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Department of Planning and Environment

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# Incident and emergency management for local water utilities

Proposed management framework

June 2022



# Acknowledgement of Country

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Incident and emergency management for local water utilities – Proposed management framework

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## Glossary

Abbreviation	Definition
ADWG	Australian Drinking Water Guidelines
AGWR	Australian Guidelines for Water Recycling
AIIMS	The Australasian Inter-Service Incident Management System
BCP	Business Continuity Plan
IERP	Incident and Emergency Response Plan
LEMC	Local Emergency Management Committee
LEMO	Local Emergency Manager Officer
PIRMP	Pollution Incident Response Management Plan
POEO	Protection of the Environment Operations
TWRRP	Town Water Risk Reduction Program

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# Foreword

## **Incident and emergency management is a key risk for local water utilities**

In the past 5 years, almost every local water utility in NSW has responded to some sort of serious incident or emergency. These range from smaller localised incidents such as loss of power, infrastructure failure or water quality issues, through to wide ranging emergencies such as bushfires, floods and pandemic. Responding to and recovering from these events quickly and efficiently is vital to providing continuity of water and sewage services to our communities.

These events have shown that local water utilities need to look beyond incident and emergency response and focus more broadly on incident and emergency management through a Plan, Prepare, Respond, Recover approach.

The NSW regional water sector identified incident and emergency management as a key area of risk for local water utilities and the communities they serve. The Town Water Risk Reduction Program convened a focus group to investigate and provide recommendations for how local water utilities can improve management of incidents and emergencies. The Program also engaged Atom Consulting to work with the focus group to develop a draft incident and emergency management framework to support local water utilities to improve risk management.

This draft incident and emergency management framework aims to support local water utilities to better manage risks. The report presents a management framework, comprising a set of outcomes and actions for local water utilities. This framework draws on several existing requirements in NSW Government policy and legislation for incident and emergency management. The framework aims to guide local water utilities in their development of specific incident and emergency management processes using a risk based and outcomes focused approach. The framework will be supported by additional guidance material, to be developed following review of this framework.

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## The department is seeking feedback on this draft framework

The department's Town Water Risk Reduction Program is seeking feedback from the water industry on this draft framework. The department invites submissions on this report and, in particular, answers to the following questions:

1. Does the framework support local water utilities to manage risks posed by incidents and emergencies? How could the Framework be improved to better support utilities?
2. Which areas of incident and emergency management should be prioritised for improvement?
3. What guidance material should the department develop to help a local water utility effectively develop local incident and emergency management processes?
4. What training and support would a local water utility need to effectively implement this framework? What should the department's role be in providing this training and support?
5. Should the department assess local water utilities' incident and emergency management processes to ensure risks are managed?
6. What other support should the department consider providing to better support local water utilities and their communities manage incidents and emergencies?

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# Executive summary

Local water utilities provide essential drinking water and sewerage services to their communities. The Town Water Risk Reduction Program (TWRRP) identified incident and emergency support as an area to be progressed. This document summarises the current regulatory context and proposes outcomes to support local water utilities to plan and prepare for as well as respond to and recover from, incidents and emergencies. Further guidance will be provided in separate documents.

This proposed incident and emergency management framework for local water utilities was developed in conjunction with an industry focus group. The framework is risk based and outcomes focused. Four key risks were identified, and each risk has an associated outcome within the framework that will mitigate the risk for local water utilities.

[Table 2](#) summarises the proposed incident and emergency management outcomes, the risk they manage and provides an example of how a utility can show it has achieved the outcome.

To support the proposed outcomes, five high-level improvement actions are proposed that local water utilities can implement to improve incident and emergency management ([Table 3](#)).

The proposed management framework also provides guidance on defining risk escalation levels to allow planning of required actions and the allocation of resources required to support the incident response. Level 4 has been included to reflect the change in incident management when a local water utility is no longer the lead agency.

A typical escalation framework that could be utilised is shown in [Figure 2](#), with further details given in [Section 3.3](#).

The role of the department in support local water utilities, and potential for expanding this role, is included in [Section 3.5](#).

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# 1. Introduction

Local water utilities provide essential drinking water and sewerage services to their communities. There are times when the provision of these services is challenged. Recent incidents and emergencies have highlighted both strengths and areas for improvement in incident and emergency management for water utilities.

