seen assessments for 2024 near to completion. When determining risk, the team has commenced attaching the evidence that informed their decisions recently, in response to the QAO recommendations.</p> <p>The Water Supply Regulation team completes a Targeted Compliance assessment quarterly and has amended reporting to align risk ratings of service providers with planned future actions.</p>
<p>8. enhances its workforce planning to ensure it has sufficient resources to deliver its compliance activities, meet the demand for responding to incidents and review the providers' audit reports and annual reports in a timely manner</p>	Agree	Workforce planning commenced in November 2024 and will be complete by July 2025	
<p>9. evaluates its response to non-compliance and assesses the effectiveness of outcomes from its actions</p>	Agree	November 2024 and then ongoing	<p>The department has commenced mapping out a wider range of responses across the compliance spectrum including the issuance of Penalty Infringement Notices. The department will continue to consider all compliance tools available to them including appropriate funding referrals and education opportunities and will deliver compliance responses in accordance with risk.</p> <p>The department will continue to develop and implement strategies to incorporate regulatory best practice to ensure drinking water service providers are fulfilling their legislative responsibilities.</p>

Recommendation	Agree/ Disagree	Timeframe for implementation (Quarter and financial year)	Additional comments
<p>10. enhances the data it collects on drinking water quality and implements a process to monitor and report on water quality</p>	Agree	Commence assessment in 2024 and then ongoing	<p>The department acknowledge the need to identify a process where shortfalls in monitoring are identified prior to annual report review. As any shortfalls in monitoring rely on self-reporting, requirements can be placed on drinking water service providers to provide results on a more regular basis especially where a higher risk is identified.</p> <p>The department will consider any cost implications for service providers in gathering and reporting additional data and will require a review of future enhancement of the regulator's client relationship management system (CRM).</p>
<p>11. improves how it measures its performance and reports externally by:</p> <ul style="list-style-type: none"> • developing specific performance measures that align with its water quality outcome in its strategic plan • setting clear benchmarks or targets for its performance measures and assessing its performance against these • changing its approach to calculating non-compliance in its service delivery statements. 	Agree	Commence 2024 and implements through Annual Compliance Plans in 2024/25 and future business plans.	<p>Through the department's Annual Compliance Plan and Operational Planning, the department will continue to set measures and targets to ensure that drinking water service providers continue to improve standards and meet the requirements under their Drinking Water Quality Management Plans.</p> <p>By identifying high risk service providers and requiring more regular meaningful data referred to in recommendation 9 the department will be able to measure efficiency through an anticipated reduction in future repeated non-compliant behaviour from the service providers.</p> <p>The department will also review its service delivery statement measures to accurately measure the regulators effectiveness.</p>



Responses to recommendations received from Chief Executive Officer, Cherbourg Aboriginal Shire Council

Cherbourg Aboriginal Shire Council provided a response to the report recommendations, but declined the offer to provide a formal response commenting on the report.



Cherbourg Aboriginal Shire Council

Managing Queensland's regional water quality

Response to recommendations provided by [redacted] Chief Executive Officer, Cherbourg Aboriginal Shire Council on 25th November 2024.

Recommendation	Agree/ Disagree	Time frame for implementation (Quarter and financial year)	Additional comments
We recommend all councils:			
1. assess their record keeping of essential activities for managing drinking water quality to ensure they are: <ul style="list-style-type: none"> maintaining up-to-date standard operating procedures recording maintenance and inspection results developing schedules and timelines for upcoming periodic activities recording verification monitoring (regular water testing) results and analysis of water quality trends 	Agree	End financial year 2025	This is on going continuous improvement implemented by monthly improvement meetings
2. ensure appropriate oversight of compliance with management plans, risks to drinking water quality, improvement actions and recommendations from independent audits	Agree	End financial year 2025	Regular risk register revision meetings to action the items on the risk register. Increased audits of plans.
3. assess and address identified capability and expertise gaps	Agree	June 2027	This has been given a longer time line as the funded upgrades to the water treatment plant will dictate what extra training will be required.
4. test their emergency response plans periodically for high-risk events, and train staff in how to respond.	Agree	End financial year 2025	This will done as part of the LDGM meetings and monthly water staff meetings

Comments received from Chief Executive Officer, Fraser Coast Regional Council



Responses to recommendations



Fraser Coast Regional Council

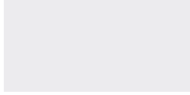
Managing Queensland's regional water quality

Response to recommendations provided by Fraser Coast Regional Council on 9 December 2024.

