Fraser Coast Regional Council

LDMP – Part 6 Disaster Risk Management Sub Plan 2009

Rowland.

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LDMP Part 6 Disaster Risk Management Sub Plan

Foreword

The Fraser Coast Regional Council incorporates the former Hervey Bay City Council, Maryborough City Council, Woocoo Shire Council and two divisions (of three divisions) of Tiaro Shire Council. Fraser Island and other smaller islands form part of the Council. It is a vibrant and fast growing area that has a wide range of topography and changing demographics. It exhibits an abundance of natural, world heritage, historic, aquatic, flora and fauna attractions.

Despite the Fraser Coast Region's idyllic lifestyle, there will be occasions when the community is affected by a disaster both natural and non-natural, hence the need for a dynamic and robust Local Disaster Management Plan.

A key component of disaster management is the preparation of accurate and detailed risk studies and the implementation of effective risk treatment and mitigation strategies. The Local Disaster Management, Emergency Risk Management Sub Plan details including the Council's policy and procedures governing emergency risk identification and analysis and ongoing management. The sub plan identifies the roles and responsibilities of lead stakeholders and outlines the key objectives for risk treatment and mitigation strategies.

This document will be reviewed on a regular basis and updated to reflect changes in legislation, the changing needs of the region and lessons learnt from disasters elsewhere.

As a community we are unable to prevent a disaster from happening, however, we are able to minimise the adverse effects a disaster has on a community (both economically and socially) through comprehensive planning and preparation and managing effective response and recovery.

Mayor, Fraser Coast Regional Council
Chairperson
Fraser Coast Local Disaster Management Group.

____/ _____ / 2009

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Preliminaries

Authority of the Plan

Fraser Coast Regional Council has the authority to write and implement a Local Disaster Management Plan in accordance *with Section 30, 57(1) and 63 of the Disaster Management Act 2003.*

Approval of the Plan

The Fraser Coast Local Disaster Management Group, in accordance *with Section 57(1), of the Disaster Management Act 2003*, has prepared the Fraser Coast Regional Council Local Disaster Management Plan, Part 6 Emergency Risk Management Sub Plan version number 1, dated 2nd February 2009.

……
Signature

……
Print Name

Executive Officer
Fraser Coast Local Disaster Management Group

Dated: _ _ /_ _/ _ _ _ _

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Review of the Plan

The Executive Officer, Maryborough District Disaster Management Group, in accordance *with Section 28(1)*, of the *Disaster Management Act 2003,* has reviewed the Fraser Coast Regional Council Local Disaster Management Plan, Part 6 Emergency Risk Management version number 1, dated 2nd February 2009.

……
Signature

……
Print Name

Executive Officer
Maryborough District Disaster Management Group

Dated: _ _/_ _/ _ _ _ _

Endorsement of the Plan

The Fraser Coast Regional Council, in accordance *with Section 80(1) (b)* of the *Disaster Management Act 2003,* endorsed the Fraser Coast Regional Council Local Disaster Management Plan, Part 6 Emergency Risk Management version number 1, dated 2nd February 2009 *o*n __/ __/ 2009, resolution No.

The Fraser Coast Regional Council Local Disaster Management Plan Part 6 Emergency Risk Management is hereby approved for distribution.

……
Signature

……
Print Name

Chairperson
Fraser Coast Local Disaster Management Group

Dated: _ _/_ _/_ _ _ _

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Amendment Register and Version Control

1. The Fraser Coast Local Disaster Management Group Executive Officer is responsible for approving the sub plan and subsequent amendments before review by the Executive Officer Maryborough District Disaster Management Group, in accordance *with Section 28(I) Disaster Management Act 2003*.

2. Following review by the Executive Officer Maryborough District Disaster Management Group, the Fraser Coast Regional Council must approve and endorse the plan or proposed amendments, in accordance *with Section 80(1)(b), Disaster Management Act 2003*.

3. The Fraser Coast Local Disaster Management Group Executive Officer may make updates or amendments of a minor nature, such as document references, key appointment names or contact details, which are ratified at the next Fraser Coast Local Disaster Management Group meeting.

