



Examination of Auditor-General Report No. 9: 2021-22 *Regulating dam safety*

Report No. 33, 57th Parliament

State Development and Regional Industries Committee

December 2022

State Development and Regional Industries Committee

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Acknowledgements

The committee acknowledges the work of the Auditor-General and the Queensland Audit Office in preparing Report No. 9: 2021-22, Regulating dam safety.

The committee also acknowledges the work of the Department of Regional Development, Manufacturing and Water and its comprehensive and timely response to the Auditor-General's recommendations.

Inquiry documents



All inquiry documents are available on the inquiry webpage here:

<https://www.parliament.qld.gov.au/Work-of-Committees/Committees/Committee-Details?cid=172&id=4187>

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Chair's foreword

This report presents a summary of the State Development and Regional Industries Committee's examination of the Auditor-General Report No. 9: 2021-22- *Regulating Dam Safety*.

The report found that the Department for Regional Development, Manufacturing and Water needs to improve its regulatory approach to ensure that Queensland dam owners are monitoring, assessing and responding to dam safety risks in line with their legislative responsibilities. The Auditor-General made 9 recommendations to the department accordingly.

One year on, all 9 recommendations have been implemented in a comprehensive and timely manner. It is clear that the department embraced the opportunity to improve the regulatory framework for dam safety to ensure that public safety risks are being appropriately managed and should be complemented for their diligence.

In general, the committee believes there is an ongoing need for government entities such as bulk water entities and local governments as dam owners to add independent audit and risk management committees to their governance structures, and the committee has recommended this accordingly. Such committees can add significant value to an organisation on its risk management responsibilities and legislative compliance.

On behalf of the committee, I thank the Queensland Audit Office and officials from the department. I also thank my fellow committee members and committee secretariat.

I commend this report to the House.



Chris Whiting MP

Chair

Recommendation

Recommendation	7
That government entities such as bulk water providers and relevant local governments be required to add independent audit and risk management committees to their governance structures.	7

1 Examination of the Audit Report

1.1 Dam safety regulatory framework

The regulatory framework for dam safety is established in the *Water Supply (Safety and Reliability) Act*. The aim of the regulatory framework is to minimise the risk to the public living and working downstream of dams resulting from dam failure. The Deputy Director-General, Water Resource Management described the regulatory framework as follows.

Queensland has 111 referable dams. Referable Dams are dams where 2 or more people would be at risk if the dam was to fail. Dam owners include state owned entities like Seqwater and Sunwater—who own around half of the referable dams—councils, mining companies and pastoral companies.¹

The Australian National Committee on Large Dams, or ANCOLD, is a non-government, non-statutory body that produces guidance on dam safety that is considered industry best practice. All state jurisdictions point to ANCOLD guidelines. Queensland's regulatory framework reflects and, in some cases, exceeds the ANCOLD guidelines. Queensland's regulatory framework has evolved over time in response to various reviews, flood events, ANCOLD guideline changes and updated Bureau of Meteorology rainfall projections.²

Queensland's regulatory framework places the responsibility for monitoring, assessing and responding to potential dam safety risks with the dam owner.³

The role of the Department of Regional Development, Manufacturing and Water (the department) is to enforce the regulatory framework and ensure dam owners are properly undertaking their requirements as set out in the legislation, in regulatory guidelines and in dam safety conditions set for each dam.⁴ The department assesses these risks through the review of reports and plans submitted to the department and undertaking onsite audits to ensure these reports have been appropriately applied to dam management processes.⁵

The department uses a range of regulatory tools to achieve compliance including education and informal and formal warnings. Penalty infringement notices and prosecutions are also available. The department has also established a dam safety community of practice for dam owners to share technical knowledge and for the department to set expectations as a regulator.⁶

1.2 Audit conclusions

The Queensland Audit Office (QAO) examined how the department collects and uses information from owners to manage risks to dam safety, tabling its report in Parliament in December 2021.

The report found that while the department has the key design elements of an effective regulatory framework in place, it is not effectively or consistently applying some important elements of the framework.

The audit focused on 3 themes – collecting dam safety information from owners; identifying and managing risks; and dealing with non-compliance. In summary, the audit found:

¹ Mrs Linda Dobe, Deputy Director-General, Water Resource Management, Department of Regional Development, Manufacturing and Water, public hearing transcript, Brisbane, 10 October 2022, p 1.

