Civil Defence Emergency Management Group Plan for Taranaki

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Taranaki Regional Council
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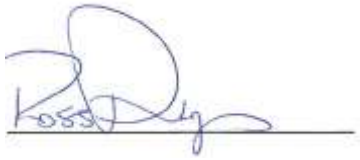
Civil Defence Emergency Group Plan for Taranaki

This Civil Defence Emergency Management Group Plan for Taranaki was prepared by the Taranaki Regional Council on behalf of the Taranaki Civil Defence Emergency Management Group under the requirements of the Civil Defence Emergency Management Act 2002.

The Civil Defence Emergency Management Plan for Taranaki was approved by the Civil Defence Emergency Management Group on 11 September 2012, to take effect on 22 September 2012.

DATED at the Taranaki Regional Council this 11th day of September, 2012.

SIGNED by the following members of the Taranaki Civil Defence Emergency Management Group:

Taranaki Regional Council Cr. Brian Jeffares Taranaki Regional Council	South Taranaki District Council  His Worship the Mayor – Ross Dunlop South Taranaki District Council
Te Kaunihera-ā-Rohe o Ngāmotu NEW PLYMOUTH DISTRICT COUNCIL newplymouthnz.com His Worship the Mayor – Harry Duynhoven New Plymouth District Council	STRATFORD DISTRICT COUNCIL His Worship the Mayor – Neil Volzke Stratford District Council

Preface

The Taranaki Civil Defence Emergency Management Group Plan for Taranaki (CDEM Group Plan), is the second CDEM Group Plan to be prepared by the Taranaki Civil Defence Emergency Management Group. The Plan is an important document that sets out the strategic direction that the CDEM Group and wider community will take to ensure the effective and efficient management of hazards and risk within the Taranaki Region, to provide a resilient and secure regional community.

The Taranaki region sits within a complex hazardscape, under the shadow of Mount Taranaki volcano. Our communities are built on fault lines and in hazard zones. They are also at the peril of severe weather rolling off the Tasman Sea. Our reliance and critical dependence on lifeline utilities such as electricity, water and information technology leaves us vulnerable should these be compromised in an event. Furthermore, the region's economic prosperity relies on our dairy farming and oil and gas activities, which are vulnerable to a number of hazards. This Plan sets out the ways that the community can *reduce* risk and ensure *readiness* for these events.

The Plan sets out the arrangements in place for the CDEM Group's *response* to an emergency event, and details how the Group plans to help communities *recover* following an event. In the Plan, there is a big focus on developing community and business continuity planning, to ensure systems function as well as possible during and following an event.

It is important to note that while the CDEM Group are responsible for delivering emergency management functions, emergency readiness and community resilience is the responsibility of every individual, community and agency within the region. Emergency events throughout New Zealand and the World over the past five years have highlighted the vulnerability of society to the forces of nature and associated technological failures. They have also demonstrated how personal preparedness can ensure resilience in these situations. This Plan is not just for CDEM professionals, it is for the whole community to buy in to and deliver on.

With that in mind, I have great pleasure in presenting the CDEM Group Plan for Taranaki. The CDEM Group looks forward to working with you and to continuing our efforts towards a prepared and resilient Taranaki.

B R Jeffares
Chairman
Taranaki Civil Defence Emergency Management Group

Executive summary

The Taranaki region is set within a unique hazardscape, and is subject to a wide range of hazards differing significantly in seriousness and manageability. With an increasingly urban population, low levels of preparedness, and a strong dependence on the agricultural sector and oil and gas industry, the region is vulnerable in an emergency.

This CDEM Group Plan is a statutory requirement under the Civil Defence Emergency Management Act 2002. It provides a framework for the efficient management of the hazardscape of the Taranaki region by:

- stating hazards and risks;
- specifying arrangements for the management of hazards and risks; and
- stating the roles and responsibilities for the management of hazards and risks.

Civil Defence Emergency Management in Taranaki is governed by the Taranaki CDEM Group, consisting of elected representatives of the four Councils. The CDEM Group nurtures valuable relationships with key stakeholders, local agencies, and communities to ensure Taranaki is well equipped to be resilient in an emergency event.

The underlying philosophy of emergency management is that while the CDEM Group are responsible for delivering civil defence functions, every individual, party, and agency, should recognise their own responsibility for civil defence and emergency management, to ensure the resilience of our region.

In support of its vision 'A resilient Taranaki,' the CDEM Group has identified four goals:

Goal 1: *To increase community awareness and understanding of, and preparation and readiness for emergencies*; through public education, engagement, and community led CDEM planning.

Goal 2: *To reduce the risks from hazards in Taranaki;* by improving understanding of hazards, and by developing and monitoring a Group wide risk reduction programme which demonstrates how individual agency initiatives contribute to overall regional risk reduction.

Goal 3: *To enhance Taranaki's ability to respond to emergencies;* through continued focus on response plans, professional development and exercises

Goal 4: *To* enhance *Taranaki's ability to recover from emergencies;* through a continued focus on community recovery planning, management and training.

This Group Plan is guided by a five year statutory timeframe, and has a strong focus on delivering an outcome based programme that makes efficient use of available resources. The objectives and key activities outlined in this plan feed into the five year work plan which is implemented at an operational level by the Taranaki Emergency Management Office in partnership with key agencies.

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1. Introduction

This plan is the Civil Defence Emergency Management (CDEM) Group Plan for Taranaki (2012). It is the second plan prepared by the Taranaki CDEM Group to meet the statutory requirements of the CDEM Act 2002.

Taranaki CDEM manages the area from Tongaporutu in the north, to Waitotara in the south (figure 1).