Recommendation	Agree/ Disagree	Time frame for implementation (Quarter and financial year)	Additional comments
We recommend all councils:	Agree	n/a	
1. assess their record keeping of essential activities for managing drinking water quality to ensure they are: <ul style="list-style-type: none"> • maintaining up-to-date standard operating procedures • recording maintenance and inspection results • developing schedules and timelines for upcoming periodic activities • recording verification monitoring (regular water testing) results and analysis of water quality trends 			1. fully implemented
2. ensure appropriate oversight of compliance with management plans, risks to drinking water quality, improvement actions and recommendations from independent audits	Agree	n/a	2. fully implemented
3. assess and address identified capability and expertise gaps	Agree	n/a	3. implemented and ongoing, no additional action required
4. test their emergency response plans periodically for high-risk events, and train staff in how to respond.	Agree	n/a	4. fully implemented

Comments received from Chief Executive Officer, Western Downs Regional Council

ENQUIRIES TO:
Chief Executive Officer
P 1300 268 624
P 07 4679 4000 (interstate)



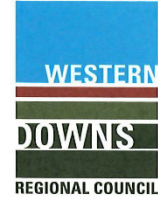
11 December 2024

Rachel Vagg Auditor-General
Queensland Audit Office
PO BOX 15396
CITY EAST QLD 4002
e: gao@gao.qld.gov.au

Customer Contact
1300 COUNCIL (1300 268 624)
07 4679 4000

www.wdrc.qld.gov.au

OUR COMMUNITIES | OUR FUTURE



Address all correspondence
to the Chief Executive Officer
PO Box 551, DALBY, QLD 4405
info@wdrc.qld.gov.au

Dear Ms Vagg,

RE: PRJ03894 Managing Queensland's Regional Water Quality Report

Reference is made to your email correspondence received on 20 November, 2024.

Western Downs Regional Council welcomes the opportunity to contribute to the Managing Queensland's Regional Water Quality Report and appreciates the professionalism demonstrated by your team throughout the process. We were given several opportunities to provide feedback on the audit findings and we appreciate your consideration of our input in the final report.

I believe the report accurately summarises our experiences and we support the proposed recommendations. We believe our existing systems address the intent of the recommendations, though we acknowledge recent staff turnover and vacancies have stretched our performance and review processes.

I believe early consultation on any proposed changes from the Department of Local Government, Water and Volunteers are essential to address the findings and avoid further division between regulatory mechanisms and service providers. All local government service providers are committed to delivering the best service within the unique challenges each entity endures which include;

- Poor quality and limited source water availability;
- Lower customer base to support return on equity;
- Insufficient capital and operational funding support;
- High consumer cost per capita;
- Skilled worker shortages to maintain and operate complex treatment technology; and
- Aging assets unsuitable to meet modern quality requirements.

Local Governments will continue to advocate for funding and support to address ever evolving water quality and security needs. This report and associated recommendations will hopefully be the catalyst for change and facilitate improving the framework for State and Local Governments' to work together for the benefit of regional communities.

Should you require any further information in relation to this matter please do not hesitate to contact either myself: [redacted] or [redacted]

Yours sincerely

Jodie Taylor
CHIEF EXECUTIVE OFFICER



Responses to recommendations



Western Downs Regional Council

Managing Queensland's regional water quality

Response to recommendations provided by [redacted] Western Downs Regional Council on 11 December 2024.



 **Queensland
Audit Office**

Recommendation	Agree/ Disagree	Time frame for implementation (Quarter and financial year)	Additional comments
<i>Water public services</i>			
We recommend all councils:			
1. assess their record keeping of essential activities for managing drinking water quality to ensure they are:	Agree	Complete	<u>Recommendation 1 - Record keeping.</u> <i>Operating Procedures</i> WDRC maintains a suite of standard operating procedures. A review is completed every five years during the Drinking Water Quality Management Plan (DWQMP) review.
<ul style="list-style-type: none"> maintaining up-to-date standard operating procedures 	Agree	Complete New System June 2026	<i>Maintenance & Inspection Results</i> WDRC has several record keeping processes which meet this need. A future software solution is intended to be implemented to amalgamate and centralise records.
<ul style="list-style-type: none"> recording maintenance and inspection results 	Agree	Complete	<i>Schedules and Timelines</i> WDRC has several positions that coordinate operations and maintenance scheduling. Recently a Works Scheduler position was appointed whose primary role is to coordinate and maintain a master schedule.
<ul style="list-style-type: none"> developing schedules and timelines for upcoming periodic activities 	Agree	Complete	<i>Verification Monitoring & Analysis</i> WDRC digitally record all internal and external laboratory results in a software platform (SWIM) available to all staff. Staff are able to use this system to review data and compare against Critical Control Points. Senior staff complete a weekly review of data to understand developing trends.
<ul style="list-style-type: none"> recording verification monitoring (regular water testing) results and analysis of water quality trends 	Agree	Complete	
2. ensure appropriate oversight of compliance with management plans, risks to drinking water quality, improvement actions and recommendations from independent audits		Complete	<u>Recommendation 2 - Oversight</u> WDRC has established several internal review and audit groups to identify risks and develop action plans. This includes review of the DWQMP and Risk Management Improvement