Amendment and Version Control Register

Amendment /Version	Date	Prepared by	Comments
Ver.1.00	02/02/2009	Heide Nelson	

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Distribution List

Fraser Coast Regional Council	3 copies (includes public display copy)
Fraser Coast Regional Library	1 copy
Fraser Coast Local Disaster Management Group	1 copy each
Chair Maryborough Disaster District Management Group	1 copy
Area Director Emergency Management Queensland	1 copy
Local Controllers SES	1 copy
SES Group Leaders	1 copy each
Lead Agencies	1 copy each
Bundaberg Regional Council	1 copy
Gympie Regional Council	1 copy
North Burnett Regional Council	1 copy
Wide Bay Water	1 copy

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Definitions and Abbreviations

AIIMS	Australasian Inter-service Incident Management System
Community Recovery Centre	A Centre established by the Department of Communities (DOC's) to facilitate the delivery of disaster recovery services to the disaster-affected community by multiple agencies from a single location.
Consequence	The outcome of an event or situation expressed qualitatively or quantitatively, being a loss, injury, disadvantage, or gain *(Australian Emergency Management Glossary).*
COT	Council Operations Team. The COT is responsible for managing Council operations in response to a disaster.
Council	Where used means Fraser Coast Regional Council
LDCC	Local Disaster Coordination Centre. The Local Disaster Management Group and representatives of lead and support agencies plan and coordinate disaster operations for the region from the LDCC.
DDC	District Disaster Coordination
DDCC	District Disaster Coordination Centre
DDMG	District Disaster Management Group
DES	Department of Emergency Services
Disaster	A disaster is a serious disruption in a community, caused by the impact of an event that requires a significant coordinated response by the State and other entities to help the community recover from the disruption (*Disaster Management Act 2003)*
EHO	Environmental Health Officer
EMA	Emergency Management Australia
EMQ	Emergency Management Queensland
EPA	Environmental Protection Agency
EPG	Evacuation Planning Group
Event	An event means any of the following: • cyclone, earthquake, flood, storm tide, tornado, tsunami, volcanic eruption or other natural happening; • an explosion or fire, a chemical, fuel or oil spill, or gas leak; • an infestation, plague or epidemic; E.G. example of epidemic – a prevalence of foot-and mouth disease • a failure of, or disruption to, an essential service or infrastructure; • an attack against the State; • another event similar to the above events. An event may be natural or caused by human acts or omissions. (Disaster Management Act 2003)

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	If not dealt with effectively, an event may constitute a disaster.
FCRC	Fraser Coast Regional Council
Hazard	A source of potential harm, or a situation with a potential to cause loss (*Emergency Management Australia, 2004*).
Incident	Can be used interchangeably with event.
LCWC	Local Community Welfare Committee
LDMG	Local Disaster Management Group
LDMP	Local Disaster Management Plan
Likelihood	Used as a general description of the probability or frequency. *(Australian Emergency Management Glossary, 1998)*
Mitigation	Measures taken in advance of a disaster aimed at decreasing or eliminating its impact on society and environment *(Australian Emergency Management Glossary, 1998)*.
NDRA	Natural Disaster Relief Arrangements
NGO	Non Government Organisation
Pandemic	An epidemic of infectious disease that spreads through human populations across a large region (for example a continent), or even worldwide
Preparedness	Arrangements made to ensure that should an emergency occur, communities, resources and services are capable of coping with the effects *(Australian Emergency Management Glossary, 1998)*.
Prevention	Measures to eliminate or reduce the incidence or severity of emergencies *(Australian Emergency Management Glossary, 1998)*.
QAS	Queensland Ambulance Service
QFRS	Queensland Fire and Rescue Service
QPS	Queensland Police Service
Recovery	The coordinated process of supporting disaster affected communities in reconstruction of physical infrastructure and restoration of emotional, social, economic and physical well-being *(Australian Emergency Management Glossary, 1998)*.
Relief	The provision of immediate shelter, life support and human needs of persons affected by or responding to a disaster. It includes the establishment, management and provision of services to disaster relief centres *(Australian Emergency Management Glossary, 1998)*.
Response	Actions taken in anticipation of, during and immediately after, a disaster to ensure its effects are minimised *(Australian Emergency Management Glossary, 1998)*.
Risk	The chance of something happening that may have an impact