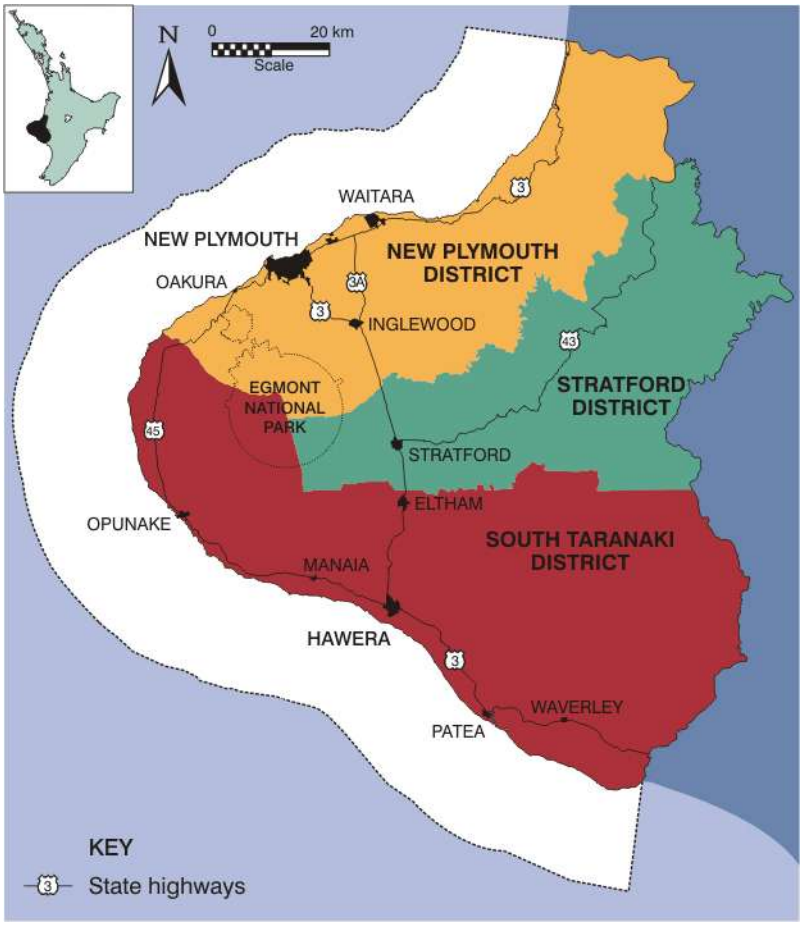


Figure 1 Area covered by the Taranaki CDEM Group Plan

1.1. CDEM in Taranaki

Civil Defence Emergency Management in Taranaki is governed by the Taranaki CDEM Group, consisting of the four Councils represented by the mayors and the Regional Council chair, or their nominated representatives. The Coordinating Executive Group consists of senior representatives of local authorities, and CDEM Group member organisations, and implements the decisions made by the CDEM Group. These decisions feed through to the CDEM advisory groups, who provide specialist advice on operational planning and expertise to assist in the running of the Taranaki Emergency Management Office (TEMO) in an event. The structure of CDEM in Taranaki is outlined in chapter 8.

1.2. Plan purpose

The purpose of this Plan is to provide a framework for the effective and efficient management of hazards and risks within the Taranaki region for which coordinated and integrated approaches across the four areas of emergency management (reduction, readiness, response, recovery) and agencies are required.

The Plan is a strategic document for the Group and seeks to:

- **Define and strengthen relationships** between agencies involved in CDEM.
- **State the anticipated responsibilities and functions** of all parties contributing to community security and resilience.
- **Encourage cooperative planning and action** between the various emergency management agencies and the community.
- **Demonstrate commitment** to deliver more effective CDEM through an agreed work programme.

The Plan also provides information on the hazards and risks in Taranaki and documents the principles of operation within which agencies involved in CDEM agree to cooperate. Operationally, this plan is implemented through a number of procedures, work plans, and associated frameworks.

1.2.1. Using the Plan

The CDEM Group Plan is divided into sections, beginning with a description of the Taranaki hazardscape and hazard analysis. Following are sections on reduction, readiness, response and recovery which detail the proposed objectives for each component and activities for their achievement. These activities feed into the five year work plan, a living document that guides the development of annual work plans, operating procedures and contingency plans. Chapters on monitoring and evaluation of the Plan, and governance arrangements follow.

A glossary, terms of reference for CDEM advisory groups, a map of CDEM plans and standard operating procedures and a summary of the risk analysis are contained in appendices I-IV.

1.2.2. Core principles and framework

This Plan is a statutory requirement of the CDEM Act 2002 (section 48). The Act requires that Group plans must not be inconsistent with the National CDEM Strategy and the National CDEM Plan. The National CDEM Strategy defines five national civil defence emergency management principles which are to guide the activity of the Taranaki CDEM Group. These principles are:

Individual and community responsibility and self-reliance. The CDEM arrangements support and encourage local ownership of individual and community safety and livelihood security; and aim to ensure resilience in the community.

A transparent and systematic approach to managing the risks from hazards. A logical and consistent process needs to be followed when identifying and assessing risks, consulting and communicating with communities and implementing any agreed mitigation measures.

Addressing the consequences of hazards. Focusing on consequences (physical, social, environmental and economic) enables more effective planning and action through improved prioritisation and resource allocation.

Making best use of information, expertise and structures. Reliable information and the availability of expert advice is crucial. The CDEM sector (professional and voluntary) needs to ensure the development of appropriate skills and knowledge, along with the use of best practice in risk management and operational activity.

Comprehensive and integrated hazard risk management. Comprehensive risk management means dealing with the risks associated with all hazards through the '4 Rs' of CDEM (Table 1) and integrated across all responsible agencies.