Recommendation	Agree/ Disagree	Time frame for implementation (Quarter and financial year)	Additional comments
3. assess and address identified capability and expertise gaps		Complete	<p>Plan (RMIP). Audit reports and recommendations are routinely provided to WDRC's Utilities Governance Committee which includes the CEO and Executive Leadership team.</p> <p><u>Recommendation 3 - Capability and Resource Gap</u></p> <p>The water industry has very low availability of skilled workers and industry professionals. Locally, WDRC has recently restructured and increased field and technical resources to address identified skills gaps though these positions are difficult to recruit due to industry shortage. WDRC has also developed a career and skills development plan to fast track training and provide a clear career path for retention and recruitment incentives.</p> <p>WDRC seeks external consultants for short term or specialist work where internal resources are limited.</p>
4. test their emergency response plans periodically for high-risk events, and train staff in how to respond.		Complete	<p><u>Recommendation 4 - Emergency Response</u></p> <p>WDRC has an established Incident Management Plan included in the DWQMP which prescribes emergency response activity. The broader organisation has developed local disaster management plans and business continuity plans which are complimentary and designed to operate together during a disaster event. Utilities staff are trained in the incident management response procedure. WDRC has recently tested these plans under actual events.</p>

Comments received from Interim Chief Executive Officer, Winton Shire Council

Winton Shire Council

All Communications to:
The C.E.O.,
P.O. Box 288,
WINTON QLD 4735
AUSTRALIA
Telephone:(07) 4657 2666
Facsimile:(07) 4657 1342

11 December 2024

Queensland Audit Office
53 Albert Street
Brisbane QLD 4000

Dear Sir/Madam


Managing Queensland's Regional Water Quality

Winton Shire Council was one of four Council's that were involved in the "Managing Queensland's Regional Water Quality" audit.

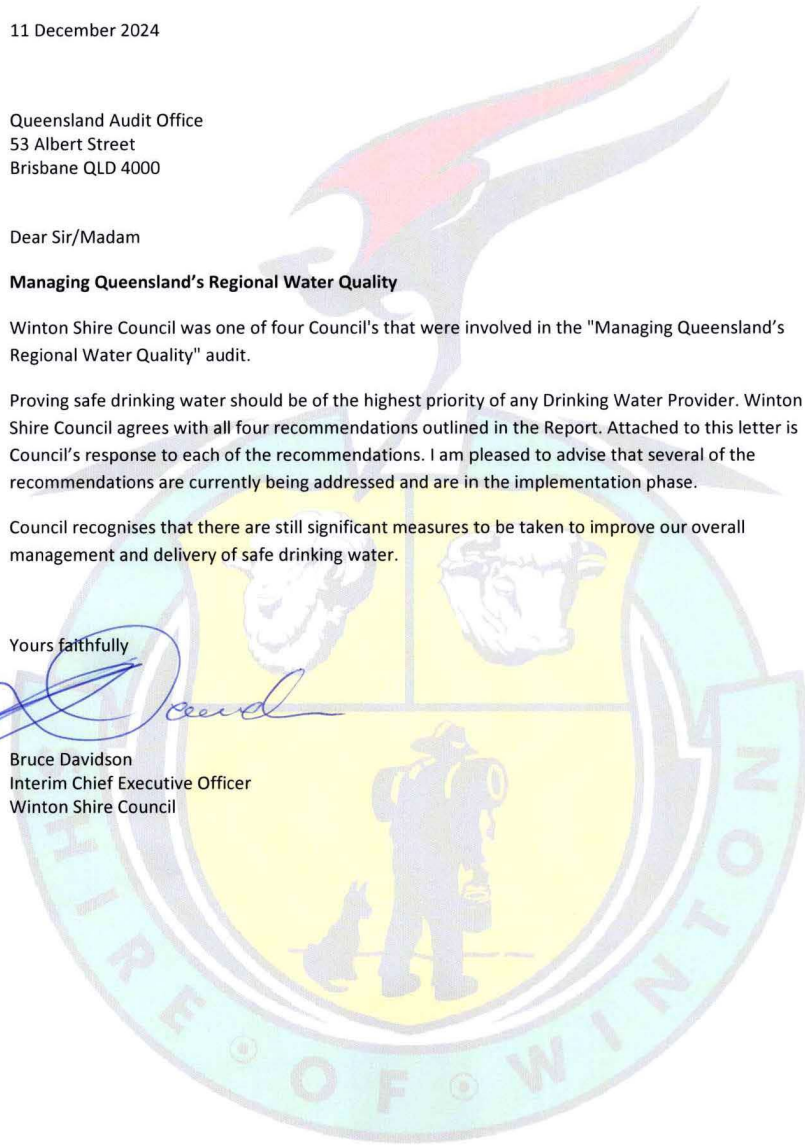
Proving safe drinking water should be of the highest priority of any Drinking Water Provider. Winton Shire Council agrees with all four recommendations outlined in the Report. Attached to this letter is Council's response to each of the recommendations. I am pleased to advise that several of the recommendations are currently being addressed and are in the implementation phase.