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	on the safety and wellbeing of your community. It includes risk as an opportunity as well as a threat and is measured in terms of consequences and likelihood *(Adapted from AS/NZS 4360:2004).*
Risk management	The culture, processes, and structures that are directed towards realizing potential opportunities whilst managing adverse effects *(AS/NZS 4360:2004).*
Serious disruption	Serious disruption means: • loss of human life, or illness or injury to humans; • widespread or severe property loss or damage; • widespread or severe damage to the environment.
SES	State Emergency Service
SEWS	Standard Emergency Warning System
Sustainability	Forms of progress that meet the needs of the present without compromising the ability of future generations to meet their needs
SITREP	Situation Report
Welfare	The provision of immediate and continuing care of disaster affected persons who may be threatened, distressed, disadvantaged, homeless or evacuated and the maintenance of health, well-being and prosperity of such persons with all available community resources until their rehabilitation is achieved.
WICEN	Wireless Institute Civil Emergency Network. A group of Licensed Radio Operators, who have volunteered their services for emergency and backup communications.

References

- Emergency Management Australia Manual Series - Manual 10 Recovery, 2004
- Emergency Management Australia Manual Series - Manual 18 Community and Personal Support Services
- Emergency Management Australia Manual Series - Manual 38 Communications, 1998
- Emergency Management Australia Critical Infrastructure Emergency Risk Management and Assurance, January 2006
- Emergency Management Australia Emergency Risk Management Process
- Emergency Management Queensland Operational Guidelines 2004
- Emergency Management Queensland Major Disaster Evacuation Plan
- Department of Transport and Regional Services, Natural Disaster Relief & Recovery Arrangements
- Disaster Management Act 2003
- Disaster Management Strategic Policy Framework 2005
- Australian Emergency Management Glossary 1998
- AS/NZS Standard 4360:2004 Risk Management treatment options

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- Queensland Management Planning Guidelines 2005
- Hervey Bay City Council, DMP, Welfare sub-plan section 4
- SafePlan 2
- Fraser Coast Regional Council Risk Management Policy
- LTC Strategic Risk Management Review
- Wide Bay Water Corporation, Corporate Risk Management Plan
- FCRC Media Policy Docs # 806324
- Hervey Bay Building Management Plan 1999
- Maryborough Building Management Plan 2004.

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Section 1 – Introduction

1.1 Purpose of the sub plan

The purpose of the Fraser Coast Regional Council Local Disaster Management, Disaster Risk Management Sub Plan is to:

- Ensure the safety and sustainability of the local community
- Reduce or eliminate disaster risks to the community
- Ensure consistent risk prevention, mitigation and treatment procedures are utilised for the ongoing management of disaster risks
- Promote effective liaison between the Council and other agencies involved in risk prevention, mitigation and treatment
- Ensure compliance with the Disaster Management Act 2003.

1.2 Key Objectives

The key objectives of the Fraser Coast Regional Council Local Disaster Management, Disaster Risk Management Sub Plan are to:

- Outline the objectives and priorities of the Council regarding disaster risk management
- Detail the Council's approach to disaster risk management
- Provide guidance on the preparation and implementation of disaster risk assessments and studies
- Ensure regular reviews of risk assessments and studies are conducted to maintain up-to-date and accurate understanding of the region's vulnerability to disasters
- Outline the priority risks most likely to affect the region as identified in current disaster risk studies.

1.3 Testing and review

This sub plan is reviewed in accordance with the review policy outlined in the Fraser Coast Regional Council Local Disaster Management Plan, Part 1 Main Plan.