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## 1.1 Project background

The Town Water Risk Reduction Program (TWRRP) was established in December 2020 by the NSW Department of Planning and Environment (the department) to identify long-term solutions to barriers faced by local water utilities.

The TWRRP identified incident and emergency support as an area to be progressed. The TWRRP has engaged with the wider sector to identify three priority areas to improve incident and emergency management support:

- to help local water utilities develop more robust incident planning
- to help local water utilities regularly exercise their incident plans together with other relevant agencies and entities
- with targeted incident response support for local water utilities that are too resource constrained to adequately respond to incidents while also managing their critical day-to-day business operations.

The department engaged Atom Consulting to develop a management framework and guidance document to address the first two priority areas. This document summarises the review of the current regulatory context and proposes outcomes to support local water utilities to plan and prepare for, as well as respond to and recover from, incidents and emergencies.

An incident support focus group has been utilised to identify areas of focus and collect stakeholder feedback on the management framework. The focus group is made up of representatives from water utilities and regulators as well as other key stakeholders.

Further guidance will be provided in separate documents. This will support the management framework and provide information to assist local water utilities to meet their requirements for incident and emergency management as well as guide them on how to ensure their plans are, and continue to be, effective.

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## 1.2 Document structure

This framework documents the process of developing the proposed management framework and aims to provide greater context and detail regarding existing requirements and proposed improvements to assist local water utilities in incident and emergency management. This report includes the following:

- current regulatory context and requirements, including key findings from the framework development ([Section 2.1](#) and [Section 2.2](#))
- identified gaps in incident and emergency response management ([Section 2.3](#))
- a detailed breakdown of the proposed outcomes for the framework as well as the risks that they aim to address ([Section 3.1](#))
- overarching improvement actions to be implemented by regulators and local water utilities to improve incident and emergency management ([Section 3.2](#))
- guidance on escalation processes ([Section 3.3](#))
- guidance on different types of incidents and emergencies ([Section 3.4](#))
- information on the role of the department ([Section 3.5](#)).



## 2.2 Existing requirements

There are seven acts and regulations that have requirements for incident and emergency response relevant to local water utilities:

- *Dams Safety Act 2015 & Dams Safety Regulation 2019*
- *Fluoridation of Public Water Supplies Act 1957*
- *Local Government Act 1993 & Local Government (General) Regulation 2021*
- *Protection of the Environment Operations Act 1997 & Protection of the Environment Operations Regulation 2021*
- *Public Health Act 2010 & Public Health Regulation 2012*
- *Rural Fires Act 1997*
- *State Emergency and Rescue Management Act 1989 & State Emergency Management Plan.*

The Minister for Water also has authority under Section 62 of the *Local Government Act 1993* to direct local water utilities to take action during an emergency. This power requires concurrence of the Minister for Health.

Key legislative requirements have been classified into the following categories ([Table 1](#)):

- *Incident and Emergency Response Plan (IERP)*: any overarching plans required to be developed to address incident and emergency response.
- *Risk assessment*: assessment of threats to a local water utility's system that could lead to an incident or emergency. This assessment includes the identification and assessment of existing or proposed controls.
- *Training and testing*: training and testing for staff on the implementation of IERPs.
- *Reporting and communication*: requirement to have a system in place for reporting of incidents or communication with relevant stakeholders in the case of an emergency.
- *Incident management committee*: a committee required to be organised and maintained with the responsibility of incident and emergency preparation, prevention, response and recovery.

Table 1. Incident and emergency response requirements by Act

Act	IERP	Risk assessment	Training and testing	Reporting and communication	Incident management committee
Dams Safety Act & Dams Safety Regulation	Yes	Yes	n/a	Yes	n/a
Fluoridation of Public Water Supplies Act	Yes	Yes	n/a	Yes	n/a

Act	IERP	Risk assessment	Training and testing	Reporting and communication	Incident management committee
Local Government Act	Yes	n/a	Yes	Yes	n/a
Protection of the Environment Operations Act & Protection of the Environment Operations Regulations	Yes	Yes	Yes	Yes	n/a
Public Health Act & Public Health Regulation	Yes	Yes	Yes	Yes	n/a
State Emergency and Rescue Management Act	Yes	n/a	Yes	n/a	Yes