Table 1 The '4Rs' of CDEM

Reduction: Identifying and analysing risks to human life and property from hazards; taking steps to eliminate these risks if practicable, or reducing the potential magnitude of their impact and the likelihood of their occurring.
Readiness: Developing operational systems and capabilities before a civil defence emergency happens; including self-help and response programmes for the general public, and specific programmes for emergency services, lifeline utilities and other agencies.
Response: Actions taken immediately before, during or after civil defence emergency to save lives and protect property, and to help communities recover.
Recovery: The coordinated efforts and processes to bring about the immediate, medium-term and long-term holistic regeneration of a community following a civil defence emergency.

1.2.3. Consistency with the National CDEM Strategy

The objectives of the Taranaki CDEM Group Plan are consistent with the objectives of the National CDEM Strategy[1] which provides long term direction for CDEM in New Zealand (table 2 below).

Table 2 Consistency with the National CDEM Strategy

Taranaki CDEM Goal	National CDEM objectives	Taranaki CDEM Group objectives
1. To increase community awareness and understanding of, and preparation and readiness for emergencies.	1a Increasing the level of community awareness and understanding of the risks from hazards 1b Improving individual, community and business preparedness 1c Improving community participation in CDEM 1d Encouraging and enabling wider community participation in hazard risk management decisions	1a Increasing community and business awareness and understanding of risks and appropriate readiness measures through public education and consultation 1b Increasing community participation in hazard and risk management decisions 1c Improve implementation of community preparedness measures, through community based planning and engagement 1d Improve community preparedness through leadership and commitment to CDEM at political and executive levels.

[1] Department of Internal Affairs 2007. National Civil Defence Emergency Management Strategy www.civildefence.govt.nz

Taranaki CDEM Goal	National CDEM objectives	Taranaki CDEM Group objectives
2. To reduce the risks from hazards to Taranaki	2a Improving the coordination promotion and accessibility of CDEM research 2b Developing a comprehensive understanding of New Zealand's hazardscape 2c Encouraging all CDEM stakeholders to reduce the risks from hazards to acceptable levels 2d Improving the coordination of government policy relevant to CDEM	2a Increase the understanding by the Taranaki community of the hazardscape and associated risks 2b Undertake long term, strategic reduction of the risks from hazards through collaborative planning with stakeholders and implementation of such plans
3. To enhance Taranaki's ability to respond to emergencies	3a Promoting continuing and coordinated professional development in CDEM 3b Enhancing the ability of CDEM Groups to prepare for and manage civil defence emergencies 3c Enhancing the ability of emergency services to prepare for and manage civil defence emergencies 3d Enhancing the ability of lifeline utilities to prepare for and manage civil defence emergencies 3e Enhancing the ability of government agencies to prepare for and manage civil defence emergencies 3f Improving the ability of government to manage an event of national significance	3a Enhance the professional development and competency for all CDEM personnel 3b Enhance the CDEM's and the community's capability and capacity to respond to and manage civil defence emergencies, with or without a declaration.
4. To enhance Taranaki's ability to recover from emergencies	4a Implementing effective recovery planning and activities in communities and across the social, economic, natural and built environments 4b Enhancing the ability of agencies to manage the recovery process	4a To encourage the strengthening of recovery capability and capacity across the wider community and within CDEM. 4b To promote the implementation of recovery planning across the wider community.

The Group Plan is also consistent with the National CDEM Plan[2] and takes into account other guidelines, codes, regulations and technical standards issued by the Director of Civil Defence and Emergency Management (MCDEM). The National CDEM Plan sets out the CDEM arrangements necessary to manage nationally significant hazards and risks and the coordination of CDEM during a period of national emergency. These arrangements have been taken into account by ensuring Taranaki's operational arrangements link to national planning arrangements. The planning relationships between the Crown, CDEM groups and other agencies are set out in the National CDEM Plan.[3]

[2] Ministry of Civil Defence Emergency Management 2009. Guide to the Civil Defence Emergency Management Plan. www.civildefence.govt.nz

[3] The National CDEM Plan is currently under review, a process that has become more longer term due to the need to indentify and incorporate learnings from the Christchurch earthquake.

1.2.4. Who this Plan is for

Target audiences for the CDEM Group Plan are individuals and agencies with roles and responsibilities in addressing hazards and risks in the Taranaki region under the CDEM Act, being:

- The **Taranaki Civil Defence Emergency Management Group (CDEM Group)** - who set the strategic direction and conduct CDEM business in Taranaki;
- The **Coordinating Executive Group** (**CEG**)- implements the decisions of the CDEM Group, and provides advice on the strategic direction of CDEM in Taranaki;
- **Local authorities –** to coordinate and integrate all aspects of their hazards and emergency management functions and activities under this Act and other legislation;
- **Emergency services-** in support of their readiness, response and recovery planning and delivery;
- **Community support agencies –** who play a vital role in increasing community resilience through promoting awareness of CDEM issues;
- **Non Government Organisations (NGOs) and lifeline utilities** (including local authority services) – to link with their strategic risk reduction and operational planning for emergency readiness, response and recovery of services;
- **Government departments –** to integrate national planning and services delivery in support of local CDEM management; and,
- The **communities of Taranaki**[4] **–** to provide advice and information, to gain an overview of how the above agencies and groups are planning to manage hazards and risks in their region, and to advocate and promote adoption of the 4Rs by all communities in the region.

1.3. Vision and goals

The **Vision** of the Taranaki CDEM Group reflects the importance of an integrated effort; one of partnerships and cooperation with agencies working together to function at the highest possible level during an extra ordinary event:

A Resilient Taranaki

The **goals** of the Group set out the broad criteria against which the CDEM Group Plan will be measured and monitored. The goals of the Taranaki CDEM Group are:

Goal 1: *To increase community awareness and understanding of, and preparedness and readiness for emergencies*

A resilient community is well-informed about hazards and consequences, committed to managing risks, takes steps to be prepared and learns from emergencies. Taranaki CDEM Group will work with Taranaki communities to:

- Improve individual, family, community and business preparedness;
- Improve community participation in civil defence emergency management;

[4] This Plan recognizes that the term 'communities' may refer to specific individuals, agencies, organizations, local authorities, iwi authorities, community boards, community representatives etc, that may have specific role, interest, or responsibility within civil defence.