² Department, public hearing transcript, Brisbane, 10 October 2022, p 1.

³ Department, public hearing transcript, Brisbane, 10 October 2022, p 2.

⁴ Department, public hearing transcript, Brisbane, 10 October 2022, p 2.

⁵ Department, public hearing transcript, Brisbane, 10 October 2022, p 2.

⁶ Department, public hearing transcript, Brisbane, 10 October 2022, p 2.

- There are gaps in the way the department collects and manages the information it needs, how it targets risks, and how it acts on non-compliance. The department needs to improve its regulatory approach to compliance, monitor dam owner planning and progress in achieving necessary upgrades, and better address non-compliance by owners.
- The department does not effectively collect the information it needs to conduct targeted, risk-based inspections, making it harder to enforce compliance with dam safety conditions. Weaknesses in the system and processes for monitoring and recording information on dam safety conditions reduce the department's ability to inspect and enforce the conditions.
- The department does not identify non-compliance with dam safety conditions consistently. When it does identify non-compliance with dam safety conditions, the department does not always follow up with owners to ensure issues are adequately addressed. Consequently, the department does not have complete and up-to-date data on the level of non-compliance and risk across its regulated population (dam owners).
- The department has developed good relationships with dam owners to promote voluntary compliance. It runs workshops and training for owners and the community to increase understanding of dam safety principles and compliance requirements.
- The department has recently focused on improving compliance for emergency action plans, with no outstanding plans identified from its review of the 2020 plans. While these are positive and important elements of regulatory practices, the department needs to improve its processes to enforce compliance.⁷
- The department focuses on voluntary compliance but has been reluctant to use enforcement measures such as penalty infringement notices or court action when needed. It has not made use of the available enforcement actions even though there are examples of owners consistently not providing the legislatively required safety notifications and reports on time. It cannot assess whether the dams are compliant with the safety standards if the safety reports are considerably late or not provided at all.
- That gaps in information gathering, systems, monitoring and enforcement practices limit the department's effectiveness as a regulator.⁸

1.3 Audit recommendations and implementation progress

The QAO made 9 recommendations to the department, which have now been implemented in full.

The department provided a detailed response to the committee on each of the recommendations (discussed below) and stated its ongoing commitment to improving how it delivers its regulatory obligations and embracing learnings from the report.

1.3.1 Project team established and budget allocated

In July 2021, the department pre-emptively established a dedicated project team to implement the QAO recommendations. The department also appointed a nationally recognised dam safety expert to provide an independent review of the department's proposed actions, to review the regulatory approach, and to confirm that the department's approach aligns with best practice and with other jurisdictions.⁹

⁷ Queensland Audit Office, Report 9: 2021-22 Regulating dam safety, p 2.

⁸ Queensland Audit Office, Report 9: 2021-22 Regulating dam safety, p 2.

⁹ Director-General, Department of State Development, Infrastructure, Local Government and Planning, 25 August 2022, Detailed response report, p 1.

This was supported by a 2022-23 state budget allocation of \$3.4 million over 4 years to address the recommendations.¹⁰

1.3.2 Recommendation 1 - Complete

1. The QAO recommends that the department improves the implementation and application of its regulatory framework and approach to dam safety to embed better compliance. This should include:
 - better understanding the level of non-compliance
 - acting on non-compliance, using the full range of enforcement measures at its disposal to address serious or persistent non-compliance
 - assessing its performance to determine outcomes
 - adopting a continuous improvement approach.

Recommendation 1 was completed in August 2022. The department confirmed that it had now reviewed compliance with all referable dam safety conditions to identify overall compliance levels in the state.¹¹

The department confirmed that all dams due for an upgrade by 2015 were completed on schedule and that all dams due to be upgraded by 2025 are still on schedule. All instances of non-compliance outlined in the Auditor-General's report have been addressed.¹²

The department advised that it had also undertaken the QAO self-assessment for all regulators as recommended by the Auditor-General in its report *Regulating Animal Welfare Services*^{13, 14}

The department published its Annual Compliance Plan 2022-23 in August 2022 which consolidates the department's compliance priorities including for dam safety.¹⁵ A range of performance measures are identified and the department has confirmed that it will publicly report on performance in September 2023.