## 2.3 Findings

Through the literature review, focus group consultation and the development of the framework, gaps in incident and emergency response requirements were identified. A summary of these requirements is tabulated in [Appendix B](#). Overarching gaps identified for planning and preparation were:

- Asset criticality assessments (and risk management strategies) are not consistently undertaken across the sector.
- The adequacy of incident and emergency response plans is inconsistent across the sector. Plans may not consider specific operational areas, the escalation process or incident types.
- There is no regulatory requirement for business continuity plans (BCP), resulting in inconsistent development of plans or sub plans specific to water and sewerage.
- Linkages between incident and emergency plans within a council are often not clear (e.g. between BCP and a contaminated drinking water response). Operational staff may not be involved in the preparation of the high-level plans (e.g. BCP) and conversely the Local Emergency Management Officer (LEMO) may not be involved in development of operational plans (e.g. water quality response plans).
- The frequency (and type) of plan testing is often not prescribed. The POEO Act is the only act that includes mandated testing of a plan (i.e. annual testing of the PIRMP). Drinking and

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recycled water guidance (ADWG and the AGWR) require regular testing and training of incidents plans, which is not well implemented across the sector.

- Contact information is often out of date and lacks a custodian responsible for currency. There are a number of requirements that specify contact details be kept (gaps in implementation are noted across all areas).
- There are currently no requirements for county councils to be involved in their relevant LEMCs and a lack of support for county councils to provide staff to the LEMCs.

Overarching gaps identified for response and recovery were:

- Limited water utility specific guidance around declaring, classifying and escalating incidents.
- Many supporting staff (including relief operators) are not trained in the IERPs .
- Responding staff may not have financial delegation for the necessary procurement activities required to manage an incident or emergency.
- Incident recovery can be hindered by a lack of information regarding which assets are critical to a local water utility's operation.
- There were several gaps noted relating to the oversight of reporting of an incident as well as gaps in requirements for debriefs and reviews following an incident.
- There is a lack of clarity on what is considered advice and what is considered direction from authorities during an emergency.

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# 3. Proposed management framework

A risk-based, outcomes-focused management framework for incident and emergency management has been proposed and improvements to address gaps identified in current requirements have been identified.

This framework aims to guide local water utilities in developing local processes to manage risks related to incident and emergency management and response.

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## 3.1 Proposed outcomes

The proposed management framework was developed to be risk and outcomes based. Four key risks were identified that are managed through incident and emergency response planning. Each of these risks has an associated outcome within the framework that will mitigate the risk for local water utilities.

Table 2 summarises the proposed incident and emergency management outcomes, the risk each manages and provides an example of how a utility can show it has met the requirements.

Table 2. Incident and emergency management outcomes

Aspect	Outcome	Risk	Typical ways to meet outcome
Incident and emergency response processes	<b>Impacts of incidents are minimised (scale and time) by appropriate planning and training.</b>	Insufficient planning and testing of plans to manage incidents and emergencies can increase the severity of consequences, the recovery time and likelihood of an incident occurring again in the future.	Utility has considered high-risk events and has documented and tested incident and emergency response systems in place to plan and prepare for, recover from and respond to incidents and emergencies. Staff involved are trained in enacting incident plans.

Aspect	Outcome	Risk	Typical ways to meet outcome
Contact information	<b>Key individuals are made aware of incidents or emergencies so as to exercise their required incident functions.</b>	Having out-of-date or incorrect details for contacting relevant people, organisations and stakeholders in an emergency may result in required actions or reliant plans not being enacted. This may lead to incident escalation or may extend the recovery time of the incident.	Utility has a current contact list of individuals to be contacted when responding to incidents and emergencies.
Resourcing	<b>Adequate incident management is achieved through appropriate resourcing and supported by an escalation framework.</b>	Failure to escalate incidents to the appropriate level could lead to resourcing constraints, which may increase the severity of consequences and the recovery time.	Utility has considered and documented the processes to classify the incidents and escalate them to the appropriate levels based on severity.
Reporting and continuous improvement	<b>Utility meets their requirement for reporting of an incident and all learnings from the incident are used to inform future incident management.</b>	A failure to correctly report incidents to relevant authorities and stakeholders will minimise the learnings taken from the incident, which in turn increases the likelihood of the incident occurring again.	Utility has documented processes in place for reporting of incidents to relevant authorities and to capture learnings for all relevant stakeholders following an incident or emergency.