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Section 2 – Process

The Fraser Coast Regional Council faces many challenges that could impact on community and environment safety. Prominent among these is the requirement to fully understand the range of disasters likely to occur within the Council boundaries and how to develop plans to reduce, or manage, the effects of those disasters. In order to develop a comprehensive understanding of potential disasters the Council is required to establish and maintain effective disaster risk management procedures, including the conduct of regular risk studies.

In addition to identifying and understanding the Region's risks, the Fraser Coast Regional Council must ensure detailed mitigation and treatment strategies are developed, implemented and monitored.

2.1 The Risk Management Process

The Fraser Coast Regional Council is committed to using the risk management process recommended by Emergency Management Australia in conjunction with Risk Management AS/NZS 4360:2004 to identify, analyse and evaluate disaster risks that pose potential threats to the Fraser Coast Region. This process will include continued review and maintenance of all parameters and documentation.

The major activities of the risk management process outlined in AS/NZS 4360:2004, as follows:

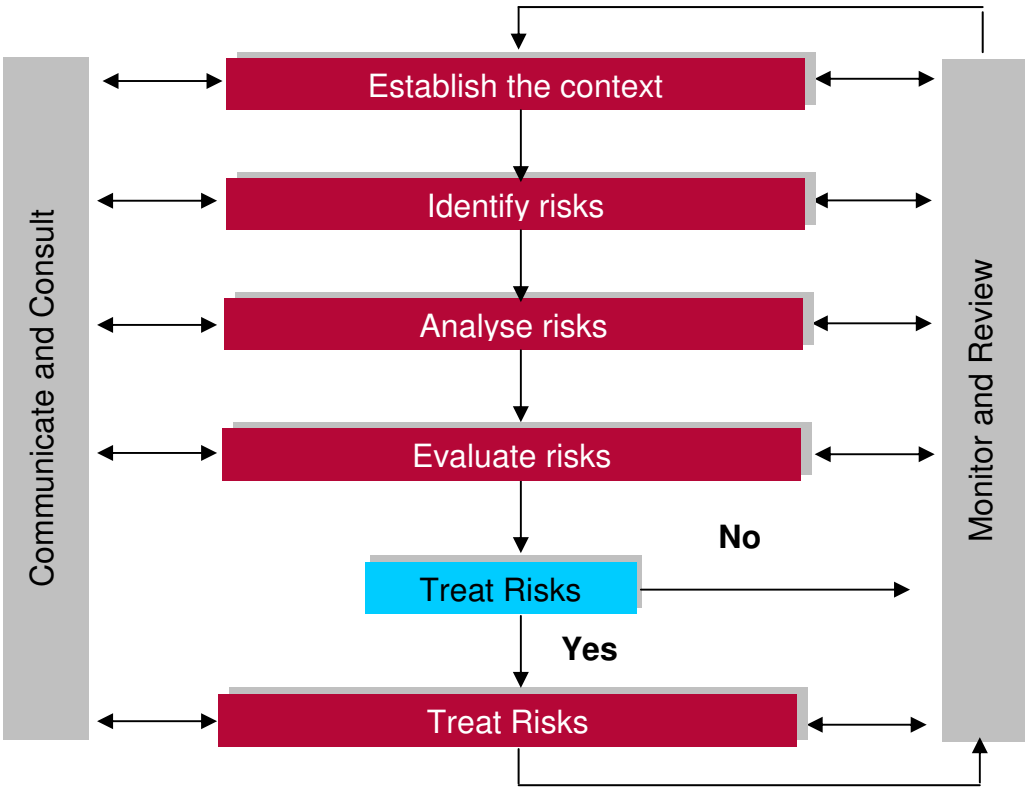

Figure 1.1: The risk management process (AS/NZS 4360:2004)

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2.2 Establish the Context

It is important to establish the context clearly in order to understand the wide range of risks a community may be required to respond to. This step requires effective engagement of stakeholders to build understanding of the different factors involved in maintaining normalcy within the community. By having an understanding of these factors, and the wide range of perceptions amongst the community, we are able to more accurately assess the impacts of disaster events.