Council recognises that there are still significant measures to be taken to improve our overall management and delivery of safe drinking water.

Yours faithfully



Bruce Davidson
Interim Chief Executive Officer
Winton Shire Council



Responses to recommendations



Winton Shire Council

Managing Queensland's regional water quality

Response to recommendations provided by Winton Shire Council on 10 December 2024

Recommendation	Agree/Disagree	Time frame for implementation (Quarter and financial year)	Additional comments
<p>We recommend all councils:</p> <ol style="list-style-type: none"> <p>assess their record keeping of essential activities for managing drinking water quality to ensure they are:</p> <ul style="list-style-type: none"> maintaining up-to-date standard operating procedures recording maintenance and inspection results developing schedules and timelines for upcoming periodic activities recording verification monitoring (regular water testing) results and analysis of water quality trends 	Agree	March 25	<p>Council agrees that it falls short in record keeping of essential activities.</p> <p>Council is in the process of developing a Water Masterplan. This Plan will address the gaps identified in the Audit. The Plan will be the go-to document for continuous improvement and implementation.</p>
<ol style="list-style-type: none"> <p>ensure appropriate oversight of compliance with management plans, risks to drinking water quality, improvement actions and recommendations from independent audits.</p> 	Agree	June 25	<p>Council to review and update the Asset Management Plans and continue to reduce risks identified in the Drinking Water Quality Management Plan (DWQMP)</p>
<ol style="list-style-type: none"> <p>assess and address identified capability and expertise gaps.</p> 	Agree	Feb 25	<p>Council is currently recruiting for a Water and Sewer Technical Officer</p>
<ol style="list-style-type: none"> <p>test their emergency response plans periodically for high-risk events, and train staff in how to respond.</p> 	Agree	Feb 25	<p>Council is finalising a fully automated upgrade to the Water Pump Station that can be shut-down immediately if needed. Carry out a mock exercise to identify gaps and train Staff.</p>

B. Audit scope and methods

Performance engagement

This audit has been performed in accordance with the *Auditor-General Auditing Standards*, incorporating, where relevant, the standards on assurance engagements issued by the Auditing and Assurance Standards Board. This includes the standard on assurance engagements ASAE 3500 *Performance Engagements*. This standard establishes mandatory requirements and provides explanatory guidance for undertaking and reporting on performance engagements.

The conclusions in our report provide reasonable assurance about the audited entities' performance against the identified criteria. Our objectives and criteria are set out below.

Audit objective and criteria

The objective of the audit is to assess how effectively state and local government entities ensure communities can access safe drinking water.

The audit addressed the objective through the following sub-objectives and criteria:

Sub-objective 1	Does the Department of Local Government, Water and Volunteers (the department) effectively monitor and respond to drinking water quality risks?
Criteria	
1.1	The department has defined its desired regulatory objectives and plans its work accordingly
1.2	The department assesses and prioritises risks which inform its regulatory activities
1.3	The department responds to incidents and non-compliance in an effective and timely manner
Sub-objective 2	Do the selected water service providers effectively manage drinking water quality?
Criteria	
2.1	The selected water service providers have developed and implemented water quality plans and procedures that are based on industry guidelines
2.2	The selected water service providers effectively respond to incidents and hazardous events
2.1	The selected water service providers continually improve their performance

The entities we audited

Our audit included the Department of Regional Development, Manufacturing and Water and 4 local councils (water service providers) responsible for providing safe drinking water to their communities.