- Encourage community participation in hazard and risk management decisions.

Goal 2: *To* **reduce** *the risks from hazards to Taranaki*

A Reduction in the impacts of hazards is a fundamental step towards realising a resilient Taranaki community. It is not possible to completely remove risk, but by working with communities many impacts can be reduced to an acceptable level by:

- effective building controls and/or planning (e.g. floor height above likely flood levels; and containment for human and animal diseases);
- redundancy in critical infrastructure;
- incorporating lessons learnt from events and exercises into future planning;
- careful and secure location of critical services and infrastructure;
- ensuring information about hazards and risks is easily available and understandable, and promoting actions that take hazards and risks into account;
- increasing the knowledge within the community about the risks facing Taranaki.

Goal 3: *To* **enhance** *Taranaki's ability to respond to emergencies*

An effective **response** capability is one in which coordination is timely and efficient and the community is supported and the basics of life are restored as quickly as possible. This will be done by:

- integrated planning by all agencies with a role to play in responding to emergencies;
- a high level of cooperation and information sharing between responding agencies
- a clear understanding of respective roles and responsibilities in an emergency
- business continuity planning for Taranaki;
- overall coordination of the response is timely and efficient.

Goal 4: *To enhance Taranaki's ability to recover from emergencies*

After an emergency, affected communities depend on immediate relief and an effective and efficient rebuilding process. **Recovery** focuses on minimising the escalation of the consequences of an emergency, and on rehabilitating the community's social, emotional and physical wellbeing in both the short and longer term. This will require:

- integrated planning by local authorities, emergency services, and other key agencies with a role to play in recovering from emergencies;
- continued mitigation of hazards and their associated risks;
- reassessing community priorities and adapting to changed environmental, economic and social needs;
- recovery capability is continuously developed.

1.4. Group Plan Development Process and Consultation

This Group Plan was developed from a review of the first Group Plan (2004) beginning in 2009. The following process was used to ensure all interested parties participated in the development of the Group Plan:

- During 2010 and 2011 all members of the Taranaki CDEM sector participated in review workshops and were provided opportunities to comment on the draft Group Plan.

- In March , April and May 2012, public consultation was conducted in accordance with the requirements of the CDEM Act 2002.
- Comments from public consultation were considered and incorporated into the Plan before the Plan was approved by the CEG, CDEM Group and MCDEM.

The Plan will remain in effect for a period of no longer than five years. This plan will be operative from 22 September 2012. It will be reviewed by 2017 or earlier in accordance with Section 56 of the CDEM Act 2002.

2. Taranaki's risk profile

The implications for risk management presented by the social, built, economic and natural environments of Taranaki are discussed. The section then gives a broad overview of hazards that require Taranaki CDEM Group management, assesses their risk and assigns a level of priority to each. This hazard analysis guides the directing of resources and effort for the treatment of risk across the four phases of emergency management: Reduction, Readiness, Response, and Recovery.

2.1. Taranaki CDEM Group environment

The first step in creating a risk profile for Taranaki is gaining an understanding of the community and environment within which this Group Plan operates.

2.1.1. Social environment

Increasing urban population

Taranaki's population has remained steady at around 105,000[5] over the past five years. Taranaki accounts for 2.5% of New Zealand's population.

The concentration of population within the New Plymouth district accounts for approximately 65%[6] of the region's total population. The general trend has been for a decrease in the population of smaller rural towns and an increase in concentration of the population in North Taranaki. 75.8% of the population lives in urban areas[7].

The median age is 38, older than the national average of 35.9, and 14.8% of the population is aged 65 or over, compared to the national average of 12.3%[8].

Ethnic diversity

Taranaki's population is less ethnically diverse than the population of New Zealand as a whole. 77% of Taranaki residents indicated that they belonged to the European ethnic group, compared with 67.6% for New Zealand as a whole[9]. The percentage of Māori within the Taranaki population is 15.8%[10]. Those belonging to Pacific (1.4%) and Asian (2.2%) ethnic groups make up a small proportion of the population[11].

Taranaki Iwi

The Taranaki region is made up of the following iwi:

- Ngati Tama
- Ngati Mutunga
- Ngati Maru
- Te Atiawa
- Taranaki
- Nga Ruanui

[5] March 2006 Census
[6] Venture Taranaki Trust 2010. Work Live Patterns in the Taranaki Region. Prepared by BERL.
[7] Venture Taranaki Trust 2010. Work Live Patterns in the Taranaki Region. Prepared by BERL.
[8] March 2006 Census
[9] Ministry of Social Development 2010. The Social Report 2010; Regional Indicators.
[10] Ministry of Social Development 2010. The Social Report 2010; Regional Indicators.
[11] Ministry of Social Development 2010. The Social Report 2010; Regional Indicators.

- Ngati Ruanui
- Ngati Rauru.

Further information on iwi and their member hapu can be found at: http://www.trc.govt.nz/iwi-contacts.

Socio-economic diversity

The New Zealand Deprivation Index scores for the region range from 1 to 10, with higher social deprivation in satellite urban areas[12]. 5.3% of the working population are unemployed, compared to 6.4% nationally[13]. However, the proportion of the Taranaki population living in low income households is 19.7%, which is slightly higher than the national average of 18.1%[14].

Poorly prepared for an emergency

Taranaki residents appreciate it is very important to be prepared for a disaster, although only 60% of the community surveyed admit they have taken some steps to becoming prepared and only 10% of those confess to being fully prepared [15]. Improving readiness in the community is a priority for CDEM in Taranaki.

2.1.2. Built Environment

Taranaki is well serviced by an extensive infrastructure network, however some vulnerabilities exist.