Establishing the context includes:

- Identification of key stakeholders within the community
- Community scanning to identify factors in the political, economic, social and cultural environment, which may impact on decision-making and/or the disaster management planning process
- Identification of the physical attributes of the region i.e. geography, climate and weather, critical infrastructure
- Identification of the resilience of the community in respect to community capacity and essential services
- Development of risk evaluation criteria to assist in making judgements on which risks to treat.

2.3 Identify risks

Identifying risks requires a detailed study of the potential sources of risks within and around the region, and the ways in which these sources interact with the community and the environment. Sources of risk for disasters may be natural, accidental or intentional attacks.

Identify risks and develop risk statements, which include:

- Identification of sources of risk (identified hazards using records of past events, scientific data or research)
- Identification of elements at risk (aspects of the community and environment that may be exposed to sources of risk including population, buildings, economic activities, infrastructure and the environment).

2.4 Analyse risks

The purpose of analysing risks is to assist with the development of treatment options. Risk analysis is often based on considered judgements and assumptions, it may involve uncertainty and you will not always have complete information. To ensure a robust analysis, risk managers should utilise information from a range of sources and apply a variety of data collection techniques. This includes referring to:

- Previous studies
- Past experience and judgement
- Practices in related industry

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- Modelling, scenarios and experiments
- Reviews and audits.

The information collected from this range of sources is used to determine the likelihood and consequence of each risk. The likelihood and consequence are cross referenced to provide an overall risk rating for each risk. Risks are then placed on a Risk Level Matrix providing a clear order of priority based on overall risk rating. The process of determining the level of risk by consideration of the likelihood and consequence can be summarised by:

- Establish parameters for measuring the scale of likelihood and consequence
- Cross reference likelihood and consequence scale to develop a Risk Level Matrix.

Likelihood and Consequence Table

The table below is used to cross reference the likelihood and consequence of each risk to determine the overall risk rating.

Risk Consequences
Insignificant – no fatalities. Medical treatment required. Small number displaced for a short period. Some damage. Little disruption to the community. Some impact on environment, with no lasting effects. Some financial loss.
Minor – Small number of fatalities. Hospitalisation required. Minor temporary displacement. Significant damage. Some community disruption. Serious impact on environment with no long-term effects Significant financial loss
Moderate – Multiple fatalities. Numerous injuries requiring hospitalisation. Significant numbers displaced for short periods. Serious damage requiring some external assistance. Community functioning with difficulty. Severe impact on environment with long-term effects. Serious financial loss.
Major – Numerous fatalities. Extensive injuries, with significant hospitalisation. Large number displaced for significant duration. Severe damage that requires external resources. Community only partially functioning. Severe permanent damage to the environment. Severe financial loss.
Catastrophic – Mass fatalities. Large numbers requiring extended hospitalisation. Large number displaced for significant duration. Severe damage that requires external resources. Community only partially functioning. Severe permanent damage to the environment. Severe financial loss.

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Likelihood	Consequences				
	1 Insignificant	2 Minor	3 Moderate	4 Major	5 Catastrophic
A Almost Certain 1:1	H - 40	H – 48	E – 72	E – 84	E- 100
B Likely 1:10	M – 24	H – 44	H – 56	E – 80	E – 96
C Possible 1:50	L – 12	M – 28	H – 52	E – 76	E – 92
D Unlikely 1:100	L – 8	L – 20	M – 36	H – 64	E - 88
E Rare 1:500	L – 4	L – 16	M – 32	H – 60	H - 68

Risk Level:	Low	Medium	High	Extreme

2.5 Evaluate Risks

Evaluating risks is aimed at determining the relative seriousness of individual risks and considering the resources available for treating risks. If resources are limited this may influence the selection of risks for treatment. The outcome of this step is a prioritised list of risks identified for further treatment.

Risk evaluation includes the following actions:

- Consider the objectives of the Council and the community
- Prioritise risks and the associated treatment options
- Consider further analysis for some risks.

2.6 Treat Risks

Risk treatment involves the identification of options to eliminate or mitigate the effects of a risk including the assessment of the available options and the preparation and implementation of treatment plans.

