Business Continuity Plan
Water Services

Version 2.1 Dec 2016

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1.0   Introduction

1.1   Overview

Water Services provides water and sewerage services to approximately 80,000 people across the Mackay Region. The outcomes of the businesses operations are fundamental to maintaining the public health, economy and environmental characteristics of this unique region. Continued, consistent and sustainable delivery of water services outcomes creates the need for a clearly defined strategy for building Water Services' capability as a key means of maintaining business continuity.

This Business Continuity Plan is designed to clearly outline key processes and strategic initiatives which will ensure that the business has the capacity and resilience to overcome unexpected business interruptions. The Business Continuity Plan will encompass the full range of emergency response phases including:
- Planning and mitigation;
- Preparedness;
- Response to an event; and
- Recovery from such an event

These four aspects are referred to in the industry as the "PPRR" framework.

1.2   *Aim*

The primary aims of this plan are to:
- Describe the governance and coordination arrangements for Water Services' Prevention, Preparedness, Response and Recovery (PPRR) from emergencies and ensure continuity of water services for the region;
- Describe key roles and responsibilities of those involved in managing such emergencies (including clearly identifying the needs and expectations of Council and other stakeholders);
- Provide specific advice on the businesses response to emergencies (including clearly defined triggers for escalation of incidents); and
- Provide guidance on ensuring effective communication with Council and other stakeholders during an emergency.

The emergency response components of this plan have been designed to integrate with Councils emergency management framework as well as the broader (region, state and national) frameworks.

1.3   *Business Continuity vs. Emergency Response*

The traditional concept of organizational crisis or disruption is usually based around a single spectacular incident. However, such dramatic incidents are relatively rare and represent less than 20% of the total reported cases of organizational crisis[1] . A far more common cause of organizational crisis is from escalation of more routine management issues (e.g. mismanagement, ongoing labour disputes, consumer activism, discrimination, white collar crime etc.). If such events are ignored, then they can give rise to a crisis which disrupts the organizations strategic and functional capacity. In some instances, if the crisis escalates, control may be lost and the event is regarded as a disaster.

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[1] Institute of Crisis Management Report, 2004

Figure 2 – Crisis vs. disruption
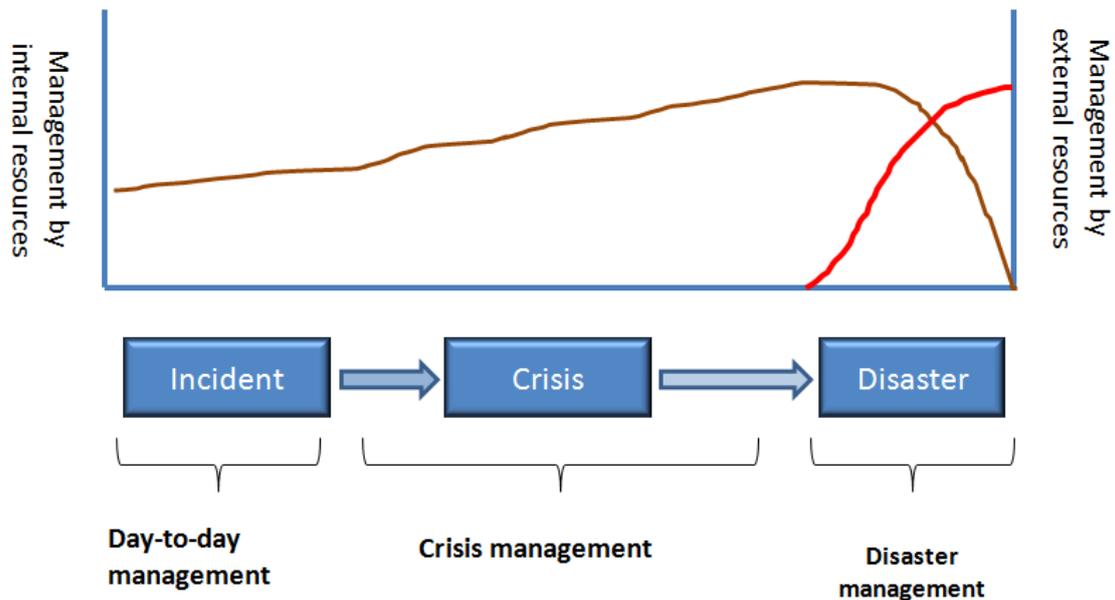
(Source: Standards Australia, HB292-2006; "A Practitioners Guide to Business Continuity Management")

The framework developed within this Business Continuity Plan is focused on ensuring that Water Services retains sufficient capability to cope with and control crises as they arise. It acknowledges the need for the business to respond effectively and efficiently during an event but also recognises that such response can only be achieved if the business has a broader program to maintain its capability and prepare for such emergencies. In this regard, much of the Business Continuity Plan is focussed on establishment of a continuous process of businesses capability development beyond (and including) the response and recovery to a specific event.

Figure 3 – Business Continuity and Emergency Response
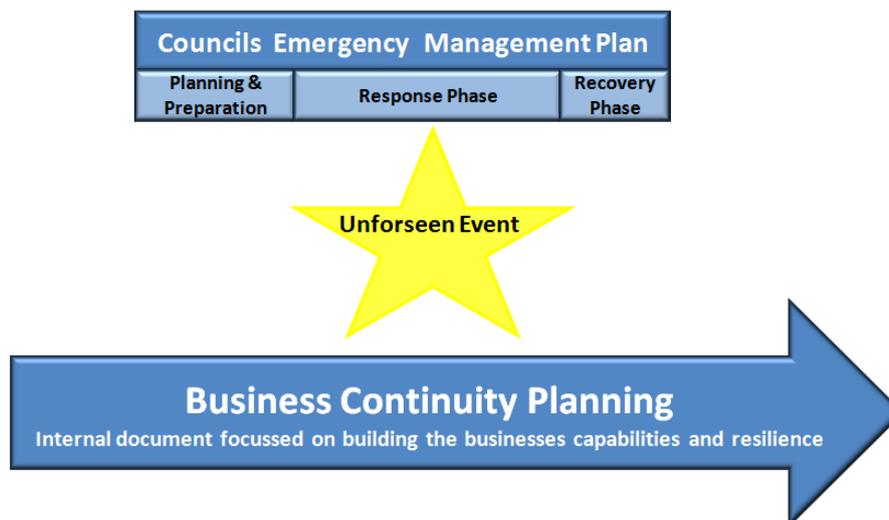
1.4   *Relevance to the Corporate Plan*

The Corporate Plan is Mackay Regional Council's principal strategic document which provides the framework to guide the organisation and identify priority issues for the region. This Business Continuity Plan has been designed to address several of the key strategic priorities contained within Mackay Regional Councils Corporate Plan[2].

Table 1

Key Strategic Priority	Relevance of the Business Continuity Plan
Community and Lifestyle	To ensure that Water Services can play an effective part in supporting the community manage and recover from an emergency
Economic Development	By ensuring that Water Services remains commercially viable, the business continuity plan seeks to ensure that those essential services which underpin the regional economy will be sustainable over the long term
Environmental Sustainability	This business continuity plan is designed to assist Water Services in minimising the impact on the environment of any emergency
Infrastructure and Councils Services	The Business continuity plan is designed to assist Water Services manage the physical infrastructure as effectively as possible to deliver water services to the community during and after an emergency
Organizational excellence and governance	This business continuity plan has been developed to reflect current "best practice" in emergency management

As outlined in Section 2, this plan has been developed to align with Council's broader Enterprise Risk Management Framework.

1.5   *Relevance to the Enterprise Risk Management Framework*

This Business Continuity Plan has been developed to provide a clear and readily accessible outline of Water Services' processes for all aspects of emergency management. In particular:

- **Section 1** provides a general overview of the need for the Business Continuity Plan which goes beyond emergency response and accommodates the full "PPRR" (Prevention, Preparedness, Response and Recovery) aspects of emergency management;
- **Section 2** provides an overview of the broader emergency management framework which governs Water Services' Business Continuity Plan. This includes Councils emergency management framework as well as brief overview of the mechanisms of other state agencies;
- **Section 3** provides a succinct summary of the key roles/responsibilities of Water Services' personnel in executing all aspect of the Business Continuity Plan;
- **Section 4** provides further detail on the emergency management arrangements across all aspects of the PPRR spectrum; and
- **Section 5** summarises key administrational considerations.

Critically, the detailed Incident Response Plans (which provide detailed action plans for key events) are provided in **Appendix 2**.

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[2] Mackay Regional Council, "Corporate Plan 2015-2020", 21 July 2015

2.0   Operational Environment (including key risks)

2.1   *The Framework for the Business Continuity Plan*

It's essential that Water Services' Business Continuity Plan is consistent with the broader framework developed by Council, other agencies as required for the event (i.e. Local Disaster Management Group) and the requirements of other district, state and national agencies. The following discussion provides a brief overview of key aspects of the business continuity and emergency management framework.

National Disaster Management Plan:
In the event of a catastrophic emergency, the Commonwealth government may activate the National Emergency Coordination Centre with specific responses provided by Emergency Management Australia.

State and District Management Groups:
In an extreme event, the Queensland Department of Community Safety (encompassing State Police, Corrective Services and Emergency Services) may activate their district or state Disaster Management Plan.

Local Disaster Management Group:
It is envisaged that most emergencies would be managed under the Local Disaster Management Plan which has been developed by Mackay Regional Council[3]. The purpose of this plan is to "minimise the effects of and coordinate the response to a disaster or major emergency affecting the residents/communities in the Mackay Regional Council Local Government Area". This document establishes the roles and responsibilities of key personnel within the Local Disaster Management Group. It also specifically allocates to Council "principal control authority" for flooding, cyclones, storm, storm surge, earthquake and tsunami. Other threats have been similarly allocated to the agency most capable of providing an effective response (e.g. Qld Fire and Rescue Service as the Principal Control Authority for fire and industrial accidents; Queensland Policy Services as Principal Control Authority for shipping and aircraft accident and terrorist activities; etc.). Activation of the Local Disaster Management Group is outlined BOTH in the Local Disaster Management Plan as well as the subordinate Activation of Local Disaster Management Group Operational Plan.

Development and Execution of the Local Disaster Management Plan is managed within Mackay Regional Council's overall Enterprise Risk Management Framework, the principal document of which is the Council Enterprise Risk Management Policy. Collectively, these documents provide a broad overview of risk management processes within Council.

More specific detail on Council's Emergency Response is outlined in Council's Emergency Management Sub plan[4] as well as Mackay's Evacuation Plan.

Water Services' Business Continuity Plan:
The Water Services Business Continuity Plan is designed to complement Council Emergency Management Sub Plan by clearly and succinctly outlining Water Services' intended response to an emergency. Details relevant to the specific instance addressed in the Council's Emergency Management Sub Plan (i.e. that of a cyclone emergency) is provided in the specific Incident

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[3] Mackay Regional Council, "Local Disaster Management Plan", October 2012
[4] Mackay Regional Council "Emergency Response Sub-Plan; Mackay Local Disaster Management Plan, October 2012

Response Plan contained in **Appendix 2**. Incident Response Plans have been also developed for other major events which affect the broader business.

Water Services' procedures for escalation of events are provided in the Incident Response protocol contained in section 3.3 of this report.