Roading

Taranaki has three road routes providing access to the region. All three are susceptible to an emergency event (slips, bridge failure or floods) cutting-off access to the region.

The State Highway system is a critical part of the network connecting the main population centres with processing and manufacturing facilities, export outlets and markets. All of the region's supermarket food supplies and fuel comes from out of the region by road. General freight is moved to and from the north and south by road via State Highway 3.

Sea links

Port Taranaki is the only deep water west coast port in New Zealand. Port Taranaki is currently handling 6% of New Zealand's freight exports by volume and 6.4% by value[16]. Imports through the Port contribute significantly to the value of the regional economy (eg fertiliser, stock feed). The Port is a key transport network hub for the Taranaki region and a major contributor to the economy. It is not set up to handle passenger traffic.

[12] Venture Taranaki Trust 2010. Work Live Patterns in the Taranaki Region. Prepared by BERL.
[13] Venture Taranaki Trust 2011. Taranaki Trends: October 2011. .
[14] Venture Taranaki Trust 2010. Work Live Patterns in the Taranaki Region. Prepared by BERL.
[15] Taranaki Regional Council 2010. Emergency Preparedness/Awareness Survey and Focus Group.
[16] Statistics New Zealand. 2007. Overseas cargo statistics. http://www.stats.govt.nz/browse_for_stats/industry_sectors/imports_and_exports/overseas-cargo-statistics.aspx

Air Links

The New Plymouth Airport is the only fully commercial air freight and passenger airport in Taranaki.

Other airfields in the region that are large enough to accommodate twin engine cargo planes include those at Hawera and Stratford. A number of private airstrips throughout Taranaki also provide access for top dressing aircrafts.

Rail Network

Rail access into Taranaki is from the south via the Marton to New Plymouth Line [MNPL] which brings freight through to Port Taranaki.

Water supplies

The majority of municipal water in the Taranaki region is sourced from surface water flowing off Mount Taranaki, with groundwater sources used for Oakura, Patea, Wainui Beach and Waverley municipal water supplies. In addition to surface water, rainwater provides a consistent supply of relatively good quality water particularly for household use in rural areas not connected to an urban supply. Agricultural uses account for 33% of all allocated surface water and approximately 49% of all allocated groundwater in Taranaki[17]. It is anticipated that the water demand for agricultural purposes will grow as a result of increasing dairy intensification and pasture irrigation in Taranaki.

New Plymouth district

The New Plymouth District Council provides water supply, wastewater and stormwater services to New Plymouth city and some or all of these services to eight other smaller communities within the New Plymouth district.

The New Plymouth (Junction Road) Water Treatment Plant services the greatest area and population in north Taranaki, with a maximum daily design capacity of 70,000,000 litres[18]. Approximately 62,200 people (90% of households) receive a water supply service from the New Plymouth District Council.

Stratford district

Within the Stratford district there are three water supplies, one wastewater system and two stormwater reticulation systems that are managed by Stratford District Council.

The Stratford water supply services a population of 5,000 people. The two other supplies are located at Toko and Midhirst.

South Taranaki district

There are 12 separate water supply schemes within the South Taranaki district producing over 43,000 cubic metres per day[19]. The largest municipal urban water supply in south Taranaki is Hawera. Other significant urban schemes supply water to the townships of Opunake, Eltham and Patea. The largest rural scheme is the

[17] Taranaki Regional Council 2009. Taranaki: where we stand: State of the Environment Report.
[18] New Plymouth District Council. 2011. Water supply. http://www.newplymouthnz.com/CouncilAtoZ/Water/WaterSupply/
[19] South Taranaki District Council 2010. Water. http://www.southtaranaki.com/Council/A-Z/W/Water/

Waimate West supply which services 827 connections, including the townships of Kaponga and Manaia, as well as significant industry. The Kapuni scheme (which serves Hāwera, Ohawe, Okaiawa and Normanby) has a groundwater bore as backup for its surface water source.

Groundwater sources are used for the Patea, Waverley, Waverley Beach and Wai-inu Beach supplies, with pumps to raise the pressure within the reticulations.

Waste water disposal (sewerage)

New Plymouth district

The New Plymouth District Council operates reticulated sewerage networks in the towns of Inglewood, Waitara, Bell Block, Oakura and New Plymouth. Sewage from all but Waitara is piped to the New Plymouth Waste Water Treatment Plant where it is treated and the effluent discharged to sea via a marine (piped) outfall. Waitara sewage is treated and pumped to a sea outfall adjacent to the Waitara River mouth, but by 2013, will also be piped to the New Plymouth Plant for treatment and disposal. All other areas in New Plymouth District use on-site sewage treatment, mainly septic tanks with effluent disposal beds[20].

Stratford district

The Stratford District Council has one municipal wastewater system which serves the Stratford urban area. This system has 2,200 connections and a treatment system consisting of oxidation ponds that discharge to the Patea River east of the Stratford township. All other areas within the district are served by privately owned septic tanks[21].

South Taranaki district

The South Taranaki District Council operates eight sewage treatment plants throughout the district.

Solid and hazardous waste facilities

The New Plymouth and South Taranaki District Council each have a dedicated store for the storage of hazardous waste at a transfer station in their districts. Stratford District Council has a facility at its transfer station for the temporary storage of hazardous wastes, which are then transferred to the New Plymouth District Council. Major industries using hazardous substances also have appropriate storage facilities with contingency plans in place to deal with onsite incidents.

Taranaki has one regional landfill located in New Plymouth (Colson Road) and has an estimated 5-7 years capacity left at current filling rates. A new regional site south of Eltham has all the necessary resource consents in place. No final decision on this sites use will be made during the term of this plan.