## 3.2 Overarching improvement actions

To support the proposed outcomes, five high-level improvement actions are proposed that local water utilities can implement to improve incident and emergency management ([Table 3](#)).

Table 3. Overarching improvement items

Improvement action	Outcomes addressed
Escalation frameworks and incident plans are formalised, including notification requirements and resource planning.	<ul style="list-style-type: none"> <li>Incident and emergency response processes</li> </ul>

Improvement action	Outcomes addressed
Staff are trained in escalation frameworks and incident plans, and they are implemented so that incidents are managed at the appropriate level with the appropriate resources (See Section 3.3).	<ul style="list-style-type: none"> <li>• Incident and emergency response processes</li> </ul>
Local water utilities establish processes to ensure contact information remains current.	<ul style="list-style-type: none"> <li>• Contact information</li> </ul>
Plans are tested through incident exercises. This may be undertaken at a regional level.	<ul style="list-style-type: none"> <li>• Incident and emergency response processes</li> <li>• Resourcing</li> </ul>
Asset criticality is understood and contingency plans are developed for critical assets (e.g. business continuity sub-plans).	<ul style="list-style-type: none"> <li>• Incident and emergency response processes</li> <li>• Resourcing</li> </ul>
Local water utilities have access to appropriate resources to conduct debriefs and capture learnings from an incident and exercises and ensure these learnings are used to inform updates to relevant plans.	<ul style="list-style-type: none"> <li>• Resourcing</li> <li>• Reporting and continuous improvement</li> </ul>

### 3.3 Guidance on developing and enacting an escalation process

Pre-defined risk escalation levels allow planning of required actions and the allocation of resources required to support the incident response. Increasingly complex incidents require different levels of resources and external support.

An escalation process should be flexible to enable appropriate incident management and resource allocation. An escalation framework should include:

- escalation trigger levels
- incident management arrangements at each level (incident controller and incident management teams)
- resources needed at each level
- how incidents or emergencies are to be managed when a local water utility is no longer the lead agency
- de-escalation process
- incident debrief process
- reporting obligations.

AIIMS identifies 3 levels of incident classification. Level 4 has been added to reflect the change in incident management when a local utility is no longer the lead agency. A typical escalation framework that could be utilised is shown in [Figure 2](#) and [Table 4](#).