In identifying treatment options Council will utilise the following:

- AS/NZS Standard 4360:2004 *Risk management treatment options*
- PPRR methodology – Prevention, Preparedness, Response and Recovery
- Cost-Benefit analysis.

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A guide to a range of possible treatment options is contained in Appendix 6B.

2.7 Communicate and Consult

Communication and consultation with all stakeholders will be an important aspect to be included in all stages of the process. Communication will predominately be with selected representatives and stakeholders within the community. If wider community consultation is required refer to the LDMP Part 7, Communication Sub Plan for details of community communication and engagement processes.

2.8 Monitor and review

The regular review of risks assessments and risk studies should be conducted to maintain an accurate understanding of the region's vulnerability to disasters. Council officers are allocated responsibility for the implementation and ongoing management of risk treatment options are required to report progress at the time of review. Additionally the risk management methodology and associated assessment criteria must be regularly reviewed to ensure assessment results and action plans are relevant to the current environment and context.

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Section 3 – Documentation

3.2 Disaster Risk Studies

Where possible the Fraser Coast Regional Council will commission specialists to conduct detailed disaster risk studies of the region. All studies are to follow the best practice risk management process outlined in the previous section. In addition, all risk studies are to include information outlined in the Queensland Department of Emergency Services' Natural Disaster Risk Management Guidelines. The Guidelines identify two primary components for inclusion in disaster risk management documentation; a disaster risk management report and a disaster mitigation plan.

These components are required to qualify for Natural Disaster Relief and Recovery Assistance (NDRRA) funding and are to be included in all disaster risk studies commissioned for the Fraser Coast Region.

3.2 Disaster Risk Management Report

The disaster risk management report consists of the following:

- Record of formal acceptance of Disaster Risk Management Report by Council
- Executive Summary
- Context
- Risks
- Risk analysis and evaluation
- Risk treatment options
- Summary of project management plan for implementing treatment options
- Appendices as required.

The information obtained by completing the disaster risk management report will form the basis of the Council's disaster mitigation plan.

3.3 Disaster Mitigation Plan

The disaster mitigation plan is to include the following reports and tables, as contained in the Natural Disaster Risk Management guidelines:

- Summary of mitigation process
- Community Vulnerability Profile form A8
- Risk register Part A form A9
- Risk Register Part B Risk evaluation form A10
- Treatment Strategy Development Future Years form A14
- Treatment Strategy Development Past Years form A14/1

Examples of these forms are contained in Appendix 6C.

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Once developed, Fraser Coast Regional Council disaster mitigation plans are to be submitted to the Department of Local Government and Planning.

Summarised Disaster Risk Register

The Disaster Management Planning guidelines published by the Department of Emergency Services, Queensland, are guidelines for the formulation and development of disaster management plans by local councils. The document describes what content is required in local disaster management plans and provides examples of how it may be presented.

The guidelines also recommend the inclusion of a risk management record. The record is a simple table that displays risks likely to impact the region, their consequence level and possible treatment options. It acts as a summary of the detail contained in risk studies and provides an overview of the region's risk profile.

The Fraser Coast Regional Council's risk management record is the Summarised Disaster Risk Register contained in Appendix 6D a more detailed register is maintained in Part 9 Supporting Information of this document. In addition to the detail required in a risk management record, the Fraser Coast Regional Council Summarised Disaster Risk Register outlines officers responsible for implementing risk mitigation and treatment strategies, and identifies where further detail regarding those strategies can be found. Responsible officers are to report the progress and success of the implementation of risk mitigation strategies to the Local Disaster Management Group at least annually.

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Section 4 – Overview

4.1 Fraser Coast Region Risk Overview

The Fraser Coast Region covers a large area, characterised by a complex and diverse geography that includes Fraser Island, the Mary River, large areas of native bushland, commercial forestry plantations and significant residential areas in low lying coastal zones.