Other Functional Plans:
Water Services' Business Continuity Plan is supported in turn by a range of asset specific contingency plans. These contingency plans outline an **asset specific response to a particular incident.**

Finally any **normal operating activities** undertaken as part of the businesses emergency response (e.g. repair of reticulation mains) should be executed in accordance with the businesses' standard operating procedures.

This hierarchy of documents (and associated responsibility) is summarised schematically in Figure 2.1.

Figure 2.1 – The Emergency Management Framework for Mackay:
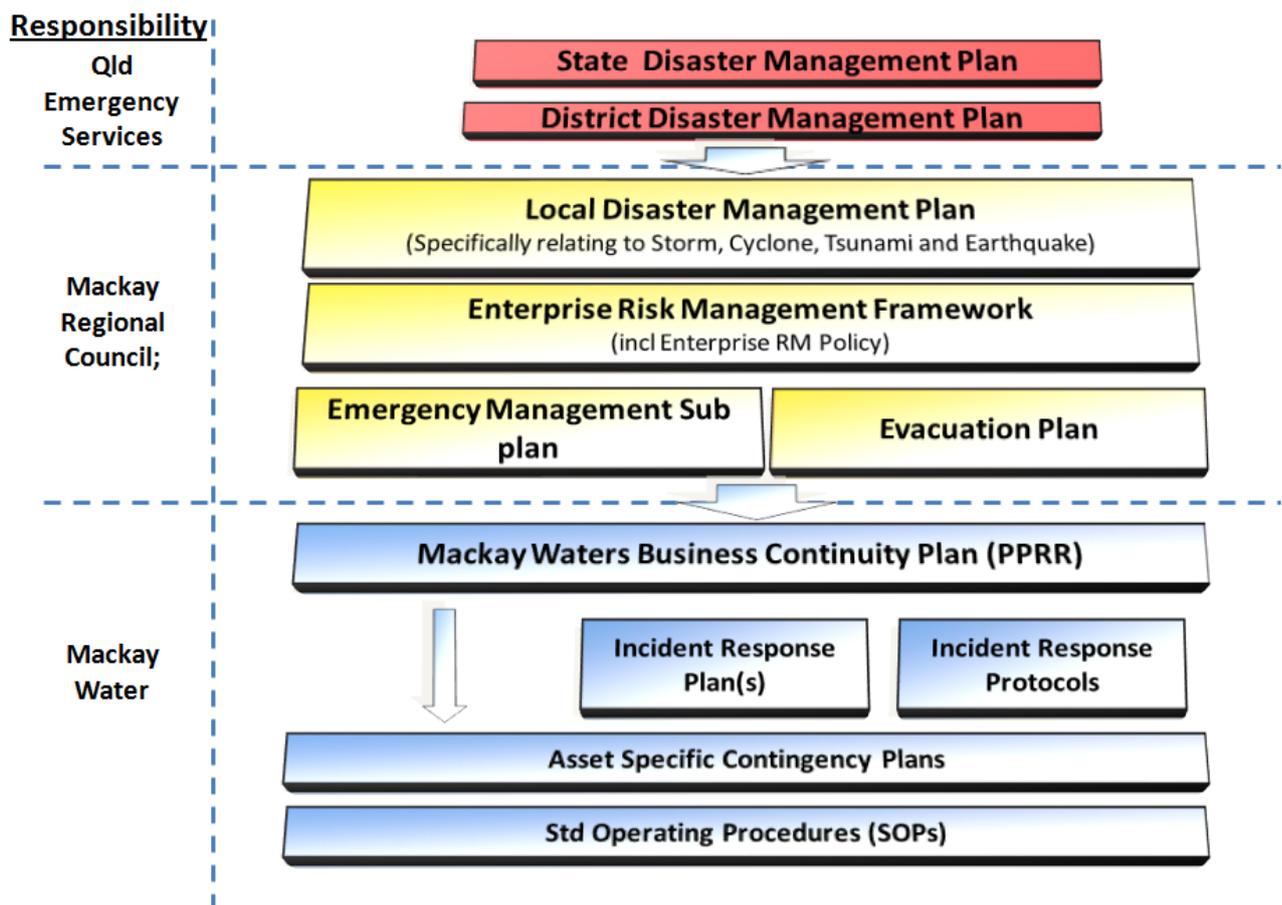
2.2   *Business Risk Assessment(s)*

The existing Local Disaster Management Plan (LMDP) identifies a range of foreseeable threats that may affect the Mackay Region. These include:

- Natural disasters: cyclone / storm / storm surge, flood, earthquake, tsunami, infectious diseases outbreaks (Epidemic/Pandemic), etc.
- Manmade incidents: aircraft, vehicle, rail, electrical supply disruption, chemical contamination, water pollution, explosion, etc.
- Acts of terrorism which could be any of the manmade disasters with ill-will intent

Water Services has developed Incident Response Plans for several of these events. These plans are provided in **Appendix 2**.

In addition to these general external threats, Water Services has also undertaken a broad assessment of key internal business risks. This review has identified a range of potential challenges which are outlined in Drinking Water Quality Management Plan and the Sewer Management Plan. The most up to date files for these can be found on Bruce; hard copies and electronic copies will be kept up-to-date in Water Services' mobile emergency operations centre.

3.0   Roles and Responsibilities:

3.1   *Overview:*

This Business Continuity Plan is intended to be a "live" document at all times (i.e. not just in times of emergency). As such, Water Services anticipates its own investment in resources on an ongoing basis to ensure that its obligations under the planning, preparatory, response and recovery phases are adequately discharged. To achieve this goal, Water Services will seek the ongoing support and assistance from Council and other stakeholders. Such cooperation and coordination between the water business and its partners is essential in ensuring that the response to events be executed efficiently and effectively.

Table 3.1 provides a summary of the anticipated roles and expectations of key stakeholder agencies in ensuring efficient execution of this Business Continuity Plan.

Table 3.1 – Roles and expectations of key agencies

Agency	Roles/ Expectations
Water Services	Water Services will be responsible for maintaining and executing this Business Continuity Plan. Expectations of Water Services are to: • Ensure the business maintains adequate levels of planning and preparedness for emergencies; • Executes an efficient/effective response to emergency events; and • Cooperates with Council and all stakeholders in the management of ALL emergencies (including those not directly water services related)
Mackay Regional Council	Mackay Regional Council will have ultimate responsibility for the emergency response within the region. The Council will also provide the business with the support, resources, and a range of skills and expertise to assist in the planning, preparation, response and recovery to a range of emergency events. The expectations of Mackay Regional Council are to: • Provide the overall enterprise risk management framework within which Water Services' business continuity plan will be executed; • Provide the necessary support to Water Services in developing its business capability; • Provide the immediate management of significant emergency situations (in accordance with the Local Disaster Management Plan and Emergency Management Sub plan) during the response and recovery phases of emergency events; and • Incorporate Water Services' business continuity and incident response protocols into the relevant Municipal Emergency Management Planning
Emergency Services (Police, QFS and SES)	As the state government agency with primary responsibility for emergency management, expectations of the emergency services are to: • Provide support and assistance to Water Services (via Mackay Regional Council) in the development of its business continuity plan (including assistance with development of required skills in emergency management); and • Provide skilled management during significant (typically Level 4 and 5) events
CTM Alliance	The CTM Water Alliance has been developed to provide assistance and share resources between the three north Queensland regional water businesses. The expectations of the CTM alliance are to: • Provide necessary (reciprocal) support to the water businesses within each region in the development of business continuity and emergency management within north Queensland. This may include training or

	sharing of resources during the response and recovery phases of emergency events
The Community	Individuals and communities will have a significant role in all parts of the emergency management response. In particular, Water Services recognises the importance of volunteer organisations, community groups and individuals who retain primary responsibility for their own safety.
Department of Environment and Heritage Protection (DEHP)	As the regulator responsible for management of Water Services' operational and environmental outcomes, the businesses expectations of (DEHP)are: • To assist Water Services in the development and execution of this business continuity plan; and • To provide support and assistance to Water Services in the response and recovery from emergency events

3.2   *Key Roles and Responsibilities:*

Roles and responsibilities of external agencies are outlined in Section 8 of Council's Local Disaster Management Plan (Oct 2012. Roles and responsibilities for members of Council that are part of the Local Disaster Management Group (LDMG) are defined in Section 3.0 of the Mackay Regional Council Emergency Response Sub Plan (Oct 2012).

Once an emergency has been declared, decisions on where, when and how units are deployed to address the situation will be handed down from the Local Disaster Management Group who are in the position to determine priorities based on fact. During an event, regular meetings between Water Services staff and the Local Disaster Management Group will occur to brief on the situation and to allocate tasks to ensure a co-ordinated response is achieved.

Within Water Services, key roles and responsibilities for development and implementation of this Business Continuity Plan are outlined in Table 3.2.

Table 3.2 Water Services' Internal Emergency Management Hierarchy

Role	General Responsibility	Personnel (and alternative)
Business Continuity Plan custodian	The custodian of the Business Continuity Plan will be responsible for development and overseeing implementation of the overall framework for management of Water Services' risk profile Primary responsibility for the BCP custodian will be to ensure that Water Services has sufficient capability to manage its response to an emergency as efficiently and effectively as possible.	Chief Operating Officer, Water & Waste Services (Alternate: Networks Manager/Treatment Manager)
Preparedness Coordinator	Primarily responsible for the execution of the emergency planning and preparedness activities. Promote opportunities for improved emergency management including review of plans, "live" exercises etc. to ensure that plans and arrangements are operable. Coordinate with/support Council and other regional or state agencies in developing Water Services' emergency management capability on a broader scale.	Treatment Manager/Networks Manager (dependant on scenario)
Incident manager	Ensure that in the event of an emergency, the businesses resources are coordinated	For level 1 events, the incident manager will be the field

Role	General Responsibility	Personnel (and alternative)
	as envisaged under this BCP The incident manager will assume the overall "day to day" responsibility for management of an event	coordinator (alternative – Operations Manager) The Incident Manager for events from Level 2 and above will be the Chief Operating Officer, Water & Waste Services (Alternate: Networks Manager/Treatment Manager).
Incident [5] Management Team	Overall responsibility for managing the tactical and wider operational aspects of the incident and for coordinating all operational aspects of the response and recovery effort for Water Services. In doing so, the Incident Management team has the following objectives: • ensure the safety of the overall operational response; • maintain the integrity of the operating systems • minimise the impact to customers, the community and the environment • ensure that the site operation has adequate organisation support and resources • capture requests from the Council Command call centre and provide it to the Site Management Team; • communicate the status of the network to Council command centred in a timely manner • receive and prioritise requests as provided from call centre staff	Incident manager (chair) and managers
Site Management Team	The site management team will have responsibility for managing the localised site based operational aspects of the incident for Water Services and in doing so, will make best endeavours to; • Ensure the safety of all persons on the site; • Restore services with minimum disruption to customers, community and the environment; • Provide hourly updates to the Incident Management Team at the times requested	Field coordinator (alt – Networks Manager/Treatment Manager)
Field coordinator	Management of the "on the ground" assessment and execution of the emergency response to an incident Provide feedback to the Incident Manager	Operations coordinator (alt – Networks Manager

[5] An Incident Management Team will generally only be formed for incidents at Level 3 or above

Role	General Responsibility	Personnel (and alternative)
	on key aspects of the event	
Data officer (schedule and dispatch)	Responsible for schedule and dispatch of work crews during the response and recovery phases of an incident	S&D team
Communications officer	Provides a single point of communication with all parties internal and external to Water Services	Chief Operating Officer, Water & Waste Services (Alternate: Networks Manager/Treatment Manager)
Emergency recovery coordinator	Management of the recovery phase of an emergency including coordination, management and advice on aspects of the businesses recovery arrangements As required, liaise with other regional (and state) stakeholders in the recovery phase	Incident Manager

3.3   *Incident Management and Escalation*

For the majority of incidents that occur within the business, Water Services will apply the procedures and systems developed as part of the broader business to minimise damage and recover from such an event. In general, such events are likely to be addressed using existing operational protocols followed by periodic review of the effectiveness of the response procedures. Assessment and escalation of an incident will be undertaken using the Incident Response Protocol contained in Table 3.3.