The department confirmed that a range of measures had now been implemented to improve the regulatory framework including increased internal monitoring and reporting, collaboration and alignment of audit activities, and a consistent response and escalation pathway for cases of severe or persistent non-compliance. The department also noted that recent enhancements to the Referable Dam Register, the department's monitoring systems have also improved monitoring and reporting abilities.¹⁶

In July 2022 the independent expert reviewed the department's risk management framework and highlighted that the dam safety regulator manages risks effectively, and prioritises regulatory action on the basis of those risks.¹⁷

¹⁰ Department, 25 August 2022, Attachment - Detailed response report, p 2.

¹¹ Department, 25 August 2022, Attachment - Detailed response report, p 1.

¹² Department, 25 August 2022, Attachment - Detailed response report, p 1.

¹³ The committee is currently examining this report and expects to table its report in early 2023.

¹⁴ Department, 25 August 2022, Attachment - Detailed response report, p 2.

¹⁵ Department, Annual Compliance Plan 2022-23.

¹⁶ Department, 25 August 2022, Attachment - Detailed response report, p 2.

¹⁷ Department, 25 August 2022, Attachment - Detailed response report, p 2.

1.3.3 Recommendation 2 - Complete

2. The QAO recommends that the department revise the acceptable flood capacity guidelines, requiring dam owners to advise it how and when spillways scheduled for upgrade will be completed and report progress

This recommendation was completed in December 2021 when the department published the revised Guidelines on Safety Assessments for Referable Dams.¹⁸

The guidelines describe in detail the requirements for dam owners to provide annual reports on dam upgrades that justify upgrade timeframes and allow the department to track progress and have been favourably referenced by several global leaders on dam safety standards.

The first round of reports was due to be received by 1 October 2022 as part of the dam owner's wet season preparedness reporting obligation.¹⁹

1.3.4 Recommendation 3 – Complete

3. The QAO recommends that the department review frequencies for conducting risk assessments and/or flood capacity for dams, particularly those conducted more than a decade ago that may have underestimated flood risk.

This recommendation was completed in December 2021. The department confirmed that the frequency of conducting risk assessments was reviewed and considered inputs from an independent expert and comparisons to industry best practice standards. The adopted risk assessment frequencies have been maintained at the current time subject to future review and ongoing dialogue with industry.²⁰

Dam owners are required to carry out safety inspections yearly, comprehensive inspections every 5 years and safety reviews (which incorporate risk assessments) every 20 years. Dam owners also carry out risk assessments when new information comes to light that suggests that the risk profile may have changed.²¹

The QAO report highlighted 4 privately owned farm dams that had not had formal flood capacity assessments conducted. The department engaged an independent engineer to conduct these assessments. The review found that the dams meet acceptable flood capacity and that no further regulatory action is required at this time.²²

1.3.5 Recommendation 4 – Complete

4. The QAO recommends that the department maximise the engineering expertise available by adopting appropriate work processes, systems, and team structure to enable consistency across all areas of compliance

This recommendation was completed in August 2022. The department confirmed that it had engaged a nationally recognised expert in dam safety to review the work processes and practises. That review identified a need for greater emphasis on compliance to better support the engineering and other technical expertise, but any reduction in the technical capacity of the dam safety regulator was to be avoided.²³

¹⁸ Department, 25 August 2022, Appendix B, p 1.

¹⁹ Department, 25 August 2022, Attachment - Detailed response report, p 4.

²⁰ Department, 25 August 2022, Attachment - Detailed response report, p 5.

²¹ Department, 25 August 2022, Attachment - Detailed response report, p 5.

²² Department, 25 August 2022, Attachment - Detailed response report, p 5.

²³ Department, 25 August 2022, Attachment - Detailed response report, p 6.

Three new positions have now been added to the dam safety team; an Engineering Manager, a Principal Compliance Officer and a Senior Project Officer for Information Systems. The department advised that these have enabled a better separation of the compliance and engineering functions, strengthened engineering capacity and improved consistency in compliance and optimised team performance.²⁴

The department also confirmed that work processes were revised according to the third-party accredited quality management system (ISO 9001:2016) and that ISO independent auditors had reviewed and approved the processes on 17 August 2022, confirming that the changes made are now embedded as “business as usual”.²⁵

1.3.6 Recommendation 5 – Complete

5. The QAO recommends that the department revises and documents its process for selecting the number and priority of dam site audits to ensure it is reflecting industry good practice. This should balance the value of on-site inspections and face-to-face dialogue with dam operators with the time needed to cycle through the audit population.