On 1 November 2024, the government restructured responsibilities, moving water regulation from the Department of Regional Development, Manufacturing and Water and local government from the Department of Housing, Local Government, Planning and Public Works into the new Department of Local Government, Water and Volunteers.



The findings in this audit reflect departmental structures as they existed before 1 November 2024. This audit did not include any assessment of the Department of Housing, Local Government, Planning and Public Works and its transferred local government functions.

The following table provides key statistics from 2022–23 for the 4 water service providers.

Figure B1
Key statistics of the 4 water service providers for 2022–23

Providers	Number of water schemes	Population	Water connections	Council area (square kilometres)	Own-source revenue \$'000
Cherbourg Aboriginal Shire Council	1	1,264	343	32	8,758
Fraser Coast Regional Council	3	117,940	41,876	7,105	240,477
Western Downs Regional Council	9	34,991	11,815	37,923	152,835
Winton Shire Council	1	1,138	611	53,814	14,358

Note: Own-source revenue refers to revenue raised by a council from its day-to-day business activities, such as rates, charges, and fees. It excludes any grant funding the council may receive.

Source: Compiled by the Queensland Audit Office from Department of Local Government, Water and Volunteers data, which is collected from local governments; Australian Bureau of Statistics estimated population data; and data from the 2022–23 local government financial statements.

The providers in South East Queensland include Gold Coast City Council, Logan City Council, Redland City Council, Toowoomba Regional Council, Unitywater, and Urban Utilities. These are larger entities, they have different resources available, and they face different challenges to the providers in regional Queensland.

Scope exclusion

We did not audit:

- Queensland Health and the public health units
- water supply management, including accessibility and infrastructure capacity
- water suppliers not regulated under the *Water Supply (Safety and Reliability) Act 2008* (for example, private tank water, mine sites, or bodies corporate)
- recycled water schemes
- water incidents that occur in infrastructure beyond the water meter (for example, in a building or hospital)
- water treatment decisions made by councillors and mayors based on information presented to them by management (for example, chlorination or fluoridation).



Audit method and approach

Field visits and interviews

We conducted interviews with stakeholders across the water sector, including regional areas of Queensland. This included, but was not limited to:

- site visits to water treatment plants and infrastructure at
 - Cherbourg Aboriginal Shire Council
 - Fraser Coast Regional Council
 - Western Downs Regional Council
 - Winton Shire Council
- meetings with
 - the former Department of Regional Development, Manufacturing and Water, now called the Department of Local Government, Water and Volunteers
 - Queensland Health
 - the local government division in the former Department of Housing, Local Government, Planning and Public Works, now called the Department of Local Government, Water and Volunteers
 - the Local Government Association of Queensland
 - the Queensland Water Directorate, which is an industry peak body that provides advisory and advocacy, training, and support to water service providers.

Document review

We obtained and reviewed relevant documents from the entities involved in the audit. This included legislation, strategic plans, annual plans, guidelines, correspondence, drinking water quality management plans, and corresponding annual reports, independent audit reports, governance committee meeting packs, and reviews. We also considered research from other jurisdictions and academia.

Data analysis

We analysed a range of data from the entities from between 2020–21 and 2022–23, including on:

- incidents, instances of non-compliance, and enforcement actions
- site visits
- risk assessments
- operational and verification monitoring.

We also accessed data from 'Urban Water Explorer', which is the Department of Housing, Local Government, Planning and Public Works' web-based dashboard. It includes information about water service provider service delivery, water supply security, demand management, and customer service.