Where an incident has the potential to escalate into an emergency, the following activation protocols will apply:

- **Level 1 and Level 2 – Minor Services Incidents:**
  - Where the primary risk is directly associated with <u>water services</u>, Chief Operating Officer, Water and Waste Services will assume responsibility for the businesses emergency response; and/or
  - Where the primary risk is NOT directly related to water services the LDMG Executive Officer (As defined under Councils "Activation of Local Disaster Management Group Operational Plan) will be responsible for activation of the Councils emergency response

- **Level 3 and 4 – Moderate and Major events**
  - Where the primary risk is directly associated with <u>water services</u> Water Services may request activation of the Council's Emergency Response; and/or
  - Where the primary risk is NOT directly related to water services, Council will trigger activation of the emergency management plan.

- **Level 5 – Catastrophic event**
  - Where an event has escalated into the Level 5 category, Queensland State Emergency Services may activate the District or State Disaster Management Plan. The SES may direct Council to activate its Emergency Response sub plan.

In the event of a Level 4 or Level 5 emergency being declared, and consistent with the provisions of the Emergency Management Act, the District and State Disaster Management Plans will take precedence over the Water Services' Business Continuity Plan.

For events that originate from outside Water Services (e.g. terrorist attack, major accident, fire etc.), the relevant Principal Control Authority will be allocated as outlined in the Mackay Local Disaster Management Plan. In these cases, Council's response will be managed through activation of the Local Disaster Management Plan, but the focus of these events will be on Council (and Water Services) providing support to the responsible agency to minimise loss of life and damage to property. In the event of an emergency being declared by an external party, Water Services will activate the emergency response components of this plan.

Table 3.3 – Water Services' Incident Response Protocol

Level	Descriptor	Definition	Consequence								Examples	Procedures	Authority
			Financial	Publicity Reputation	OH&S	Assets	Water Quality Breach	Public Health	Service Delivery	Environmental			
Level 1	Insignificant	An event that can be dealt with by the site resources without any additional assistance	<$50,000.	Of interest to individuals only	First Aid injuries – superficial injury with little/no treatment.	No damage to asset.	Exceedances of operational limit	Insignificant exposure, no illness or aesthetic impact on customers.	Isolated customer complaints	Low environmental impact. Minor clean up / reinstatement required.	• Minor/moderate asset failures • Sewer chokes/collapse on reticulation • Minor treatment plant process problems (resolved in <6rs) • Minor IT interruption • CCP limit breach	• Event managed by site manager or operational manager. • Response addressed under **standard operating procedures** • Exceedances of operational limit managed through operations and maintenance procedures	**Site manager/ Manager, Operations**
Level 2	Minor	An event that may require additional resources form within the business. The Chief Operating Officer, Water and Waste is notified	> $50,000 but < $500,000.	Of interest to local community only.	Minor injury/illness requiring medical treatment.	Minimal damage but no reduction in performance or efficiency to asset or systems.	Exceedances of ADWG aesthetic guideline (customer complaints possible)	Minor exposure, unlikely to result in illness, however some localised customer aesthetic issues.	Multiple customer complaints	Localised environmental impact. Clean up / reinstatement required.	• Mains burst requiring system reconfiguration • Disruption to supply • Widespread power outage • Minor environmental breach • WH&S incident • Failure of treatment systems • Failure of business systems • Breach of ADWG aesthetic value	• Response includes assessment of site safety, environmental impact and customer impact and broadly addressed in accordance with **standard operating procedures** • Event reported to Director, Water Services and Waste and Council • **Incident Response Plans activated**	**Chief Operating Officer, Water Services & Waste**
Level 3	Moderate	An event which involves the potential for adverse outcomes (e.g. publicity, environmental impact, loss of supply)	>$500,000 but < $2 million.	Potential for adverse publicity	Lost Time Injuries <13 weeks. Severe injury or illness with a long period off work. Widespread minor illness.	Some damage to asset and corresponding reduction in either system efficiency or performance.	Detection of 1 – 5 CFU/100 mL E. coli in reticulation Minor exceedances of ADWG health guidance value for chemical parameter (determined value is close to guideline value)	May result in illness in localised area and / or results in aesthetic impact within a localised area.	Service disruption >5 hours disruption for ~5% of customers. <4 hours duration to special needs customers.[6]	Moderate environmental impact relating to statutory requirements, but a short recovery period (weeks). Required to inform regulatory body.	• Contamination of supply • Sabotage/Terrorism • Major disruption to operating processes and/or business systems • Extended disruption to supply • Significant burst main in CBD • Potential significant spill to environment and resultant regulatory investigation • Minor breach of uranium ADWG health value	• **Incident Response Plans activated** • Event reported to Council (Event may require coordination with other directorates to minimise impact, prevent or minimise injury, damage or loss) • Water Services communications room established	**Director, Engineering and Commercial Infrastructure**
Level 4	Major	An event which requires substantial off-site coordination and major levels of external resourcing to prevent and/or minimise injury, damage or loss	<2 million but < $5 million.	Significant media coverage.	Lost Time Injuries >13 weeks. Severe injuries/ harm to person, including permanent impairment. Widespread serious illness	Major damage to asset with significant reduction in either system performance or efficiency OR period offline.	High level of E. coli (e.g. > 5 CFU/ 100 mL) or any pathogens detected in reticulation	Exposure causes confirmed illness within a system and / or results in aesthetic impact within disinfected supply system	Widespread customer complaints. Service disruption >24 hours for ~10% of customers. 4-8 hours duration to special needs customers[1].	Major environmental impact which requires extended recovery period (months). Required to inform regulatory body. Significant financial costs associated with court action, fines and recovery costs.	• Major Storm • Earthquake • Terrorist attack • Pathogen detected in reticulation	• Council **activates its Local Disaster Management Plan** • Water Services incident response plans enacted • Water Services communications room established	**Executive Officer – Mackay Local Disaster Management Group** w assistance form Director, Water and Waste

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[6] Special needs customers (e.g. industry, hospitals, schools, childcare, dialysis machines, etc.)

Level 5	Catastrophic	An event which is beyond the capability of a single Council Divisions would involve all of Mackay City Council and may also involve emergency services.	>$5 million.	Significant media coverage. Potential loss of community confidence in organisation. Enraged stakeholder with potential intervention	Fatality, or Permanent disablement	Destruction of asset with major period offline. ANCOLD Scale- dam failure	Gross exceedance of ADWG health guideline values for a chemical parameter (e.g. more than five times the ADWG health guideline limit)	Exposure results in confirmed life threatening / severe illness and / or death to one or more customers. Aesthetic impacts reported across a disinfected supply system.	>1 day loss of supply to >10,000 customers. >8 hours duration to special needs customers[1].	Environmental incident resulting in widespread long term damage, requiring long term recovery period (years). Required to inform regulatory body. Very significant financial costs associated with court action, fines and recovery.	• Major event affecting thousands of people and potential damage in millions. • 10 CFU/100 mL E.coli detected in reticulation	• States Emergency Services in control • Council **activates its Local Disaster Management Plan** • Water Services incident response plans enacted • Water Services communications room established and	**State Emergency Services** Executive Officer – Mackay Local Disaster Management Group w assistance form Director, Water and Waste

4.0   Emergency Management Arrangements:

4.1   *Prevention and Mitigation*

4.1.1   Overview

The focus of this section of the Plan is on the arrangements, roles and responsibilities that will be put in place for undertaking risk assessment and development of strategies for prevention and mitigation of major events. In this context, Prevention and Mitigation is defined as "Planned and coordinated measures that eliminate or reduce the frequency and/or consequence of emergencies."

4.1.2   Current Arrangements

Mackay Regional Council has developed an "Enterprise Risk Management Framework". Key components of this framework which has implications for Water Services' Prevention and Mitigation capability include:

- Risk identification and impact analysis and mitigation;
- Capacity development;
- Preparedness testing; and
- Safety.

Water Services' response to these elements of Council's framework are summarised below.

4.1.2.1 Risk Identification, impact analysis and mitigation

Water Services has undertaken some preliminary assessment of select risks. At present, these risks are largely confined to asset related risks. However, the business will shortly undertake a broader "whole of business" review of its corporate risk profile. This review will incorporate aspects such as:

- Commercial risks;
- OH&S;
- Drinking Water Quality and Public Health;
- Reputation Risk;
- Service Risk;
- Environmental Impact;
- Compliance; and
- Asset risks.

The business also intends to identify mitigation strategies for high or extreme risk events.

4.1.2.2 Capability Development

Water Services is committed to the development of its capability sufficient to ensure the ongoing sustainability of its business activities. To ensure that the business can develop and retain the necessary organizational, management and technical capability to appropriately respond to challenges Water Services will be working with Council to develop and implement a variety of initiatives. These include:

- **Succession Planning:**
  Water Services is considering developing a succession planning strategy. The objective of this strategy would be to ensure that the business has (and continues to retain) the necessary depth of skilled and experienced resources to ensure it has the flexibility to respond to the unexpected.

- **Skills assessment and gap analysis**
  Mackay Regional Council is undertaking a skills assessment and gap analysis across Council. This initial assessment may identify gaps and opportunities for strengthening the business through either additional training and/or complemented with importing skill sets through the staff selection process.

- **Training and development:**
  A further obligation is to ensure that all responsible parties receive sufficient training to ensure that they understand their roles and responsibilities under the Emergency Management Plan.

4.1.2.3 Preparedness Testing

As a key measure of emergency preparedness, Water Services intends to undertake at least one (1) scenario on an annual basis. This scenario may be industry specific (i.e. developed and executed by Water Services itself with participation from industry stakeholders) or may be part of a broader initiatives by Council, district or regional stakeholders. The objective of these scenarios is to ensure that the strategies and procedures outlined in the Business Continuity Plan (and associated incident response plans) are clear, efficient and effective. Lessons learned from these events will be fed back into the corporation as part of its continuous improvement strategy.

4.1.2.4 Safety

Mackay Regional Council has identified safety as being a critical component of its business values. The business is progressively developing a comprehensive safety culture with a strong emphasis on prevention of accidents in the workplace.