This recommendation was completed in December 2021. The department confirmed that it undertook an external independent review of the dam site audit program, considering number, prioritisation and sequencing of audits, and the detail and content of each audit. It reflected upon industry best practice and audit programs conducted by dam safety regulators in other states in Australia. Prioritisation of audits has been revised to consider the dam owner as well as individual dams.²⁶

The department advised that 15 dam site audits are scheduled for the 2022-2023 reporting period. Based on the revised prioritisation, this audit schedule will capture 14 per cent of the total dam population, 26 per cent of the dam owner population and around 50 per cent of the life safety risks within this one year reporting period.²⁷

Future prioritisation and audit content will also consider compliance performance from past audits.²⁸

1.3.7 Recommendation 6 – Complete

6. The QAO recommends that the department revises its risk factors to include consideration of a dam owners’ capacity to pay, based on forward budgets and plans, when prioritising compliance activities for dam upgrades.

This recommendation was completed in December 2021. The department advised that the published Guidelines on Safety Assessments for Referable Dams clarified that capacity to pay should not be considered as a factor when justifying a timeframe to upgrade a dam, not for determining how safe a dam should be.²⁹

The annual upgrade reports (due from 1 October 2022) will provide a mechanism to consider whether proposed upgrade timeframes are reasonable, feasible to implement, and if the dam owner has the capacity and resources to deliver it. The department advised that if the upgrade report indicates a risk that a particular dam owner may struggle to pay for a dam upgrade, then this will incur greater compliance attention.³⁰

²⁴ Department, 25 August 2022, Attachment - Detailed response report, p 6.

²⁵ Department, 25 August 2022, Attachment - Detailed response report, p 6.

²⁶ Department, 25 August 2022, Attachment - Detailed response report, p 7.

²⁷ Department, 25 August 2022, Attachment - Detailed response report, p 7.

²⁸ Department, 25 August 2022, Attachment - Detailed response report, p 7.

²⁹ Department, 25 August 2022, Attachment - Detailed response report, p 8.

³⁰ Department, 25 August 2022, Attachment - Detailed response report, p 8.

The department also confirmed that prioritisation of dam site audits will consider capacity to pay among other risk factors.³¹

1.3.8 Recommendation 7 – Complete

7. The QAO recommends that the department better aligns the Referable Dams Register (the department's dam monitoring system) with the compliance outcomes needed, to ensure a more centralised and consistent way to accurately capture owners' compliance information.

This recommendation was completed in August 2022. The department confirmed that the Referable Dams Register has been enhanced, including a system integrity review, enhancements to better monitor and escalate dam safety non-compliance, and improved collation and reporting functionality.

The new Senior Project Office Information Systems position within the departmental team provides in-house support to ensure the Referable Dams Register provides the necessary functionality, that data integrity is maintained.³²

1.3.9 Recommendation 8 – Complete

8. The QAO recommends that the department improves its records management processes and practices, including accurately documenting when inspections and reports are due and received

This recommendation was completed in December 2021. The department advised that the enhanced Referable Dams Register has improved compliance tracking. This was supported by a pre-emptive action taken as part of the re-issue of the safety conditions to dam owners in late 2020 that simplified submission dates for inspections and reviews.³³

The department also confirmed that reporting on compliance performance is required quarterly to senior management and subsequently collated and published as part of the department's annual compliance planning and reporting processes. Furthermore, the role of the new Principal Compliance Officer will include monitoring and reporting on compliance submissions.³⁴

The updated Quality Management System, that incorporates the functions of this role, was accepted by the ISO independent auditors review on 17 August 2022, which confirms that the changes made are now embedded as 'business as usual'.³⁵

1.3.10 Recommendation 9 – Complete

9. The QAO recommends that the department sets clear escalation thresholds and acts in a timely and effective manner to address identified noncompliance and record outcomes of enforcement.

This recommendation was completed in December 2021. The department confirmed that work processes and escalation thresholds were reviewed and implemented to ensure non-compliance is addressed in a timely manner. These non-compliance response workflow processes are embedded into the Quality Management System, which was audited and approved by the independent ISO auditor in August 2022.³⁶

³¹ Department, 25 August 2022, Attachment - Detailed response report, p 8.