Figure 2. Incident escalation levels

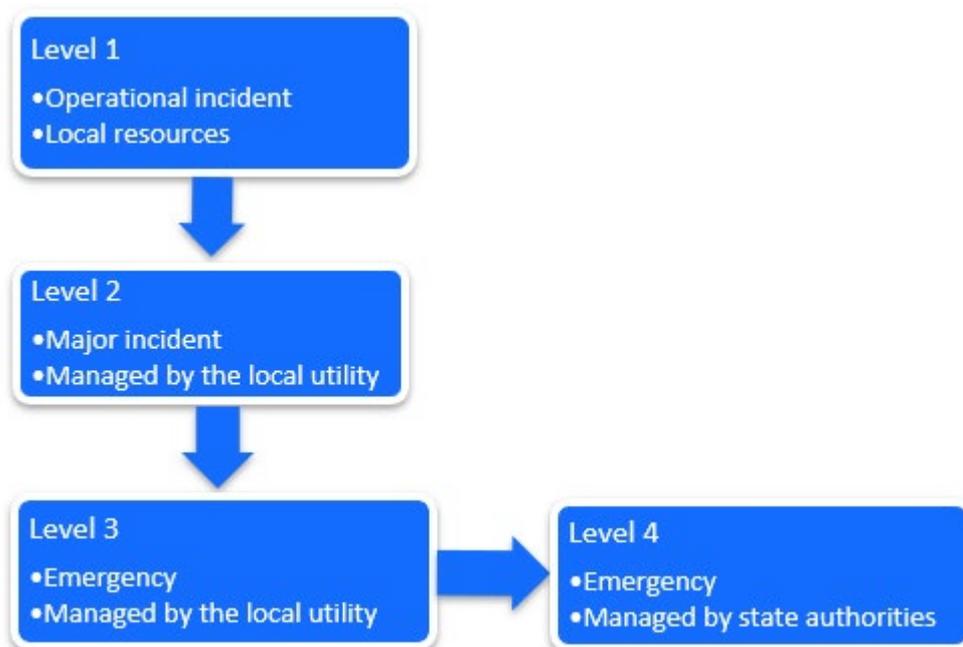


Table 4. Description of each response level

Level	Resources	Description
<b>Level 1 – Operational incident</b>	<ul style="list-style-type: none"> <li>local or initial response resources</li> <li>establishment of a site controller.</li> </ul>	An operational incident that can be resolved through local or initial response resources.
<b>Level 2 – Major incident</b>	<ul style="list-style-type: none"> <li>deployment of resources beyond initial response</li> <li>establishment of incident management team</li> <li>external technical advice (including regulator).</li> </ul>	More complex incident due to size, resources, risk or level of consequence.
<b>Level 3 – Emergency (internally led)</b>	<ul style="list-style-type: none"> <li>managed by the local water utility through an incident management team and incident control centre</li> <li>external technical advice (including regulator)</li> <li>multiple resource types.</li> </ul>	A serious incident with broad impacts anticipated to have an extended recovery period. Regulators’ powers may be invoked e.g. a lightning strike leading to a loss of the local water utility’s critical infrastructure, which impacts water supply or quality.

Level	Resources	Description
<b>Level 4 – Emergency (externally led)</b>	<ul style="list-style-type: none"> <li>• managed by an external lead agency. Local water utility will still have internal emergency team that feeds into the lead agency</li> <li>• requires more extensive and wide-ranging resources</li> <li>• external technical advice (including regulator).</li> </ul>	A serious incident where the local water utility is not the lead agency. Significant external support required. Broad impacts anticipated to have an extended recovery period e.g. a flood or bushfire that has damaged the town's and local water utility's critical infrastructure.

### 3.4 Types of incidents a local water utility should plan for

Incidents can unfold in different ways. Good emergency management ensures that different incident types are planned for so that:

- stakeholders impacted by different incidents are identified and their details maintained
- specific escalation processes are considered
- resources, both staffing and equipment, are identified in the planning processes for different scales of incidents.

Examples of key incidents are shown in [Table 5](#).

Table 5. Key types of incidents for water and sewage systems

Incident type	Key types of incidents
<b>Drinking water quality incident</b>	<ul style="list-style-type: none"> <li>• microbiological contamination</li> <li>• chemical contamination – including chemical overdose</li> <li>• dirty water</li> <li>• taste and odour</li> <li>• raw water incident</li> <li>• critical control point failure</li> <li>• waterborne illness outbreak in the community.</li> </ul>
<b>Water supply failures</b>	<ul style="list-style-type: none"> <li>• power failure (short term)</li> <li>• pipe breaks</li> <li>• power failure (longer term)</li> <li>• treatment process failure</li> <li>• critical asset failure</li> <li>• natural disaster (flood, fire, lightning, earthquake, cyclone).</li> </ul>

Incident type	Key types of incidents
Recycled water quality incident	<ul style="list-style-type: none"> <li>critical control point failures</li> <li>cross connection with the drinking water supply</li> <li>microbiological contamination (e.g. dual reticulation)</li> <li>chemical contamination (e.g. agriculture)</li> <li>environmental pollution.</li> </ul>
Sewerage asset failures	<ul style="list-style-type: none"> <li>power failure</li> <li>process failure</li> <li>critical asset failure</li> <li>environmental pollution</li> <li>natural disaster (flood, fire, lightning, earthquake, cyclone).</li> </ul>
Dam failure	<ul style="list-style-type: none"> <li>natural disasters (flood events, earthquake, fire)</li> <li>internal erosion</li> <li>seepage</li> <li>sabotage or vandalism</li> <li>mechanical failure.</li> </ul>
Pandemic	<ul style="list-style-type: none"> <li>insufficient resources to run critical infrastructure.</li> </ul>

### 3.5 Support from the department

The department is a key partner for local water utilities planning and responding to incident and emergency management. The role played by the department differs depending on the situation and type of incident and emergency.