Large numbers of tourists and visitors attracted to the region almost year round join the permanent population. The population is well spread from the more densely populated centres of Hervey Bay and Maryborough, to small remote communities located on the fringes of the region and Fraser Island.

The region continues to maintain the original industries of sugar, engineering and timber. Transportation, to and through the region, relies heavily on the Bruce Highway and the rail network.

This complex environment means that the region may be subjected to large range of disaster events. The following events have been identified as likely to affect the region:

- Cyclones and severe storms
- Storm tides
- Floods
- Bush fires
- Heatwaves
- Animal diseases
- Rail accidents
- Road accidents
- Shipping and boating accidents
- Industrial accidents.

The impacts from the above events on the commercial and social aspects of the community could range from insignificant to catastrophic depending on the severity of the event. The Fraser Coast Regional Council will continually review and develop strategies to eliminate or reduce the effects of these risks, and others, to the community.

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4.2 Priority Risks

The Risk Level Matrix below identifies the high priority risks for the region and their overall risk rating, as identified in the Maryborough Natural Disaster Risk Management Study conducted in 2004.

Identified Risk	Risk Rating
Riverine Flood: Extreme or moderate floods of about 50 year ARI due to major consequences for event in possible category. Smaller and greater floods resulted in High rating.	**EXTREME**
Severe Storm (Tropical cyclone, east coast low or thunderstorm) Category 2 or 3 Cyclone: direct hit or Category 3 or 4: offshore passage. Also category 4 Cyclone: direct hit or Category 5: offshore passage based on projected models.	**HIGH**
Storm Tide Inundation Storm tides up to 3.3m AHD ARI approx 100 years, as most of the development in coastal communities below this level.	**HIGH**
Bushfires Rural residential developments adjacent to forest.	**MODERATE**
Earthquakes and tsunamis Earthquakes of 5.5 Richter Magnitude or greater Tsunamis of 10m wave run-up.	**HIGH**

Further detail on these priority risks is contained in Appendix 6D.

Note: ARI: Annual Recurrence Interval
AHD: Australian Height Datum

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Appendix 6A – Supporting Information

The supporting information file for the Local Disaster management Plan is maintained electronically. Follow this file path for the latest version of the Supporting Information file:Docs#857228.

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Appendix 6B - Risk treatment options

The following suggested risk treatment options are drawn from Emergency Management Australia's Critical Infrastructure Emergency Risk Management (ERM) and Assurance Handbook January 2006.

	Prevention Mitigation	Preparedness	Response	Recovery
Education and maintenance	• General staff training of ERM issues • Management controls	• Specific ERM training • Leadership training.	• Develop stakeholder relationships.	• Debriefing and review of incident.
Communication and consultation	• Raising community and stakeholder awareness • Media liaison	• Engage stakeholders and communities in risk assessments, drills and scenario testing • Brief media and prepare media plans around possible scenarios.	• Communicate effectively with stakeholders, communities and media • Implement media strategy (e.g. provide media access to command centre).	• Debrief stakeholders and communities.
Engineering options	• Review design standards • Design techniques to minimise risk.	• Modification or addition of assets/infrastructure to reduce risk.	• Capability of emergency response and strategies including substituted services.	• Restoring infrastructure and if necessary redesigning.
Monitoring and reviewing	• Review the ERM process and risk treatments.	• Monitor and review the organisational preparedness.	• Monitor and review the progress of the emergency response.	• Monitor and review the recovery and organisational performance.
Resource allocation (including asset/infrastructure security)	• Assign necessary resources to deal with ERM • General physical security, surveillance and monitoring of assets.	• Drills and scenario exercises involving stakeholders, security and surveillance systems.	• Implement emergency command structure • Deployment of resources (including asset security) • Implementation of plans.	• Mobilisation of resources • Supplementary crews for relief • Performance review of security and surveillance systems.

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Appendix 6C – Queensland Natural Disaster Risk Management Guidelines: Reports and Tables

These are excerpts from the Queensland Natural Disaster Risk Management Guidelines – refer to that document for originals.