³² Department, 25 August 2022, Attachment - Detailed response report, p 9.

³³ Department, 25 August 2022, Attachment - Detailed response report, p 9.

³⁴ Department, 25 August 2022, Attachment - Detailed response report, p 9.

³⁵ Department, 25 August 2022, Attachment - Detailed response report, p 9.

³⁶ Department, 25 August 2022, Attachment - Detailed response report, p 10.

1.4 Committee comment

The Auditor-General found that the Department for Regional Development, Manufacturing and Water needs to improve its regulatory approach to ensure that Queensland dam owners are monitoring, assessing and responding to dam safety risks in line with their legislative responsibilities.

That said, the manner in which the department has addressed the Auditor-General's report is to be commended.

One year on, the committee is satisfied that all 9 recommendations have been implemented in a comprehensive and timely manner. It is clear that the department embraced the opportunity to improve the implementation of the regulatory framework to ensure that public safety risks are being appropriately managed.

In general, the committee believes there is an ongoing need for government entities such as bulk water providers and local governments who are owners of the majority of referable dams in the state, to be required by the government to add independent audit committees to their governance structures. The committee has recommended this accordingly.

As discussed in our Report no. 32 on Auditor-General Reports on the local government sector, audit committees can add significant value to an organisation in meeting its risk management responsibilities and ensuring compliance with legislative responsibilities.

Recommendation

That government entities such as bulk water providers and relevant local governments be required to add independent audit and risk management committees to their governance structures.

Appendix A – Inquiry conduct

Role of the committee

The State Development and Regional Industries Committee (committee) is a portfolio committee of the Legislative Assembly which commenced on 26 November 2020 under the *Parliament of Queensland Act 2001* and the Standing Rules and Orders of the Legislative Assembly.³⁷

The committee's primary areas of responsibility include:

- Regional Development, Manufacturing and Water.

The committee has responsibility within its portfolio areas for the assessment of the integrity, economy, efficiency and effectiveness of government financial management. This includes by considering reports of the Auditor-General.³⁸

Standing Order 194B provides the Committee of the Legislative Assembly shall as soon as practicable after a report of the Auditor-General is tabled in the Assembly, refer that report to the relevant portfolio committee for consideration. The audit report was referred to the committee on 25 February 2022.

Role of the Auditor-General

The role of the Auditor-General is to provide Parliament with independent assurance of public sector accountability and performance. This is achieved through reporting to Parliament on the results of its financial and performance audits. A performance audit evaluates whether an agency or government program is achieving its objectives effectively, economically and efficiently, and is compliant with relevant legislation. It does not consider the merits of government policy. Rather, it focuses on how that policy is implemented.³⁹

The QAO Report No. 9: 2021-22, titled '*Regulating Dam Safety*' was prepared under Part 3 Division 3 of the *Auditor-General Act 2009* and was tabled in the Legislative Assembly in accordance with section 67 of that Act on 8 December 2021. The report presents the results of the QAO's performance audit.

Examination process

The committee received a public briefing from the Auditor-General on 29 August 2022 to discuss the audit report, its findings and recommendations. (See **Appendix B**)

The committee requested a detailed response from the Department of Regional Development, Manufacturing and Water on progress against the QAO's recommendations. The department provided its response on 25 August 2022 and also attended a public briefing on 10 October 2022 on the implementation of the audit report's recommendations.

All inquiry documents including transcripts of briefings and departmental correspondence can be found on the committee's web page.

³⁷ *Parliament of Queensland Act 2001*, s 88 and Standing Order 194.

³⁸ *Parliament of Queensland Act 2001*, s 94(1)(a).

³⁹ QAO Factsheet - About us, p 2.

Appendix B – Officials at public briefings

29 August 2022

Queensland Audit Office

- Mr Brendan Worrall, Auditor-General
- Mr Patrick Flemming, Assistant Auditor-General
- Mr Darren Brown, Senior Director

10 October 2022

Department of Regional Development, Manufacturing and Water

- Mrs Linda Dobe, Deputy Director-General, Water Resource Management
- Mr Jarrod Cowley-Grimmond, Executive Director, Water Operations and Systems
- Mr Chris Nielsen, Director, Dam Safety, Water Operations and Systems