The department provides advice and support to local water utilities during incidents and emergencies. These activities include:

- on site and remote operational support to respond to and recover from incidents
- engagement with other emergency response and recovery agencies to coordinate support, including Energy and Utilities Functional Area Coordinator (EUSFAC) and NSW Public Works
- emergency funding for water carting or emergency water supply works
- coordination of mutual aid and resources from other water utilities.

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The department also provides advice and support to local water utilities planning and preparing for incidents and emergencies. These activities include:

- technical advice and support on treatment and other operational issues
- advice about strategic planning that identifies key system risks and controls.

The department's regulatory and assurance framework sets out expectations for local water utilities to plan and prepare for incidents and emergencies. These activities include:

- inspections of water and sewerage infrastructure operations and maintenance and inspection reports
- assurance of strategic planning that identifies key system risks and controls
- monitoring of water utility performance.

The department is considering how it could expand its range of functions to better support local water utilities and their communities. These activities could include:

- providing guidance and technical advice on incident and emergency management
- assessing local water utilities incident and emergency management to identify improvements
- coordination of regional incident exercise activities and other workshops and training to improve management processes
- formal incident management role when this is beyond the capacity of the water utility
- formal responsibility for coordination of mutual aid and resources from other water utilities.

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## 4. References

Australasian Fire and Emergency Service Authorities Council, 2017. *The Australasian Inter-Service Incident Management System*. AFAC Ltd. East Melbourne, Victoria, Australia.

Business Queensland, 2021. *The PPRR risk management model*

[www.business.qld.gov.au/running-business/protecting-business/risk-management/pprr-model](http://www.business.qld.gov.au/running-business/protecting-business/risk-management/pprr-model)

*Dams Safety Act 2015* (NSW).

*Dams Safety Regulation 2019* (NSW).

*Fluoridation of Public Water Supplies Act 1957* (NSW).

*Local Government Act 1993* (NSW).

*Local Government (General) Regulation 2021* (NSW).

NHMRC, 2011. *Australian Drinking Water Guidelines Paper 6 National Water Quality Management Strategy*. Version 3 Updated March 2015, National Health and Medical Research Council, National Resource Management Ministerial Council, Commonwealth of Australia, Canberra.

NSW Department of Water and Energy, 2007. *Best Practice Management of Water Supply and Sewerage Guidelines*.

NSW Health, 2018. *NSW Code of Practice for Fluoridation of Public Water Supplies*.

*Protection of the Environment Operations Act 1997* (NSW).

*Protection of the Environment Operations Regulation 2021* (NSW).

*Public Health Act 2010* (NSW).

*Public Health Regulation 2012* (NSW).

*Rural Fires Act 1997* (NSW).

*State Emergency and Rescue Management Act 1989* (NSW).

*State Emergency Management Plan 2018* (NSW).

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# Appendix A. Analysis

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## A.1 Methodology

The first stage of this project involved a literature review of existing legislation relevant to incident and emergency planning requirements for local water utilities. The legislation reviewed included:

- *Dams Safety Act 2015* & *Dams Safety Regulation 2019*
- *Fluoridation of Public Water Supplies Act 1957*
- *Local Government Act 1993* & *Local Government (General) Regulation 2021*
- *Protection of the Environment Operations Act 1997* & *Protection of the Environment Operations Regulation 2021*
- *Public Health Act 2010* & *Public Health Regulation 2012*
- *Rural Fires Act 1997*
- *State Emergency and Rescue Management Act 1989* & *State Emergency Management Plan*.

Relevant guidance such as the Australasian Inter-Service Incident Management System was also included in the review. The TWRRP and their incident support focus group were consulted to discuss project progress and provide feedback on development of the framework.

The column headings included in the detailed framework and their descriptions is provided in [Table 6](#).

Table 6. Framework descriptors

Framework column heading	Description
Area	The type of system that the requirement applies to.
Requirement	The document or process required to be fulfilled by local water utilities.
Legislation	Where the requirement is currently called up in legislation.
Intervention mechanism	How the regulator intervenes in the case of a local water utility failing to meet the requirement.
Oversight mechanism	How the regulator monitors local water utilities to ensure they are meeting the requirement.
Proposed location for requirement gap	Where a gap has been identified, this is the proposed regulatory hook to address the gap.