Electricity generation and transmission

Taranaki is heavily reliant on electricity supplies sourced from the major electricity generators, distributed first by Transpower NZ Ltd via the National Grid, then by

[20] New Plymouth District Council. 2011. Wastewater Treatment http://www.newplymouthnz.com/CouncilAtoZ/Wastewater/WastewaterTreatment.htm

[21] Stratford District Council 2010. Fire and water services. http://www.stratford.govt.nz/content.php/article/fire-and-water-services/m/113#wastewater

local distribution network companies. The Stratford (Taranaki) Combined Cycle Power Station and Peaker Plant are the major generation facilities in Taranaki. Four smaller local hydroelectric powered schemes exist: Mangorei, Patea, Motukawa and Waiaua hydroelectric power schemes.

Gas

Gas production stations in Oaonui and Kapuni in South Taranaki supply gas to the whole of the North Island through the high pressure Maui pipeline. A fault in this pipeline would disrupt gas supply to the whole North Island, affecting national power generation and industrial energy supply. The network is monitored from the Vector gas control centre in Bell Block.

Telecommunications

Seventy two percent of Taranaki residents have access to a cell phone, 91% to a land line, and 55% have access to the internet[22]. These figures are marginally lower than the rest of New Zealand.

Radio Telephone (RT) networks are provided within Taranaki, with the bulk of commercially available RT services located on Mount Taranaki. RT networks for Emergency services are also based on Mount Taranaki.

Residential dwellings and land development

In 2006 the Taranaki region had 43,908 residential dwellings of which 8% are unoccupied[23]. Seventy nine percent of the dwellings are located within urban Taranaki. The predominate type of housing in Taranaki is detached. The construction materials are generally wood.

Land development and subdivisions are taking place around the fringes of urban areas. In 2010, 2181 building consents were issued in the Taranaki region[24].

2.1.3. Economic environment

Taranaki's gross domestic product of $5.5 billion accounts for around 2.95 of the national GDP[25]. The region is continuing to manage stronger growth than the national picture, due to its strong focus on agriculture and oil and gas.

As of February 2011, there were 14,465 businesses in Taranaki[26]. The majority of employees are employed in the agricultural, manufacturing, retail, and education industries.

Agriculture and forestry

Overall, agriculture and associated food processing industries contribute almost 20% to regional GDP - generating around $980 million regionally in GDP in 2009. Farming and other land-based activities continue to play a prominent role in

[22] Venture Taranaki Trust 2010. Work Live Patterns in the Taranaki Region. Prepared by BERL.
[23] March 2006 Census
[24] Statistics New Zealand.
[25] Venture Taranaki 2010. Taranaki Trends April 2010
[26] Venture Taranaki 2012. Taranaki Trends, April 2012.

employment, with over 16.2% of Taranaki's full-time equivalent labour force employed in agriculture (compared with 7.5% nationally)[27].

Dairy farms in Taranaki produce approximately 12% of New Zealand's milk solids. Milk processing at Fonterra's Whareroa site near Hawera processes over 5 million litres of milk per day, creating 300,000 tonnes of dairy produces annually[28].

Sheep and beef farming is concentrated in the eastern hill country with approximately 880 sheep and beef farms in Taranaki; approximately 679,000 sheep and 131,000 beef cattle. Large meat processing works are located at Eltham (Riverlands Eltham Ltd), Hawera, and Waitotara (Silver Fern Farms Ltd). Taranaki is the major poultry meat producing region in New Zealand, involving all aspects of the industry from breeding and growing to production and distribution. Operations are concentrated in North Taranaki, with the major processing facility at Bell Block.

Exotic forest plantations continue to expand, increasing from 9,700 hectares in 1990 to an estimated 26,044 hectares in 2007[29].

Industry and manufacturing

As of February 2008, there were 572 manufacturing businesses in Taranaki employing 8,720 people (approximately 16% of the region's employment opportunities)[30].

Oil and gas

The oil and gas industry is a significant contributor to the regional economy generating around $1.2 billion of regional GDP[31]. The Taranaki Basin is currently New Zealand's only commercial hydrocarbon producing area, with the onshore Kapuni and the offshore Maui fields making up the major part of New Zealand's natural gas resources.

Events and tourism

Taranaki is recognized as a region for cultural and sporting events with several world class venues and regular programmes. Tourism contributes approximately $235 million to the regional economy each year[32].

These events bring large numbers of visitors to the region and place additional demand on the region's services, especially during an emergency.

2.1.4. Natural environment

Geology

The Taranaki region consists of four distinct landforms. They are:

[27] Leung-Wai, J. Nana, G., Norman, D. 2007. Taranaki Industry Projections. Report to Venture Taranaki
[28] Venture Taranaki 2010. Business in Taranaki www.taranaki.info/business
[29] Leung-Wai, J. Nana, G., Norman, D. 2007. Taranaki Industry Projections. Report to Venture Taranaki
[30] Venture Taranaki 2010. Business in Taranaki www.taranaki.info/business
[31] Venture Taranaki 2010. The Wealth Beneath Our Feet: The value of the Oil and Gas Industry to New Zealand and the Taranaki Region.
[32] Venture Taranaki 2010. Taranaki Regional Visitor Strategy 2010-2015.

- Volcanic cone and ringplain
- Marine terraces
- Coastal environment
- Eastern hill country.

The volcanic cone of **Mount Taranaki/Egmont** (2,518m) is the most recent of a number of andesitic volcanoes in western Taranaki and dominates the landscape.

Over the last 50,000 years the cone has erupted and collapsed intermittently causing debris avalanches and lahars. Erosion of the volcanic cone between successive eruptions has redistributed the volcanic debris around the base of the volcano creating the ring plain. The ring plain is dissected by rivers draining the mountain.

Marine terraces raised by tectonic activity extend along the North and South Taranaki coasts. The coastline cliffs range from three to 60 metres in height having been formed by high energy wave action.

Sand accumulation is concentrated near river mouths, particularly along the southern coastline, where dunefields extend inland for several kilometres. Less than 2% of the Taranaki region is classified as coastal sand country.