4.1.2.5 Other key strategies

In addition to the above, Water Services has developed several key strategies which support the businesses overall prevention and mitigation framework. These include the following:

- **Drinking Water Quality Management Plan:**
  Water Services has developed a comprehensive Drinking Water Quality Management Plan that is reviewed bi-annually. This is a risk based management framework developed in accordance with the Australian Drinking Water Quality Guidelines. The objective of the Drinking Water Quality Management Plan will be to establish a framework for prevention and mitigation of drinking water quality incidents.

- **Environmental Management System:**
  Water Services has developed an Environmental Management System (EMS) which provides the framework for the systems employed within the business to ensure that Water Services' activities do not have an adverse impact on the physical environment.

- **Strategic Asset/ Total Management Plan:**
  Water Services has developed a comprehensive Strategic Asset/ Total Management Plan (SAMP/TMP) which has been endorsed by Council. This SAMP/TMP provides the management framework for a wide range of aspects of the businesses' operations. This SAMP/TMP can be found in section 8 of the Water Services Business Plan that is reviewed annually.

4.2   *Preparedness*

4.2.1 **Overview**

The focus of this component of the Plan is on the arrangements, roles and responsibilities that will be put in place to ensure Water Services' preparedness in management of emergencies. The focus will be on ensuring that the businesses resources are sufficiently skilled and are able to be mobilised efficiently should an emergency arise.

4.2.2 **Current Arrangements**

4.2.2.1 Governance arrangements for preparedness:

Mackay Regional Council has established an **Enterprise Risk Management Committee**[7] whose overall responsibility is to ensure that the Councils Enterprise Risk Management Framework is developed and implemented across Council. One of the key roles of the Enterprise Risk Management Committee is to continually review and improve the Councils capability for dealing with unforeseen events.

Water Services' responsibility to the Councils Enterprise Risk Management Committee is to:
- Provide feedback on risk issues and priorities;
- Ensure that its risk management activities align with Councils adopted policy on Enterprise Risk Management as well as reflect the principles of ISO 31000;and
- Assist in promoting/encouraging a positive risk culture within Council

Councils Governance & Safety provides further assurance to Council on the effectiveness of the organisations risk management activities (including preparedness) to help ensure key business risks are being managed appropriately and that the system of internal control is operating effectively.

4.2.2.2 Stakeholder Management & Engagement

A key component of Water Services' Business Continuity Plan is to ensure that the business has contact with various stakeholders (both internally and externally) who may effect, influence or be affected by Water Services' activities during an emergency. As outlined in Section 3, clear lines of accountability, known contacts and established relationships will be a key component of ensuring that both Water Services and its stakeholders have a clear understanding of their roles and responsibilities in the event of an emergency.

4.2.2.3 Capacity and Capability

To ensure that Water Services has the necessary capability to respond to an emergency, the Council is providing assistance with a range of human resource management issues. Current Human Resources (HR) systems developed by Mackay Regional Council provide a level of delegation of authority, ongoing training, appointment of personnel with specific emergency management capabilities, succession planning and performance measurement. However, Water Services is seeking assistance from Council to undertake more specific skills assessment and gap analysis. Such initiatives will assist Water Services to develop greater resilience within its business.

Water Services continues to develop its asset management strategies to address high and extreme risk events (e.g. development of assets incorporating emergency management components such as storm resistance, provision for direct electrical backup from on-site generators at critical assets, asset redundancy, risk based maintenance strategies, treatment of

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[7] Enterprise Risk Management Framework, S 4.3.10

chemical contamination, reduced OH&S risk, etc.). Mackay Regional Council provides assistance with a range of systems and networks to improve Water Services' data capture and IT capability.

Water Services is also responsible for maintaining an up to date contact list (including "back up" contacts) in **Appendix 1**, and incidence response procedures in **Appendix 2**.

4.2.2.4 Incident Response Plans

The centrepiece of Water Services' preparedness strategy is a series of Incidence Response Plans (IRPs) for those activities where Mackay Regional Council is the Principal Response Agency. Several IRPs are provided in **Appendix 2**. These IRPs outline in greater detail, Water Services' approach to managing an event as it occurs. The IRPs are controlled documents with subsequent upgrades managed using the Councils Quality Assurance processes.

4.2.2.5 Scenario Testing/Validation

One of the cornerstones of Water Services' emergency preparedness will be the validation of its Business Continuity Plan through ongoing scenario testing both inside the business and in events that encompass a broader range of stakeholders. Such scenarios have the benefit of cementing an understanding of the emergency management processes, building relationships with key stakeholders (particularly the individuals within those organizations) and identifying weaknesses or uncertainties in the processes and procedures developed.

Water Services intends to undertake some level of scenario testing on an annual basis. These scenarios will preferably be developed and scheduled by Mackay Regional Council and ideally involve participation from other stakeholder groups. These scenarios may include exercises featuring either a single or multiple (concurrent) risk events.

The objective of these scenarios is to ensure that all parties are familiar with the response component of this plan and are aware of their roles/responsibilities during an actual event. The scenarios will also assist by identifying any potential conflicts or inconsistency in agency responses to events. Any inconsistencies thus identified will be addressed through updating the Business Continuity Plan and/or relevant IRP.

4.2.2.6 Administration

As part of its emergency preparedness strategy, Mackay Water will establish, implement and maintain procedures for receiving, documenting and responding to relevant communication from all parties. This procedure will be critical in ensuring efficient transfer of information during an incident as well as facilitating a review of the incident post-event.

Mackay Regional Council will be responsible for discussion with key stakeholders the potential need for formalisation of arrangements (including resource and cost sharing) prior to an event. It is considered that such an agreement may reduce the potential for delay in provision of resources during an event.

4.3 *Response*

4.3.1 Overview

The focus of this component of the Business Continuity Plan is on the arrangements that will be put into place in response to an actual emergency. The focus of this phase of the emergency management spectrum will be operationally based with specific teams responsible for assessing, responding to incidents, and implementation of the plan (as required).

4.3.2 **Current Arrangements**

4.3.2.1 **Response Management Structure**

The emergency response structure and key responsibilities is illustrated in Sections 2 and 3. The remainder of this section of the plan outlines the 3 Cs of Incident Management: command, control and coordination of events as proposed within Mackay Water. The majority of this section deals with events that originate from within Mackay Water. For events that originate external to the business (i.e. not water services specific), WS envisions that the incident definition and escalation will be undertaken by a separate (third party). In this instance, Water Services' role will focus on supporting a broader emergency response effort.

4.3.2.2 **Activation Protocols**

Events that occur within WS's control

Events that occur within Mackay Water (i.e. originating as water services specific event), will be assessed (and escalated) in accordance with the protocols outlined in Table 3.3.

On declaration of a significant incident (from level 3 to level 5), Water Services will establish an Incident Management Team and appoint a Field Coordinator, Incident Manager and Communications Officer. As far as practical, the Incident Management Team will be located at Water Services' Gordon St level 2 offices.

The Incident Management Team will be responsible for coordinating the businesses emergency response as efficiently as the situation allows. The IMT will establish regular contact with Council's Emergency Response Team (refer section 4.4).

Events that occur outside of WS's control

For events that originate from outside Water Services (e.g. major storm event, epidemic etc.), the emergency response will be declared either by Councils LDMG Executive Officer (as outlined in MRCs Emergency Response sub plan) or the state emergency services body who is the Principal Responsible Agency for the event.

In the event of an emergency being declared by a party external to Council, the relevant response agency will coordinate the emergency response and Council contributions will be managed by the Local Disaster Management Group, in this instance, Water Services would act as agent to acquire or supply resources on request.

4.3.2.3 **Escalation Procedures (General)**

The following discussion provides a general outline of response and escalation procedures. More detail to specific instances is provided in the Incident Response Plans contained in **Appendix 2**.

First Response:

Any person on site is authorised to activate Water Services' emergency response. The person reporting the emergency is to immediately advise the senior person at the affected site of the location and type of emergency. This person is required to:

- Gather facts relating to the incident and undertake an initial assessment of the emergency (against the criteria outlined in Table 3.3);
- Forms a <u>site management team</u>; and
- Recommends to the Chief Operating Officer, Water and Waste Services or equivalent if the Council's Emergency Response sub plan needs to be activated.

Activation of an Emergency Response

As soon as possible after the incident has been assessed, those responsible for the emergency response (as identified in Table 3.3) will determine an appropriate response. In the case of events

at level 3 or above, the Incident Manager will advise Council on the need to activate Mackay Regional Council Emergency Management sub plan.

In the event of Council's Emergency Management Sub Plan being activated, the Water Services Incident Management Team will establish an Emergency Operations Centre to manage the event. The role of the Emergency Operations Centre will be to:

- Provide technical, logistical and services support to assist in the Incident Management Team;
- Provide strategic and tactical assistance to mitigate the effects of the emergency;
- Provide a single point of accountability with Councils Emergency Management Team;
- Liaise with other emergency management stakeholders (as required); and
- Coordinate with the Councils communication centre.

The Emergency Operations Centre will be responsible for managing the businesses emergency response in accordance with this Business Continuity Plan.

4.3.2.4 Emergency Ops Centre

At all times, Water Services will maintain a room suitable for use as an Emergency Operations Centre. This room will be equipped with hard copies of Water Services Business Continuity Plan, all Incident Response Plans, Councils Emergency Management sub plan, hardcopy layout of the water and sewer networks, emergency management contact details and provide adequate communication facilities.

4.3.2.5 Emergency Supplies

A list of all Water Services Officers Equipment and Stores is available in **Attachment 3.**

4.3.2.6 Fatigue Management

The Incident Manager will be responsible for ensuring that employees that have been allocated rostered shift are not to attend work duties until time of shift. This is to ensure continuity of staffing is available if the emergency continues over an extended period.

4.3.2.7 Stand down

If a stand down order is issued by the Incident Manager, all staff are to stay home, or if at depot stay at depot until order has be lifted. Whilst the stand down order is in place there is to be no movement of staff unless the location situated presents a danger to the life of the worker.

4.3.2.8 Debrief

The Incident Management Team will be responsible for collation (and recording) all relevant information as it becomes available progressively throughout the event. This information will be used as the basis for recovery and de-briefing initiatives by Water Services as well as the broader Council.

As soon as practical after the event, Water Services will undertake a debrief to determine what lessons can be learned from the event. Outcomes of the debrief will be used to update the Business Continuity Plan and associated Incident Response Plans.

4.4   _Communication_

_4.4.1_ Overview

One common characteristic in any emergency is the necessity of fast, efficient, consistent and reliable communication. Recognising this, Water Services has developed the following broad protocol for communication during an emergency event. This protocol is consistent with Mackay Regional Council's communication policy.

4.4.2 Current Arrangements

4.4.2.1 Lines of communication

As stated in Section 3.3, upon declaration of an emergency, Water Services will appoint a Communications Officer who will (ideally) be located at the Emergency Operations Centre. The Emergency Operations Centre will have access to adequate services and resources to facilitate ease of communication with field operatives. During an event, the communication officer will coordinate (as far as practical) the flow of information within and outside Water Services.

During an incident, there will be three (3) distinct levels of communication within Water Services. This includes protocols for communication of information and decision making within the business (i.e. between the Incident Management Team and Water Services Staff), communication of information between Water Services and Mackay Regional Council and, in extreme cases, communication external to Water Services and Mackay Regional Council. In the general case, all external communications will be managed by Mackay Regional Council. In all instances, final responsibility for key decisions will rest with the Incident Manager.