Framework column heading	Description
<b>Recommend, strengthen, current</b>	Notes whether the requirement is current, is being recommended to address a gap or should be strengthened through improvements to the requirement and its associated intervention and oversight mechanisms.
<b>Actions (proposed)</b>	Proposed actions for the department and other relevant regulators to implement or strengthen the requirements as well as intervention and oversight mechanisms.

A survey was sent to members of the TWRRP incident support focus group to gather information on the perceived effectiveness of the current incident and emergency management requirements. In the survey, respondents were presented with each of the requirements identified in the literature review and asked to rate the effectiveness of the requirement, effectiveness of implementation of the requirement and the effectiveness of the regulatory oversight of the requirement. The information gathered from this survey was used to identify gaps in incident and emergency response.

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# Appendix B. Current requirements

The prevention, preparedness, response and recovery (PPRR) model is a key risk management approach in business continuity planning.

Figure 3. Prevent, prepare, respond, recover process



The requirements from each act have been classified as prevent, prepare, respond or recover:

- Prevent: requirements that aim to reduce or eliminate the likelihood of an incident or emergency.
- Prepare: steps taken prior to an incident to ensure effective response and recovery.
- Respond: containment or minimisation of the impacts of an incident.
- Recover: minimisation of disruption and time taken to return to business as usual.

Legislative requirements for incidents and emergencies are commonly applicable to the prepare and respond phases. Requirements for prevention are generally covered by other processes not covered by this assessment, including infrastructure and scheme approvals and design requirements.

A summary of key high-level requirements relevant to incidents and emergencies is included below.

## B.1 Declared dams (Dams Safety Act and Regulation)

Area	Requirement
Incident and emergency plan	<ul style="list-style-type: none"> <li>• All declared dams must have an emergency plan. Details of what should be included in an emergency plan are prescribed in the Dams Safety Regulation (clause 10).</li> <li>• Emergency plan is to be routinely reviewed (at least annually to ensure contact details are up to date) and updated every 5 years.</li> <li>• The emergency plan must be updated within 30 days following:               <ul style="list-style-type: none"> <li>— a change to the consequence category of the dam</li> <li>— a significant change, since the consequence category of the dam was last determined, to the number of persons who would be put at risk if there were to be a failure of the dam</li> <li>— a change to the emergency management arrangements</li> <li>— an incident.</li> </ul> </li> </ul>
Contact list	<ul style="list-style-type: none"> <li>• Annual review of contact details to ensure that a change to the contact details of a person responsible for exercising functions in the event of an emergency is updated as soon as practicable after the change.</li> </ul>
Incident testing and training	<ul style="list-style-type: none"> <li>• Exercises must be undertaken every 3 years with staff involved in the operation of the dam. Practical emergency exercises to be undertaken for high and extreme consequence dams every 5 years (that includes emergency agencies).</li> <li>• The <i>Guideline - Emergency Plans</i> states that good practice would also include an annual seminar, or ‘run-through’ of emergency procedures, with key onsite staff to help familiarise them with emergency systems and procedures and measures for emergency preparedness.</li> </ul>

## B.2 Drinking water supplies (Public Health Act and Regulation)

Area	Requirement
Incident and emergency plan	<ul style="list-style-type: none"> <li>• Drinking water suppliers must have a quality assurance program that includes processes for managing incidents and emergencies. Details of what processes should be included is prescribed in the Public Health Regulation (clause 34B(e)).</li> <li>• Identification of the types of incidents and emergencies that may occur and that would require management.</li> <li>• Develop procedures to be followed during an emergency (including communication procedures).</li> </ul>

Area	Requirement
	<ul style="list-style-type: none"> <li>Investigate any incidents or emergencies and revise protocols as necessary (this requirement is specified in the Australian Drinking Water Guidelines Framework Element 6).</li> </ul>
Contact list	<ul style="list-style-type: none"> <li>Document contact details (including name, business name and telephone number) of who should be contacted in an emergency relating to drinking water quality.</li> </ul>
Incident testing and training	<ul style="list-style-type: none"> <li>Regular testing of emergency response plan. *</li> <li>Training employees in incident and response plan. *</li> </ul>
Notifications	<ul style="list-style-type: none"> <li>Document processes to inform the community of any incidents.</li> </ul>