The Taranaki **coastline** is exposed to the west, and as a consequence, high energy wave and wind conditions dominate the coastal environment. Almost the entire Taranaki coastline is subject to varying rates of erosion from waves and wind. This has resulted in a predominantly cliffed coastline, with the western coast characterised by boulder cliffs and offshore reefs derived from erosion of lahar and other volcanic material. In North and South Taranaki, erosion of marine sediments has resulted in a coastline of almost continuous papa cliffs and black sand beaches.

The **Taranaki hill country** lies to the east of the ring plain. The inland terraces and frontal hill country are of strongly rolling topography and largely retain the volcanic ash soils, while the inland hill country is steeper and more deeply dissected. The underlying geology of the Taranaki hill country is not volcanic, but consists of older soft sedimentary rocks – mudstones, siltstones and sandstones known locally as 'papa'.

The soils of the inland hill country are mostly shallow soils that have developed on steep, relatively unstable slopes. The composition and depth of soils are extremely variable, and often erosion has prevented the development of a mature soil. The hill country is prone to erosion.

The rivers of the hill country have short tributaries contained by narrow valleys. In general, these rivers carry high sediment loads.

Climate

Taranaki's climate is determined by its westerly position, its mid-latitude location, and its topography. Taranaki lies in the path of weather systems moving east from the Tasman Sea. The region's climate is generally sunny and windy, with moderate temperatures and regular rainfall throughout the year.

Rainfall varies markedly throughout the region, ranging from less than 1,400 mm in the coastal areas (which is still much wetter that much of lowland New Zealand) to in excess of 8,000 mm at the summit of Mount Taranaki (figure 2).

Taranaki is windy, but wind strength varies greatly because of the range of topographical features in the region which influence the extent to which different areas are exposed. Westerly winds generally predominate in spring and summer, bringing unsettled and showery weather. South-easterlies are often predominant in coastal and exposed areas and bring generally fine weather in Taranaki due to the sheltering effect of the ranges to the east.

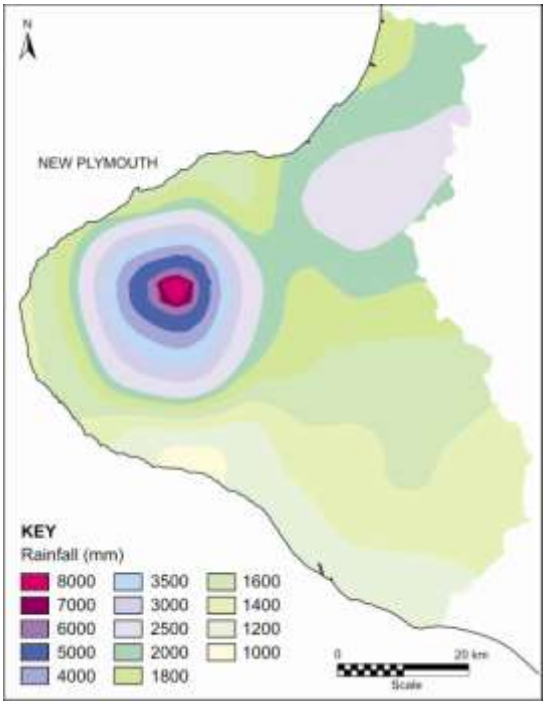


Figure 2 Annual rainfall for the Taranaki region

2.1.5. Implications for the Taranaki region

The implications of Taranaki's regional profile for civil defence emergency management are identified below. These issues have been considered in developing the CDEM work plan and priorities.

1. The aged population, children, and low income households are vulnerable during an emergency
2. Low levels of preparedness increase vulnerability and risk to communities.
3. The vulnerability and critical dependence upon some of the region's infrastructure (power, roads) may impact on the ability of the region to recover quickly from an emergency.
4. The North Island is reliant on the Taranaki region to supply all of its gas through one main high pressure pipeline. A disaster affecting gas production or the main pipeline could have major effects on the national economy.
5. Greater reliance on services and infrastructure within urban areas for the general public.
6. Isolation and access to food for smaller towns within the region.
7. A disaster could have a major effect on the regional economy (particularly oil and gas and agriculture), therefore planning for prompt recovery will be a priority.
8. Ash fall in an eruption of Mt Taranaki is highly likely to contaminate water supplies and affect water extraction as well as disrupting the agricultural sector.

2.2. The Taranaki hazardscape

The next step in understanding Taranaki's risk profile is the identification of hazards that have the potential to affect the region.

A hazard is something that may cause or aggravate an emergency, creating risks to people, property or the environment. The Taranaki region is at risk from a wide range of hazards, each differing vastly in likelihood, seriousness and consequence. This highlights the importance of thorough risk evaluation for CDEM Group planning.

2.2.1. Risk assessment and evaluation

Risk is the chance of an emergency happening that will have an impact on either the community or the environment. In general terms, risk is measured by reviewing the consequences and likelihood of an event.

In preparation for the review of the Group Plan, a list of all possible hazards in Taranaki was compiled. The assessment and evaluation of risk from the hazards was carried out through a combination of facilitated workshops with Emergency Management/Taranaki Regional Council staff; external technical experts from GNS, NIWA and Metservice; and analysis of available scientific and historical event data.

Risk assessment

Taranaki's risks were assessed based on the likelihood of a hazard occurring and its likely consequences using the qualitative risk matrix (table 3) set by the AS/NZS/ISO 3100:2009 risk management standard. A summary of risk ratings is incorporated into table 4 below.

Table 3 Qualitative risk matrix

Likelihood	Consequences				
	1 Insignificant	2 Minor	3 Moderate	4 Major	5 Catastrophic
A Almost certain	Moderate	High	Very high	Extreme	Extreme
B Likely	Low	Moderate	High	Very high	Extreme
C Possible	Low	Moderate	Moderate	High	Very high
D Unlikely	Very low	Low	Moderate	High	Very high
E Rare	Very low	Very low	Low	Moderate	High

Risk evaluation

The risk evaluation assesses the seriousness, manageability and growth of each hazard against the possibility of managing the risk effectively across the 4Rs, and across the social, built, economic and natural environments using the SMG model.