Internal Communication:
During an emergency event (Level 2 or above), communication within the businesses will (as far as practical) be directed through the Emergency Operations Centre. This direction does not limit the decision making process (during an emergency, decisions will be made by the responsible parties as part of their response). Rather the centralisation of communication is intended to minimise confusion and ensure a consistent, centralised and efficient flow of information between the Emergency Operations Centre and the response crews.

External Communication
Even for those events managed by Water Services (Level 1-3), the business may need to communicate with other agencies. This may include (but is not limited to):
- Providing advice to the general community (e.g. "boil water" alerts; contamination risks etc) and answering customer service requests received during an event;
- Communicating with other stakeholders either to request and coordinate additional resources or (in more extreme events) to respond appropriately to requests made of Water Services;
- Communicating with regulators (both during and after the emergency) who may have an interest in specific events (e.g. environmental and health regulators); and/or
- Liaison with the media or other external agency

Such communication will be managed by the Communication Officer.

4.5 *Recovery*

4.5.1 Overview

The focus of this component of the Business Continuity Plan is on the arrangements that will be put into place by Water Services to ensure that:
- The business is capable of returning to service as quickly as possible; and
- Ensure that damage and loss caused by the emergency (to people and property both inside and outside Water Services) is minimised.

As the water services provided by the business are considered central to the environmental, social (especially public health) and economic standards of the region, Water Services will generally place priority on continuity of its services as the key component of the corporation's commitment to the community recovery effort. As a supplier of essential services, restoring water services would be an immediate short term priority in the process of recovery from any incident.

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4.5.2 **Current Arrangements**

4.5.2.1 Business Recovery

Water Services' recovery effort will target the achievement of the following hierarchy of <u>short term</u> outcomes:

- Securing the immediate safety of the corporations personnel and the community;
- Re-establishing services to areas disrupted by the event (including reinstatement of assets required to deliver those services). In the event that the emergency affects a wide range of services, Mackay Water will focus on its core and critical services as expeditiously as possible;
- Minimising the environmental impact of the event;
- Providing support to the broader community recovery effort; and
- Managing the physical asset and commercial impact of the business to ensure the longer term sustainability of the water services operations.

During this initial phase of the recovery process, Water Services will provide regular operational briefings to Council to ensure that the businesses capabilities are fully understood and that services are restored as soon as practical.

4.5.2.2 Community Recovery

While the focus of Water Services will initially be on restoration of essential water services, the corporation will provide whatever assistance it can to assist in the community recovery effort. Request for community assistance may occur as a formal request from Council, regional or emergency services agency.

4.5.2.3 Post Event Assessment (de-brief)

To enable Water Services' emergency response to improve with time (as well as to capture the learning's from events), the business will conduct a de-brief exercise after any event. In the case of Level 1 and 2 events, Water Services envisages that such a de-briefing exercise would be managed internally with the outcomes used to inform and update the relevant Incident Response Plan and supporting documentation. In the case of larger events (Level 3-5) WS envisages that all stakeholders would participate in the post event assessment of the incident. Ideas for improvement of the Business Continuity Plan and associated Incident Response Plans will be adopted in the updated documents

In addition to the formal post assessment process, Mackay Regional Council will also offer psychological and emotional assistance to those employees involved in an emergency.

5.0   Plan Administration

5.1   *Plan Management Strategy*

5.1.1 Controlled Document

To ensure that the Business Continuity Plan remains up to date, Water Services will ensure that all copies are managed as controlled documents. Amendments to the Business Continuity Plan (and version control) will be clearly identified on the amendments register at the start of the document.

5.1.2 Plan Contact and Update

Changes to the Business Continuity Plan can only be made by:

Acting Chief Operating Officer, Water and Waste Services
Ph: 07 4961 9023
Mobile: 04 8808 5364
Email: linda.roberts@mackay.qld.gov.au

The person in this role will be the **plan contact** for the Business Continuity Plan.

Any enquiries regarding the day to day operation of the plan should be forwarded to the plan contact for consideration. The plan contact will be responsible for ensuring the Business Continuity Plan is up to date and reflects all relevant leanings, particularly those which flow from scenario testing or debriefing after an event.

At a minimum, the plan will be subject to review and update every two (2) years.

Appendix 1 – Emergency Contact Details

Management Team

Name	Position	Work Cell	Desk Number
Linda Roberts	Acting Chief Operating Officer	0488085364	4961 9023
Kylie Rogers	Acting Planning & Sustainability	0400770526	4961 9084
John Cumming	Infrastructure Delivery	0419622529	4961 9004
Stuart Boyd	Treatment Operations	0438388847	4961 9040
Jason Cocker	Networks Operations	0429424579	4961 9020

Administration Officers

Name	Comments	Work Cell	Desk Number
Jacqui Stewart	Executive Support Officer - COO	NA	4961 9038
Janene Latcham	Infrastructure Delivery	NA	4961 9009
Carolyn Bartos	Treatment/Networks	NA	4961 9030
Sarah Weston	Planning & Sustainability	NA	4961 9022
Fiona McMullan	Schedule & Dispatch	NA	4961 9989
Louise De Angelis	Schedule & Dispatch	NA	4961 9859

Planning & Sustainability

Name	Comments	Work Cell	Desk Number
Don Pidsley	Water & Sewer Planning Engineer	0475811120	4961 9066
Sunnie Hollenbeck	Water & Sewer Project Engineer	NA	4961 9083
Zachary Dobbins	Asset Officer	NA	4961 9019
Junu Parjapati	Technical Officer	NA	4961 9085
Tyson Craig	Water & Sewer Planning Engineer	NA	4961 9005

Infrastructure Delivery

Name	Comments	Work Cell	Desk Number
Keith Goodall	Project Manager	0400056719	4961 9037
Sarah Lethbridge	Manager – Infrastructure Delivery	0419661603	4961 9068
Simone Dommaschk	Project Engineer	0409452354	4961 9008
Gregory Johnson	Project Services Coordinator	0439739880	4961 9082
Stanley Sheeran	Construction Supervisor	0405 759 445	4961 9036
Simon Hern	Project Engineer	0417373190	4961 9028
Georgie Thomas	Project Engineer	0419839639	4961 9003
Andrew Walz	Drafting Designer	NA	4961 9034
Scott Clarke	Supervisor Construction	0409639123	4961 9088

Treatment

Name	Comments	Work Cell	Desk Number
Janice Wilson	Treatment Engineer	0459193040	4961 9961
Michael McAuley	WTP Coordinator	0437235735	4961 9241
Christine Galea	Principle Scientist	0400010582	4961 9041
Douglas Batterham	Sn Environmental Officer	0427933319	4961 9074
Russell Lenz	Nebo Rd WTP Supervisor	0417615072	4961 9010

| Ross Turner | Sarina WTP Supervisor | 0422336115 | 4943 1232 |
| Kimberly Gyles | Laboratory Coordinator | NA | 4961 9042 |

Networks

Name	Comments	Work Cell	Desk Number
Phil Benson	Senior Network Engineer	0448729812	4691 9939
Ken Martin	Electrical/ Mechanical Coordinator	0419739121	4961 9820
Bill O'Shanassy	Civil Services Coordinator	0418971463	4961 9823
Lee Taylor	Senior SCADA Engineer	0457412484	4961 9058
Warren Zunker	Transfer System Officer	0408153078	4961 9832
William Marsh	Maintenance Planner	0475963474	4961 9822
Peter McDonald	Mechanical Team Leader	0437541593	4961 9811
Russell Evans	Electrician Team Leader	0428839563	4961 3223
Ron Bailey	Sewage Team Leader	0448949014	4961 9825
Greg Saunders	Water Maintenance Team Leader	0408776624	4961 9808

Appendix 2 – Incident Response Plans

- Cyclone/Storm
- Storm Surge
- Drinking Water Incident
- Earthquake

Summary/Overview

Purpose:	Emergency response in the event of a **cyclone**
Applies to:	Water Services Infrastructure
When to Use:	From identification of potential cyclone threat.

Key triggers to be as follows:

- o **Level 1** – When advice is received regarding formation of a cyclone or tropical low off the Queensland coast
- o **Level 2 –** When tropical low/cyclone is tracking in a manner as to potentially strike the Mackay Region
- o **Levels 3 – 5 –** Activation of Councils Emergency Response Sub plan.

Related SOPs:	To be used in conjunction with Mackay Regional Council's Emergency Response Sub Plan
Enquiries:	Plan Contact: Acting Chief Operating Officer Water & Waste Services,
	Ph: 07 4961 9023
	Mobile: 04 8808 5364
	Email: linda.roberts@mackay.qld.gov.au
	IRP manager: Manager, Networks, Water Services
	Ph07 4961 6020;
	Mobile: 0448 993 954
	Email: jason.cocker@mackay.qld.gov.qu

Safety Conditions:	• Crews are not to attempt any operational work in the field if there is any danger of injury.
	• The Chief Operating Officer or delegate can and will issue a stand down order if there is a risk of potential injury to staff.
	• Monitoring of hours worked is to be carried out to ensure adequate rest breaks / fatigue management.

Procedure

Situation Analysis:

Assess Incident Level against pro forma and implement response procedures relevant to nominated level of incident

Level	Trigger	Procedure	Action Complete (incl Signature)	Resources	Responsible Party	External Assistance
Level 1 – Insignificant (Monitor)	**This phase may be triggered when advice is received that a cyclone or tropical low has formed off the Queensland coast**	• Alert members of the Incident Management Team and Site Management Team(s) of the potential threat	☐	• EM Sub Plan contact list	COO Water & Waste or Delegate	
		• Update list of names, phone numbers and method of contact for all officers and deputies to whom specific responsibilities have been delegated See **Appendix 1** Water Services' Business Continuity Plan	☐			
		• Review "critical infrastructure" plans, "critical supply points" (water services) and "priority power areas" for initial assessment of potential impact	☐	• Map of critical infrastructure • Map of critical supply points ,low pressure zones, potential		
		• Activate resource sharing/support protocols developed as part of CTM alliance	☐	• CTM Alliance		• CTM alliance partners
		• Initial advice to EHP of the potential impact and mitigation strategies	☐	• Environmental Management System (EMS)	Manager, Operations	•
		• Review high level storage (water) and time to overflow calculations (sewer)	☐	• SCADA		•
		• Activate service level agreement for provision of generators. Identify location of generators and potential availability	☐	• Service level agreement for provision of generators		• Supplier Contact
		• Establish contact with Ergon to ascertain possible power interruptions and advise Ergon on "priority power areas"	☐			• Ergon Ph 132296
		• Review quantities and location of key materials (e.g. chlorine, lime, pipe repair materials and equipment)	☐	• TP Operators		
		• Update list of Council vehicles and mobile mechanical plant (including current location)	☐	• Fleet Supervisor		
		• Ensure all crews have appropriate valve keys	☐	• Civil Coordinator		
		• Ensure adequate fuel storage at Sarina	☐	• Civil Coordinator		
		• Undertake a site clean-up at depots and treatment facilities	☐			
		• Clear manual intake screens at WWTP	☐	• TP Operators		
		• Test high level alarms within the sewer transport network	☐	• Transfer System Officer		
		• Establish job numbers for recording cost/wages/time associated with the event	☐	• Finance Officer	Manager, Business Services	