## B.3 Fluoridated water supplies (Fluoridation of Public Water Supplies Act, Regulation and Code of Practice)

Area	Requirement
Incident and emergency response plan	<ul style="list-style-type: none"> <li>Any over or under dosing incidents are quickly identified and effectively managed to minimise any impact on consumers (Code of Practice (CoP) s10.3).</li> <li>Develop an emergency response plan to minimise (or preferably prevent) fluoride concentrations over 1.5 mg/L reaching consumers in the event of an overdosing incident. The response plan should form part of the utility's overall emergency management strategy and plans and must include liaison with the local Public Health Unit.</li> </ul>
Risk assessment	<ul style="list-style-type: none"> <li>Conduct and maintain a site-specific environmental hazard risk assessment for fluoride (CoP 7.1.1).</li> </ul>
Waste disposal plan	<ul style="list-style-type: none"> <li>Prepare and document a waste disposal plan for fluoridating agent (CoP 7.1.1).</li> </ul>
Incident reporting	<ul style="list-style-type: none"> <li>Overdosing incidents are managed and reported to NSW Health (CoP Form 5 - incident notification form).</li> </ul>

## B.4 Recycled water systems (Local Government Act)

Area	Requirement
Incident and emergency response plan	<p>Develop a recycled water management system in line with the AGWR Framework (Local Government Act s 60 approval):</p> <ul style="list-style-type: none"> <li>• Develop incident and emergency response protocols in consultation with relevant authorities (this requirement is specified in the AGWR Framework).</li> <li>• Define communication protocols with regulators.</li> <li>• Investigate any incidents or emergencies and revise protocols as necessary.</li> </ul>
Notifications	<p>In line with requirements specified in the AGWR Framework:</p> <ul style="list-style-type: none"> <li>• Develop a public and media communication strategy.</li> <li>• Train designated contact.</li> <li>• Inform employees and recycled water end users during an incident and at the end of an incident.</li> </ul>
Incident testing and training	<ul style="list-style-type: none"> <li>• Train employees and regularly test emergency response plans (this requirement is specified in the AGWR Framework).</li> </ul>

## B.5 Licensed Sewage Treatment Plants and Water Treatment Plants (Protection of the Environment Operations Act and Regulation)

Area	Requirement
Incident and response plans	<ul style="list-style-type: none"> <li>• Develop and maintain a PIRMP.</li> <li>• Assessment of hazards and pre-emptive action taken to minimise risk.</li> </ul>
Incident testing and training	<ul style="list-style-type: none"> <li>• PIRMP is to be routinely tested at least every 12 months.</li> <li>• PIRMP is to be tested within one month of a pollution incident occurring in the course of an activity to which the license relates.</li> </ul>
Chemical register	<ul style="list-style-type: none"> <li>• The PIRMP is to include an inventory of potential pollutants.</li> </ul>
Contact details	<ul style="list-style-type: none"> <li>• The PIRMP is to include contact details for key individuals.</li> </ul>
Notifications	<ul style="list-style-type: none"> <li>• Duty to notify the relevant authorities of pollution incidents.</li> </ul>

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## B.6 State Emergency and Rescue Management Act

Area	Requirement
<b>Emergency committee</b>	<ul style="list-style-type: none"><li>• Establish LEMC with council representatives as prescribed in the State Emergency and Rescue Management Act (section 28).</li></ul>
<b>Incident testing and training</b>	<ul style="list-style-type: none"><li>• The LEMC may recommend and assist in the co-ordination of training in relation to emergency management in the local government area (section 29).</li><li>• The LEMC may develop, conduct and evaluate local emergency management training exercises (section 29).</li></ul>
<b>Incident and emergency response plans</b>	<ul style="list-style-type: none"><li>• The LEMC is responsible for the preparation and review of plans in relation to the prevention of, preparation for, response to and recovery from emergencies in the local government area (section 29).</li></ul>
<b>Government response activities</b>	<ul style="list-style-type: none"><li>• Minister is responsible for coordinating the government response activities necessary to respond to an emergency.</li></ul>