Subject matter experts

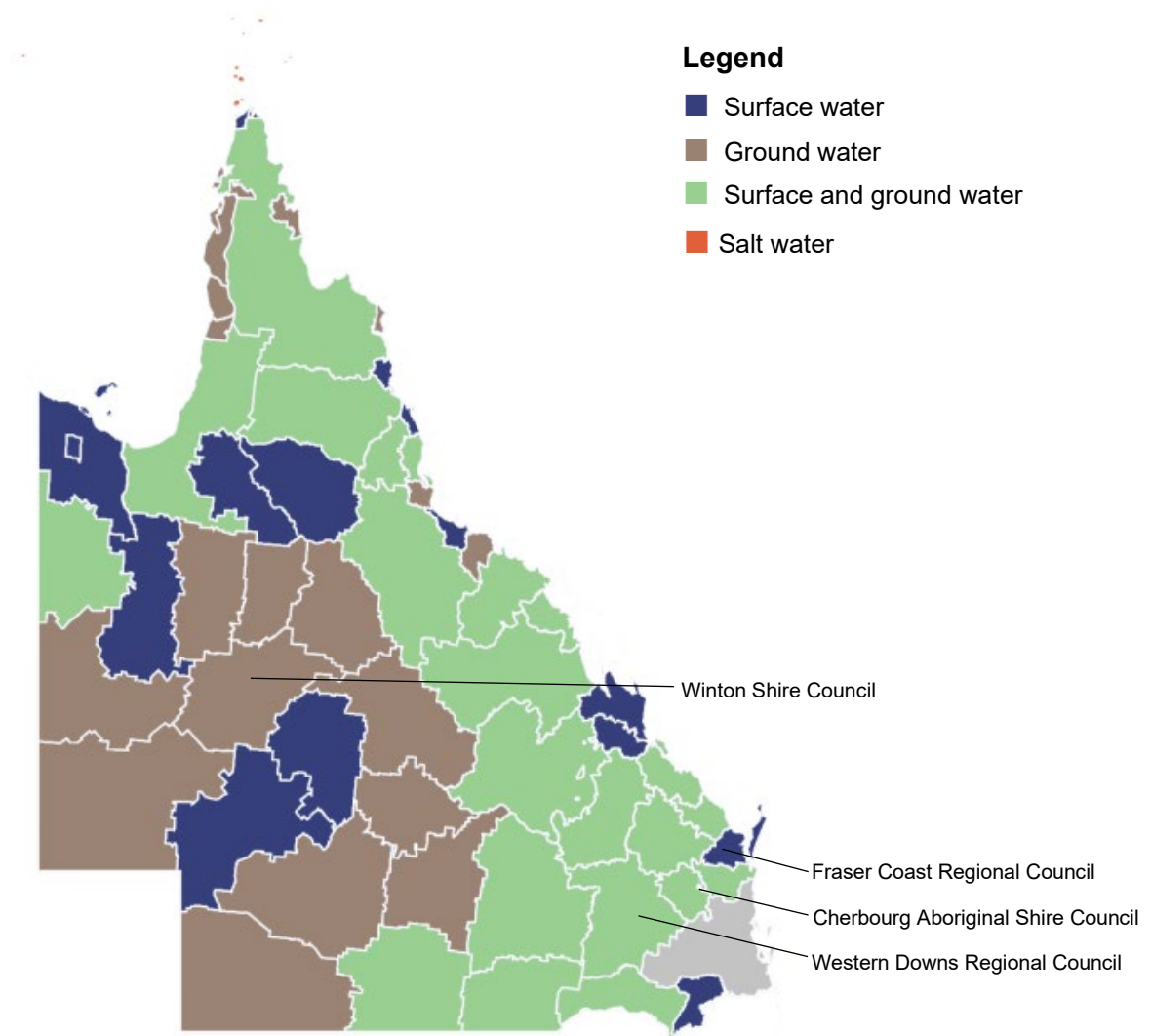
We engaged and sought advice from 2 subject matter experts from the University of Sydney and the Australian National University. The experts have fellowships with Engineers Australia and are members of the Australian Water Association. They provided insight into water operations, key issues, and risks. They also offered advice and validated facts and concepts related to specific aspects of the audit.



C. Water sources in Queensland

Figure C1 outlines the type of water sources accessed by providers in regional Queensland.

Figure C1
Distribution of water sources in regional Queensland



Notes: There are 11 local governments in South East Queensland, who we excluded from this audit because they have different resources available and they face different challenges to the providers in regional Queensland. Some of these councils purchase water from bulk water suppliers. These councils are not shown on the map. They include Brisbane City Council, Gold Coast City Council, Logan City Council, Ipswich City Council, Redland City Council, Sunshine Coast Regional Council, Toowoomba Regional Council, Moreton Bay Regional Council, Somerset Regional Council, Lockyer Valley Regional Council, and Scenic Rim Regional Council.

Source: Compiled by the Queensland Audit Office from information provided by the Department of Local Government, Water and Volunteers.



qao.qld.gov.au/reports-resources/reports-parliament

qao.qld.gov.au/contact-us

T: (07) 3149 6000
E: qao@qao.qld.gov.au
W: www.qao.qld.gov.au
53 Albert Street, Brisbane Qld 4000
PO Box 15396, City East Qld 4002