Level	Trigger	Procedure	Action Complete (incl Signature)	Resources	Responsible Party	External Assistance
Level 2 – Minor (Standby Alert)	**This phase is triggered when a tropical low or cyclone is tracking in such a manner as to potentially strike the Mackay Region**	• Establish Incident Management Team and Site Team • **Incident Management Team** to: o Establish an incident room within Water Services at Sir Albert Abbott Administration Building, Gordon Street, Mackay and log on to Guardian Disaster Management Software. Notify Councils Emergency/Disaster Coordination centre that the liaison / incident team is in place and on the status of reservoir levels, reticulation pressure, main breaks, loss of electricity supply to any waterworks facility(including advice on restoration of services)	☐ .... ☐	Water Services Emergency Management Sub plan	COO, Water & Waste	
		o Brief the site team and ensure that the site team has adequate resources to provide an effective response o Establish Depot Control Centre o Ensure all reservoir storages are filled and that the Mt Pleasant Reservoir No 1 and Mt Oscar Reservoir No 2 are isolated from the system. Maximise storage at Gargett, Fitch Hatton, Sarina Town and beach area reservoirs to ensure supply for these towns o Engage with Ergon regarding supply to "priority Power" areas supplier o Provide advice to DEHP on situation (and planned impact minimisation strategies) o Arrange for the Water Treatment Works to be continuously attended during the event	☐ .... ☐ .... ☐ .... ☐ .... ☐ .... ☐	• Environmental Management System (EMS)	Manager, Operations	
		o Arrange for public information and warnings to be issued in relation to safe use of water and conservation of water supplies, in accordance with the *Pubic Information and Warnings Operational Plan*	☐		Manager, Business Services	

		Site Team to:
		  o Brief workers on the situation
		  o Ensure that the aluminium dingy is on its trailer with outboard motor attached and ready for immediate use
		  o Ensure that all borehole pumping stations are ready for use and have been run in a shandy mix into the network prior to the event.
		  o Ensure that all sewerage overflows and bypass facilities are in working order.
			☐ ....
			 ☐ ....
			
			 ☐ ....
			
			 ☐ ....
					Manager, Operations	

Level	Trigger	Procedure	Action Complete (incl Signature)	Resources	Responsible Party	External Assistance
		o Ensure that mobile sewerage pumps are available for immediate use	☐			
		o Fuel and test mobile generators and relocate generators to appropriate locations within the network	☐			
		o				
		o Ensure that electric motors and switchgear at the Low Lift Pump Station and Bores No 5 and 8 adjacent to the Low Lift Station are raised to above the anticipated maximum flood level	☐			
		o Engage adequate electrical technicians for assistance during the event	☐			
		o Ensure temporary accommodation for workers at Paget Depot, Sarina Depot	☐			
		o Ensure sodium hypochlorite vats topped up at all outer treatment plants	☐			
		o Increase level sensors at tanks at Seaforth WWTP to increase weight and resist dislocation of facilities.	☐		Manager, Operations	
		o Charge up spare batteries and replace any telemetry batteries that may be running flat due to sub-optimal solar recharging	☐			
		o Ensure a diesel genset for Paget Depot to ensure continuous flow of power supply to telemetry room, workshop, tools and workers facilities	☐			
		o Ensure all hand held radios are checked, charges and issued.	☐			
		o Ensure field staff have contact details for resources	☐			
		o Ensure adequate supply of sand and sandbags at both Sarina and Paget Depots	☐			
		o Ensure supplies of torches, batteries, disinfectant, bottled water and tarpaulins	☐			
		o Close down and make safe all works in progress and return all non-essential Council vehicles and mobile plant to respective depots or suitable storage areas	☐		Manager, Capital Works	
Level 3 – Moderate		**Incident Management Team** to:				
		o Invoke a total water ban.	☐			
		o Provide hourly advice to Councils Emergency/Disaster Coordination centre on the status of reservoir levels, reticulation pressure, main breaks, loss of electricity supply to any water services facility (including advice on restoration of services), and activation of any sewerage bypasses, sewerage overflows or spills.	☐		Chief Operating Officer, Water and Waste	

Level	Trigger	Procedure	Action Complete (incl Signature)	Resources	Responsible Party	External Assistance
	Triggered when Councils Emergency Response Sub Plan activated	o Manage fatigue among the workforce	☐			
		o Provide regular briefings to site team on changing conditions	☐			
		o Oversee deployment of mobile sewerage pumping plants to required locations	☐		Manager, Operations	
		o Oversee deployment of generators to required critical sewerage Pump Stations.	☐			
		o Provide regular updates to DEHP on status	☐			
		o Receive requests via the Guardian Disaster Management software, prioritise and issue to site team.	☐		Manager, Business Services	
		o Arrange for public information and warnings to be issued in relation to safe use of water, conservation of water supplies, sewerage spillages, and restrictions on the use of the sewer system in accordance with the *Pubic Information and Warnings Operational Plan*	☐			
		<u>Site Team to</u>: o Deploy mobile sewerage pumping plants to required locations	☐		Manager, Operations	
		o Deploy generators to critical sewerage Pump Stations.	☐			
		o Provide a network status report to the Incident Management team every quarter to the hour. The advice to the Incident Management team to include the status of reservoir levels, reticulation pressure, main breaks, loss of electricity supply to any water services facility (including advice on restoration of services), and activation of any sewerage bypasses, sewerage overflows or spills.	☐			
		o Respond to call-outs to the extent deemed safe under the circumstances	☐			
Level 4 – Major		**As above**				
Level 5 - Catastrophic		**As above**				•

Post Cyclone Recovery

Trigger	Procedure	Action Complete (incl Signature)	Resources	Responsible Party	External Assistance
As advised by Director of Engineering Services at the "stand down" of emergency	**General Business Recovery:** • Preliminary assessment of damage caused by and advise Councils Local Disaster Management Group↑	☐		Chief Operating Officer, Water and Waste	
	• Mobilise water tankers to provide contingency supplies to critical supply points↑ • Mobilise trade waste tankers to pump out key manholes • Ongoing contact with energy supplier regarding supply continuity and reliability ↑	☐		Manager, Operations	
	• Instigate financial accounting and cost recovery for the business	☐		Manager, Business Services	
	Water: • Re-establish primary secondary pumping facilities • Re-establish water treatment facilities • Isolate broken mains and turn off broken services at the meter cocks • Repair trunk mains • Repair reticulation mains • Permanent repair of buildings and facilities • Check Middle Creek Dam • Enforce water restrictions to conserve water supplies	☐ .... ☐		Manager, Operations	
	• Update public information and warnings in relation to safe use of water and conservation of water supplies, in accordance with the *Pubic Information and Warnings Operational Plan*	☐		Manager, Business Services	
	Sewerage: • Re-establish main sewerage pumping stations • Re-establish minor sewerage pumping stations • Re-establish sewerage treatment works • Repair of rising mains • Permanent repair of sewers • Arrange for the clean up/restoration of any sewerage overflow or spills o Throttle flow from Mt Basset to Sydney St as required. • Open Emergency Relief valve at River Street if Required	☐ .... ☐ .... ☐		Manager, Operations	
	• Update public information and warnings in relation to sewerage spillages, restrictions on the use of the sewer system in accordance with the *Pubic Information and Warnings Operational Plan*	☐		Manager, Business Services	

	WATER SERVICES- INCIDENT RESPONSE PLAN (IRP)	Status: ACTIVE
Mackay REGIONAL COUNCIL	**SEVERE STORM RESPONSE**	Version: A Date 23.05.2016

Summary/Overview

Purpose:	Emergency response in the event of a **severe storm**
Applies to:	Water Services Infrastructure

When to Use:	From identification of potential severe storm threat.
	
	Key triggers to be as follows:
	  o **Level 1** – When advice is received regarding formation of a severe storm
	  o **Level 2** – When severe storm is about to strike the Mackay Region
	  o **Levels 3 – 5** – Activation of Councils Emergency Response Sub plan.

Related SOPs:	To be used in conjunction with Mackay Regional Councils Emergency Response Sub Plan
Enquiries:	<u>Plan Contact</u>: Acting Chief Operating Officer Water & Waste Services, Ph: 07 4961 9023 Mobile: 04 8808 5364 Email: linda.roberts@mackay.qld.gov.au <u>IRP manager:</u> Manager, Networks, Water Services Ph07 4961 6020; Mobile: 0448 993 954 Email: jason.cocker@mackay.qld.gov.qu
Safety Conditions:	• Crews are not to attempt any operational work in the field if there is any danger of injury. • The Chief Operating Officer can and will issue a stand down order if there is a risk of potential injury to staff. • Monitoring of hours worked is to be carried out to ensure adequate rest breaks / fatigue management.

Procedure

Situation Analysis:

Assess Incident Level against pro forma and implement response procedures relevant to nominated level of incident

Level	Trigger	Procedure	Action Complete (incl Signature)	Resources	Responsible Party	External Assistance
Level 1 – Insignificant (Monitor)	**This phase may be triggered when advice is received that a severe storm is forecast**	• Alert members of the Incident Management Team and Site Management Team(s) of the potential threat	☐	• EM Sub Plan contact list	Chief Operating Officer, Water and Waste or Delegate	• CTM alliance partners
		• Update list of names, phone numbers and method of contact for all officers and deputies to whom specific responsibilities have been delegated	☐			
		• Review "critical infrastructure" plans, "critical supply points" (water services) and "priority power areas" for initial assessment of potential impact	☐	• Map of critical infrastructure • Map of critical supply points ,low pressure zones, potential		
		• Activate resource sharing/support protocols developed as part of CTM alliance	☐	• CTM Alliance		
		• Initial advice to DEHP of the potential impact and mitigation strategies	☐	• Environmental Management System (EMS)	Manager, Operations	•
		• Review high level storage (water) and time to overflow calculations (sewer)	☐	• SCADA		•
		• Activate service level agreement for provision of generators. Identify location of generators and potential availability	☐	• Service level agreement for provision of generators		• Supplier Contact
		• Establish contact with Ergon to ascertain possible power interruptions and advise Ergon on "priority power areas"	☐			• Ergon Ph 132296
		• Review quantities and location of key materials (e.g. chlorine, lime, pipe repair materials and equipment)	☐	• TP Operators		
		• Update list of Council vehicles and mobile mechanical plant (including current location)	☐	• Fleet Supervisor		
		• Ensure all crews have appropriate valve keys	☐	• Civil Coordinator		
		• Ensure adequate fuel storage at Sarina	☐	• Civil Coordinator		
		• Undertake a site cleanup at depots and treatment facilities	☐			
		• Clear manual intake screens at WWTP	☐	• TP Operators		
		• Test high level alarms within the sewer transport network	☐	• Transfer System Officer		
		• Establish job numbers for recording cost/wages/time associated with the event	☐	• Finance Officer	Manager, Business Services	

Level	Trigger	Procedure	Action Complete (incl Signature)	Resources	Responsible Party	External Assistance
Level 2 – Minor (Standby Alert)	**This phase is triggered when a severe storm is imminent to strike the Mackay Region**	• Establish Incident Management Team and Site Team • **Incident Management Team** to: o Establish an incident room within Water Services. Notify Councils Emergency/Disaster Coordination centre if active, that the liaison / incident team is in place and on the status of reservoir levels, reticulation pressure, main breaks, loss of electricity supply to any waterworks facility(including advice on restoration of services)	☐ .... ☐	Water Services Emergency Management Sub plan	Chief Operating Officer, Water and Waste	

		o Brief the site team and ensure that the site team has adequate resources to provide an effective response
		  o Establish Depot Control Centre
		  o Ensure all reservoir storages are filled and that the Mt Pleasant. Maximise storage at Gargett, Fitch Hatton, Sarina Town and beach area reservoirs to ensure supply for these towns
		  o Engage with Ergon regarding supply to "priority Power" areas supplier
		  o Provide advice to DEHP on situation (and planned impact minimisation strategies)
		  o Arrange for the Water Treatment Works to be continuously attended during the event
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			☐ ....
			