Form A8
Community Vulnerability Profile

Vulnerability of People

Vulnerability of Social Structures

Vulnerability of Buildings

Vulnerability of Environment

Vulnerability of Lifelines

Vulnerability of Critical Facilities

Vulnerability of Local Economic Production and Employment

Vulnerability Other Elements

Recorded By……..
Date……

EXAMPLE

Form A9
Risk Register-Risk Description

Vulnerable Elements	Hazard Risk	Consequence
People		
Buildings		
Environment		
Business		

Form A10
Risk Register-Risk evaluation

Hazard	Risk	Likelihood Rating	Consequence Rating	Risk Rating

Note: This form is used to record the output from the risk analysis process. For each hazard, specific risks are described in relation to likelihood, consequence and risk rating.

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Form A11
Identification and Evaluation of Treatment Options

Hazard	Risk	Risk Priority	Treatment Option	Treatment Evaluation

Note: This form is used to link treatment options to each of the identified risks and for treatment evaluation.

Form A 12
Risk Treatment Action and Monitoring Schedule

Hazard	Hazard Project Leader	Reporting Frequency
Generic Duties		

EXAMPLE

Note: Use this form to record the project leader assigned to manage and monitor the progress of all treatment options associated with a specific hazard.

Form A 13
Detailed Risk Action (Disaster Mitigation Plan)

Risk Statement

Summary-Recommended response and expected outcomes

Action disaster mitigation Plan
1. Proposed actions

2. Resources required

3. Responsibilities

4. Timetable-Operational plan year and Timeframe

5. Estimated cost and Possible funding source

6. Reporting and Monitoring.

Recorded by……..

Date……

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Form A 14 and 14/1
Treatment Strategy Development

Operational Plan Year: 20….

Endorsed Treatment	Responsible Agency	Consequential Actions	Estimated Coast	Funding Source	Timeframe

EXAMPLE

A14: For each future treatment strategy approved to be implemented, record the information in each column.
A14/1: For each past treatment strategy approved to be implemented, record information in the associated column except for Estimated Cost and Funding Source.

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Appendix 6D – Summarised Disaster Risk Register

No	The Risk	Consequences		Likelihood		Risk Treatment Plan	Location of Plan	Responsible Officer
		Description	Rating	Description	Rating	Y/N		
1	**Riverine Flood:**	Extreme for moderate floods of about 50 year ARI due to major consequences for event in possible category. Smaller and greater floods resulted in High rating.	EXTREME	50 Year ARI	Possible	Y	Refer to Form A13 of the Maryborough City Council Natural disaster Risk Management report-pg a62	
2	**Severe Storm (Tropical cyclone, east coast low, thunderstorm)**	Category 2 or 3 Cyclone-direct hit or Category 3 or 4- offshore passage. Also category 4 Cyclone-direct hit or Category 5-offshore passage taking account of pre-historic data.	HIGH	Wind / Hail: 50 year ARI	Likely/ Almost Certain	Y	Refer to Form A13 of the Maryborough City Council Natural disaster Risk Management report- pg a60	
3	**Storm Tide Inundation**	Storm tides up to 3.3 m AHD ARI approx 100 years, as most of the development in costal communities below this level	HIGH	100 Year ARI-3.3m AHD	Likely	Y	Refer to Form A13 of the Maryborough City Council Natural disaster Risk Management report- pg a61	
4	**Bushfires**	Rural residential developments adjacent to forest	MODERATE	Affecting rural residential adjacent to forests	Likely	Y	Refer to Form A13 of the Maryborough City Council Natural disaster Risk Management report- pg a63	
5	**Earthquakes and tsunamis**	Earthquakes of 5.5 Richter Magnitude or greater Tsunamis of 10m wave run-up	HIGH	Earthquake200yrs ARI-1000 year ARI Tsunamis ARI 200-500 years	Unlikely	Y	Refer to Form A13 of the Maryborough City Council Natural disaster Risk Management report-pg a64 / a65	

EXAMPLE

Note: For full likelihood description and detailed plans, refer to Maryborough City Council Natural Disaster Risk Management Report 2004.

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