			☐ ....
				• Environmental Management System (EMS)	Manager, Operations	

		o Arrange for public information and warnings to be issued in relation to safe use of water and conservation of water supplies, in accordance with the *Pubic Information and Warnings Operational Plan*	☐		Manager, Business Services	

		Site Team to:
		  o Brief workers on the situation
		  o Ensure that the aluminium dingy is on its trailer with outboard motor attached and ready for immediate use
		  o Ensure that all borehole pumping stations are ready for use and have been run in a shandy mix into the network prior to the event.
		  o Ensure that all sewerage overflows and bypass facilities are in working order.
		  o Ensure that mobile sewerage pumps are available for immediate use
		  o Fuel and test mobile generators and relocate generators to appropriate locations within the network
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			☐ ....
			
			☐ ....
					Manager, Operations	

Level	Trigger	Procedure	Action Complete (incl Signature)	Resources	Responsible Party	External Assistance
		o Ensure that electric motors and switchgear at the Low Lift Pump Station and Bores No 5 and 8 adjacent to the Low Lift Station are raised to above the anticipated maximum flood level	☐			
		o Engage adequate electrical technicians for assistance during the event	☐			
		o Ensure temporary accommodation for workers at Paget Depot, Sarina Depot	☐			
		o Ensure sodium hypochlorite vats topped up at all outer treatment plants	☐			
		o Increase level sensors at tanks at Seaforth WWTP to increase weight and resist dislocation of facilities.	☐		Manager, Operations	
		o Charge up spare batteries and replace any telemetry batteries that may be running flat due to sub-optimal solar recharging	☐			
		o Ensure a diesel genset for Paget Depot to ensure continuous flow of power supply to telemetry room, workshop, tools and workers facilities	☐			
		o Ensure all hand held radios are checked, charges and issued.	☐			
		o Ensure field staff have contact details for resources	☐			
		o Ensure adequate supply of sand and sandbags at both Sarina and Paget Depots	☐			
		o Ensure supplies of torches, batteries, disinfectant, bottled water and tarpaulins	☐			
		o Close down and make safe all works in progress and return all non-essential Council vehicles and mobile plant to respective depots or suitable storage areas	☐		Manager, Capital Works	
Level 3 – Moderate		**Incident Management Team** to:				
		o Provide hourly advice to Councils Emergency/Disaster Coordination centre on the status of reservoir levels, reticulation pressure, main breaks, loss of electricity supply to any water services facility (including advice on restoration of services), and activation of any sewerage bypasses, sewerage overflows or spills.	☐		Chief Operating Officer, Water and Waste	
		o Manage fatigue among the workforce	☐			
		o Provide regular briefings to site team on changing conditions	☐			
		o Oversee deployment of mobile sewerage pumping plants to required locations	☐			

Level	Trigger	Procedure	Action Complete (incl Signature)	Resources	Responsible Party	External Assistance
	Triggered when Councils Emergency Response Sub Plan activated	o Oversee deployment of generators to required critical sewerage Pump Stations.	☐		Manager, Operations	
		o Provide regular updates to EPA on status	☐			
		o Receive requests via the Guardian Disaster Management software, prioritise and issue to site team.	☐		Manager, Business Services	
		o Arrange for public information and warnings to be issued in relation to safe use of water, conservation of water supplies, sewerage spillages, and restrictions on the use of the sewer system in accordance with the *Pubic Information and Warnings Operational Plan*	☐			
		<u>Site Team to</u>:				
		o Deploy mobile sewerage pumping plants to required locations	☐		Manager, Operations	
		o Deploy generators to critical sewerage Pump Stations.	☐			
		o Provide a network status report to the Incident Management team every quarter to the hour. The advice to the Incident Management team to include the status of reservoir levels, reticulation pressure, main breaks, loss of electricity supply to any water services facility (including advice on restoration of services), and activation of any sewerage bypasses, sewerage overflows or spills.	☐			
		o Respond to call-outs to the extent deemed safe under the circumstances	☐			
Level 4 – Major		**As above**				
Level 5 - Catastrophic		**As above**				•

Post Severe Storm Recovery

Trigger	Procedure	Action Complete (incl Signature)	Resources	Responsible Party	External Assistance
As advised by Director of Engineering Services at the "stand down" of emergency	**General Business Recovery:** • Preliminary assessment of damage caused by and advise Councils Local Disaster Management Group↑	☐		COO, Water & Waste	
	• Mobilise water tankers to provide contingency supplies to critical supply points↑ • Mobilise trade waste tankers to pump out key manholes • Ongoing contact with energy supplier regarding supply continuity and reliability ↑	☐		Manager, Operations	
	• Instigate financial accounting and cost recovery for the business	☐		Manager, Business Services	
	Water: • Re-establish primary secondary pumping facilities • Re-establish water treatment facilities • Isolate broken mains and turn off broken services at the meter cocks • Repair trunk mains • Repair reticulation mains • Permanent repair of buildings and facilities • Enforce water restrictions to conserve water supplies • Check Middle Creek Dam	☐		Manager, Operations	
	• Update public information and warnings in relation to safe use of water and conservation of water supplies, in accordance with the *Pubic Information and Warnings Operational Plan*	☐		Manager, Business Services	
	Sewerage: • Re-establish main sewerage pumping stations • Re-establish minor sewerage pumping stations • Re-establish sewerage treatment works • Repair of rising mains • Permanent repair of sewers • Arrange for the clean up/restoration of any sewerage overflow or spills o Throttle flow from Mt Basset to Sydney St as required. • Open Emergency Relief valve at River Street if Required	☐ .... ☐ .... ☐		Manager, Operations	
	• Update public information and warnings in relation to sewerage spillages, restrictions on the use of the sewer system in accordance with the *Pubic Information and Warnings Operational Plan*	☐		Manager, Business Services	

	WATER SERVICES- INCIDENT RESPONSE PLAN (IRP)	**Status: ACTIVE**
Mackay REGIONAL COUNCIL	**DRINKING WATER QUALITY INCIDENT RESPONSE**	Version: B
		Date 2.12.2016

Summary/Overview

Purpose:	Response in the event of a Drinking Water Quality incident (including breach of an operational limit or ADWG aesthetic or health guideline)
Applies to:	Water Services Infrastructure
When to Use:	When a drinking water quality limit is breached.
	Key triggers to be as follows:

- o **Level 1** – Exceedance of operational limits
- o **Level 2 –** Exceedance of ADWG aesthetic guideline
- o **Level 3 –** Detection of 1 – 5 CFU/100 mL E. coli in reticulation OR minor exceedance of ADWG chemical parameter (determined value is close to guideline value)
- o **Level 4 –** High level of E.coli (e.g. > 5 CFU/100 mL) or any pathogens detected in reticulation
- o **Level 5 –** Gross exceedance of ADWG health values for a chemical parameter (e.g. more than five times the ADWG health guideline limit)

Related SOPs:	To be used in conjunction with Mackay Regional Council's Emergency Response Sub Plan and Mackay Regional Council's Drinking Water Quality Incident Reporting Process
Enquiries:	Plan Contact: Acting Chief Operating Officer Water & Waste Services,
	Ph: 07 4961 9023
	Mobile: 04 8808 5364
	Email: linda.roberts@mackay.qld.gov.au
	IRP manager: Manager, Treatment Water Services
	Ph 07 4961 6020;
	Mobile: 0448 993 954;
	Email: stuart.boyd@mackay.qld.gov.au

Safety Conditions:	• Crews are not to attempt any operational work in the field if there is any danger of injury.
	• The COO can and will issue a stand down order if there is a risk of potential injury to staff.
	• Monitoring of hours worked is to be carried out to ensure adequate rest breaks / fatigue management.

Procedure

Situation Analysis:

Assess Incident Level against pro forma and implement response procedures relevant to nominated level of incident

Level	Trigger	Procedure	Action Complete (incl Signature)	Resources	Responsible Party	External Assistance
Level 1- Insignificant	Exceedance of operational limits	Operator or Plant Supervisor to complete O&M procedures or raise a maintenance request to solve issue	☐		Plant Supervisor	
		Operators to advise Plant Supervisor if assistance is required	☐			
		Plant supervisor review requests from operators and approve/disapprove	☐		Plant Supervisor	
		Document incident and changes in O&M procedures	☐	O&M Procedures	Plant Supervisor	
Level 2 Minor	Exceedance of ADWG aesthetic guideline	Environmental Officer to determine if any customer complaints have been lodged which may relate to the ADWG aesthetic guideline breach.	☐	Pathways requests	Environmental Officer	
		Document incident	☐		Environmental Officer	
Level 3 - Moderate	Detection of 1 – 5 CFU/100 mL E. coli in reticulation OR minor exceedance of ADWG chemical parameter (determined value is close	Implement Mackay Regional Council's Drinking Water Quality Incident Reporting Process	☐		Environmental Officer	DEWS
		Manager of Water Treatment to liaise with Queensland Health to determine public health notification and further actions required	☐		Manager Water Treatment	Queensland Health
		Arrange for public information and warnings to be issued in relation to safe use of water and conservation of water supplies, in accordance to Queensland Health's Input	☐		Manager, Business Services	

		Document incident	☐		Environmental Officer	
Level 4 – Major	**High level of E.coli (e.g. > 5 CFU/100 mL) or any pathogens detected in reticulation**	As above				
Level 5 - Catastrophic	**Gross exceedance of ADWG health values for a chemical parameter (e.g. more than five times the ADWG health guideline limit)**	As above				

	WATER SERVICES- INCIDENT RESPONSE PLAN (IRP)	Status: ACTIVE
		Version: A
	EARTHQUAKE RESPONSE	Date 23.05.2016

Summary/Overview

Purpose:	Emergency response in the event of an **Earthquake**
Applies to:	Water Services Infrastructure
When to Use:	From identification of potential earthquake threat.

Key triggers to be as follows:

- o **Level 1** – When advice is received regarding formation of a possible earthquake
- o **Level 2 –** When earthquake affects the Mackay Region
- o **Levels 3 – 5 –** Activation of Council's Emergency Response Sub plan.

Related SOPs:	To be used in conjunction with Mackay Regional Council's Emergency Response Sub Plan
Enquiries:	Plan Contact: Acting Chief Operating Officer Water & Waste Services,
	Ph: 07 4961 9023
	Mobile: 04 8808 5364
	Email: linda.roberts@mackay.qld.gov.au
	IRP manager: Manager, Networks, Water Services
	Ph 07 4961 6020;
	Mobile: 0448 993 954;
	Email: jason.cocker@mackay.qld.gov.au

Safety Conditions:	• Crews are not to attempt any operational work in the field if there is any danger of injury.
	• The Chief Operating Officer can and will issue a stand down order if there is a risk of potential injury to staff.
	• Monitoring of hours worked is to be carried out to ensure adequate rest breaks / fatigue management.

Procedure

Situation Analysis:

Assess Incident Level against pro forma and implement response procedures relevant to nominated level of incident

Level	Trigger	Procedure	Action Complete (incl Signature)	Resources	Responsible Party	External Assistance
Level 1 – Insignificant (Monitor)	**This phase may be triggered when advice is received that a earthquake has or might occur**	• Alert members of the Incident Management Team and Site Management Team(s) of the potential threat	☐	• EM Sub Plan contact list	Chief Operating Officer, Water and Waste or Delegate	• CTM alliance partners
		• Update list of names, phone numbers and method of contact for all officers and deputies to whom specific responsibilities have been delegated	☐			
		• Review "critical infrastructure" plans, "critical supply points" (water services) and "priority power areas" for initial assessment of potential impact	☐	• Map of critical infrastructure • Map of critical supply points ,low pressure zones, potential		
		• Activate resource sharing/support protocols developed as part of CTM alliance	☐	• CTM Alliance		
		• Initial advice to DEHP of the potential impact and mitigation strategies	☐	• Environmental Management System (EMS)	Manager, Operations	•
		• Review high level storage (water) and time to overflow calculations (sewer)	☐	• SCADA		•
		• Activate service level agreement for provision of generators. Identify location of generators and potential availability	☐	• Service level agreement for provision of generators		• Supplier Contact
		• Establish contact with Ergon to ascertain possible power interruptions and advise Ergon on "priority power areas"	☐			• Ergon Ph 132296
		• Review quantities and location of key materials (e.g. chlorine, lime, pipe repair materials and equipment)	☐	• TP Operators		
		• Update list of Council vehicles and mobile mechanical plant (including current location)	☐	• Fleet Supervisor		
		• Ensure all crews have appropriate valve keys	☐	• Civil Coordinator		
		• Ensure adequate fuel storage at Sarina	☐	• Civil Coordinator		
		• Undertake a site cleanup at depots and treatment facilities	☐			
		• Clear manual intake screens at WWTP	☐	• TP Operators		
		• Test high level alarms within the sewer transport network	☐	• Transfer System Officer		
		• Establish job numbers for recording cost/wages/time associated with the event	☐	• Finance Officer	Manager, Business Services	

Level	Trigger	Procedure	Action Complete (incl Signature)	Resources	Responsible Party	External Assistance
Level 2 – Minor (Standby Alert)	**This phase is triggered when a tropical low or earthquake has or might occur in the Mackay Region**	• Establish Incident Management Team and Site Team • **Incident Management Team** to: o Establish an incident room within Water Services at Sir Albert Abbott Administration Building, Gordon Street, Mackay and log on to Guardian Disaster Management Software. Notify Councils Emergency/Disaster Coordination centre that the liaison / incident team is in place and on the status of reservoir levels, reticulation pressure, main breaks, loss of electricity supply to any waterworks facility(including advice on restoration of services)	☐ .... ☐	Water Services Emergency Management Sub plan	Chief Operating Officer, Water and Waste	

		o Brief the site team and ensure that the site team has adequate resources to provide an effective response
		  o Establish Depot Control Centre
		  o Ensure all reservoir storages are filled and that the Mt Pleasant Reservoir No 1 and Mt Oscar Reservoir No 2 are isolated from the system. Maximise storage at Gargett, Fitch Hatton, Sarina Town and beach area reservoirs to ensure supply for these towns
		  o Engage with Ergon regarding supply to "priority Power" areas supplier
		  o Provide advice to DEHP and/or DEWS on situation (and planned impact minimisation strategies)
		  o Arrange for the Water Treatment Works to be continuously attended during the event
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			 ☐ ....
			
			 ☐ ....
				• Environmental Management System (EMS)	Manager, Operations	

		o Arrange for public information and warnings to be issued in relation to safe use of water and conservation of water supplies, in accordance with the *Pubic Information and Warnings Operational Plan*	☐		Manager, Business Services	

		Site Team to:
		  o Brief workers on the situation
		  o Ensure that the aluminium dingy is on its trailer with outboard motor attached and ready for immediate use
		  o Ensure that all borehole pumping stations are ready for use and have been run in a shandy mix into the network prior to the event.
		  o Ensure that all sewerage overflows and bypass facilities are in working order.
			☐ ....
			 ☐ ....
			
			 ☐ ....
			
			 ☐ ....
					Manager, Operations	

Level	Trigger	Procedure	Action Complete (incl Signature)	Resources	Responsible Party	External Assistance
		o Ensure that mobile sewerage pumps are available for immediate use	☐			
		o Fuel and test mobile generators and relocate generators to appropriate locations within the network	☐			
		o				
		o Engage adequate electrical technicians for assistance during the event	☐			
		o Ensure temporary accommodation for workers at Paget Depot, Sarina Depot	☐			
		o Ensure sodium hypochlorite vats topped up at all outer treatment plants	☐			
		o Charge up spare batteries and replace any telemetry batteries that may be running flat due to sub-optimal solar recharging	☐			
		o Ensure a diesel genset for Paget Depot to ensure continuous flow of power supply to telemetry room, workshop, tools and workers facilities	☐		Manager, Operations	
		o Ensure all hand held radios are checked, charges and issued.	☐			
		o Ensure field staff have contact details for resources	☐			
		o Ensure adequate supply of sand and sandbags at both Sarina and Paget Depots	☐			
		o Ensure supplies of torches, batteries, disinfectant, bottled water and tarpaulins	☐			
		o Close down and make safe all works in progress and return all non-essential Council vehicles and mobile plant to respective depots or suitable storage areas	☐		Manager, Capital Works	
Level 3 – Moderate		**Incident Management Team** to:				
		o Invoke a total water ban.	☐			
		o Provide hourly advice to Councils Emergency/Disaster Coordination centre on the status of reservoir levels, reticulation pressure, main breaks, loss of electricity supply to any water services facility (including advice on restoration of services), and activation of any sewerage bypasses, sewerage overflows or spills.	☐		Chief Operating Officer, Water and Waste	
		o Manage fatigue among the workforce	☐			
		o Provide regular briefings to site team on changing conditions	☐			
		o Oversee deployment of mobile sewerage pumping plants to required locations	☐			

Level	Trigger	Procedure	Action Complete (incl Signature)	Resources	Responsible Party	External Assistance
	Triggered when Councils Emergency Response Sub Plan activated	o Oversee deployment of generators to required critical sewerage Pump Stations.	☐		Manager, Operations	
		o Provide regular updates to DEHP and/or DEWS on status	☐			
		o Receive requests via the Guardian Disaster Management software, prioritise and issue to site team.	☐		Manager, Business Services	
		o Arrange for public information and warnings to be issued in relation to safe use of water, conservation of water supplies, sewerage spillages, and restrictions on the use of the sewer system in accordance with the *Pubic Information and Warnings Operational Plan*	☐			
		<u>Site Team to</u>: o Deploy mobile sewerage pumping plants to required locations	☐		Manager, Operations	
		o Deploy generators to critical sewerage Pump Stations.	☐			
		o Provide a network status report to the Incident Management team every quarter to the hour. The advice to the Incident Management team to include the status of reservoir levels, reticulation pressure, main breaks, loss of electricity supply to any water services facility (including advice on restoration of services), and activation of any sewerage bypasses, sewerage overflows or spills.	☐			
		o Respond to call-outs to the extent deemed safe under the circumstances	☐			
Level 4 – Major		**As above**				
Level 5 - Catastrophic		**As above**				•

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Post-Earthquake Recovery

Trigger	Procedure	Action Complete (incl Signature)	Resources	Responsible Party	External Assistance
As advised by Director of Engineering Services	**General Business Recovery:** • Preliminary assessment of damage caused by and advise Council's Local Disaster Management Group↑	☐		Chief Operating Officer, Water and Waste	
	• Mobilise water tankers to provide contingency supplies to critical supply points↑ • Mobilise trade waste tankers to pump out key manholes • Ongoing contact with energy supplier regarding supply continuity and reliability ↑	☐		Manager, Operations	
	• Instigate financial accounting and cost recovery for the business	☐		Manager, Business Services	
	Water: • Assess Damage (Engage structural & geotechnical engineers, check dams and reservoirs first, CCTV all stormwater pipes from reservoirs) • Re-establish primary secondary pumping facilities • Re-establish water treatment facilities • Isolate broken mains and turn off broken services at the meter cocks • Repair trunk mains • Repair reticulation mains • Permanent repair of buildings and facilities • Check Middle Creek Dam • Enforce water restrictions to conserve water supplies	☐ .... ☐		Manager, Operations	
	• Update public information and warnings in relation to safe use of water and conservation of water supplies, in accordance with the *Pubic Information and Warnings Operational Plan*	☐		Manager, Business Services	
	Sewerage: • Assess Damage • Re-establish main sewerage pumping stations • Re-establish minor sewerage pumping stations • Re-establish sewerage treatment works • Repair of rising mains • Permanent repair of sewers • Arrange for the clean up/restoration of any sewerage overflow or spills ○ Throttle flow from Mt Basset to Sydney St as required. • Open Emergency Relief valve at River Street if Required	☐ .... ☐ .... ☐		Manager, Operations	
	• Update public information and warnings in relation to sewerage spillages, restrictions on the use of the sewer system in accordance with the *Pubic Information and Warnings Operational Plan*	☐		Manager, Business Services	

Appendix 3 – Administrative Emergency Supplies*

Paget Depot**
- Shelter
    - 6 cots to be purchased
- Food
    - Cartons of canned food, bread to be stored in freezer
    - Coffee & Tea
    - Sugar
- Appliances
    - Microwave
    - Small gas camp stove
    - Toaster iron
- Extras
    - Portable florescent lights
    - Extra batteries

Water Services Mobile Emergency Room Supplies
- Admin
    - Stationary: pens, paper, pins, blue tac,
    - Easy Chart-disposable white board with markers
    - In & Outboxes
    - Blank storage devices: USBs & pack of DVD+Rs
    - 2 Universal Chargers (NOTE: not for iPhone 5+)
    - Folders
    - 1 extension cord/ surge protector
    - 1 Laptop
    - 1 Guardian Control Centre Operations Loggers Handbook
- Hard Copies
    - BCP
    - Map Books
    - Hazard Report Forms
    - Work Method Safety Statement
    - Scenarios
    - 2 Cyclone tracking Maps
    - Emergency Management Site Event Record Forms
    - Council's Emergency Management Action Guide
- Electronic Copies
    - Template: Media Releases
    - Emergency Management Map Books (4 CDs)
    - Middle Creek Dam EAP
- Electronic Plans-On USB
    - DWQMP
    - SMP
    - Water Services Business
    - Business Continuity Framework
    - Map Books

Needs to be reviewed after every event and before cyclone season.

**Part of the fatigue management plan: given some workers may not be able to get back to their houses or need to have a break; the following has been put in place.