Seriousness: a consequence rating is assigned and weighting added to the social (50%) built (25%), economic (15%) and natural (10%) environments. Seriousness is weighted twice as high as manageability and growth.
Manageability: rating based on a combination of management difficulty and current level of effort being applied
Growth: based on the combination of the probability of occurrence of the event arising and the changes in community exposure to the event.

The ranked list produced as a result of this analysis is summarised below (Table 4). Significant hazards for the Taranaki region are identified as those with a total score of 10 or more, and are shaded in orange. This does not mean the Group considers hazards with a risk score of less than 10 as trivial or not requiring some degree of attention. A description of the complete results and full analysis process can be found in appendix IV.

This information allows the Taranaki CDEM Group to direct resources to the areas of highest priority. Please note that, as described previously, prioritisation is based on analysis of both consequence and likelihood. Therefore, a major hazard that is very unlikely may be a lower priority than a frequently occurring minor hazard.

Table 4 Summary of risk analysis and hazard prioritisation identifying significant hazards

	Risk rating	Seriousness					Manageability					Growth	Total
Hazard		Social	Built	Economic	Natural	***Sub-total***	Reduction	Readiness	Response	Recovery	***Sub-total***		
Seismic event- local fault	High	5	5	5	5	**10**	4	4	2	2	**3**	2	**15**
Hazardous substance spill - Oil Spill	High	4	2	4	5	**7.2**	3	3	3	3	**3**	4	**14.2**
Biosecurity incursion	Very High	4	1	5	4	**6.8**	3	4	4	5	**4**	3	**13.8**
Infections human disease/pandemic	High/very high	5	1	5	1	**7.2**	3	3	5	3	**3.5**	3	**13.7**
Slope instability – Mt Taranaki	High	2	2	3	2	**4.3**	5	5	4	4	**4.5**	4	**12.8**
Information and Communication Technology failure (long term)	High	3	1	5	1	**5.2**	3	3	3	3	**3**	4	**12.2**
Volcanic eruption (Taranaki) tephra (ash fall)	Moderate/High	2	4	4	5	**6.2**	4	4	4	4	**4**	2	**12.2**
Flooding: Lwr Waitara River	High	4	3	3	2	**6.8**	2	2	2	2	**2**	3	**11.8**
Major urban water supply failure (long term)	Moderate	4	1	5	1	**6.2**	3	3	3	2	**2.75**	3	**11.95**
Tornado	Very high	3	3	3	1	**5.6**	4	4	4	4	**4**	2	**11.6**
Hazardous substance spill – industrial - widespread	Moderate	3	1	3	3	**5**	3	3	3	2	**2.75**	3	**10.75**
Water supply contamination	High	5	1	5	3	**7.6**	1	1	1	1	**1**	2	**10.6**
Damaging winds	Very high/ Extreme	3	3	3	1	**5.6**	2	2	2	2	**2**	3	**10.6**
Significant structural failure (including dam failure)	Moderate	4	4	3	2	**7.3**	1	2	3	3	**2.25**	1	**10.55**
Volcanic eruption (Taranaki) volcanic lahars & assoc floods	Very High	2	3	4	3	**5.3**	3	3	3	3	**3**	2	**10.3**
Road network failure (long term)	High	2	1	4	1	**3.9**	3	3	3	3	**3**	3	**9.9**
Drought	Moderate	3	1	3	2	**4.8**	3	3	3	3	**3**	2	**9.8**
Major transport accident – Air	Moderate/High	4	1	1	1	**5**	2	2	4	3	**2.75**	2	**9.75**
Information and communication technology failure (short term)	Moderate	3	1	3	1	**4.6**	2	2	2	2	**2**	3	**9.6**
Flooding New Plymouth (Lower Waiwhakaiho)	Moderate	2	3	3	1	**4.6**	2	2	2	2	**2**	3	**9.6**
Hazardous substance spillage/leakage – local ground water	Moderate	2	1	2	3	**3.7**	3	3	3	2	**2.75**	3	**9.45**
Flooding – Stony River	High	2	3	2	1	**4.3**	3	3	3	3	**3**	2	**9.3**
Road network failure – (short term)	High	2	1	2	1	**3.3**	3	3	3	3	**3**	3	**9.3**
Water – small community supply failure (long term)	Moderate	3	1	4	1	**4.9**	2	2	2	2	**2**	2	**8.9**
Flooding – Lower Waitotara River	Moderate	2	3	2	1	**4.3**	2	2	2	2	**2**	2	**8.3**
Riverbed aggradation	High	1	2	2	1	**2.8**	4	3	4	3	**3.5**	2	**8.3**
Tsunami	Moderate	2	2	2	1	**3.8**	3	3	2	1	**2.25**	2	**8.05**
Volcanic eruption (Taranaki) Pyroclastic flows	Moderate	1	3	3	3	**4**	3	3	3	3	**3**	1	**8**
Sewerage system failure (long term)	Low	2	1	2	2	**3.5**	3	3	3	1	**2.5**	2	**8**

2.3. Significant hazards for Taranaki

Outlined below is a summary of each significant hazard identified by the risk evaluation process.

- **Seismic event (local fault)**
  A number of faultlines dissect the Taranaki region, and damaging earthquakes have occurred in the past. A major quake can inflict serious consequences on social, built, and economic environments through ground shaking and liquefaction.

- **Volcanic eruption – tephra (ash fall); lahars/associated flooding; slope instability**
  Mt Taranaki is an active volcano in a state of quiescence. Eruptions of Mt Taranaki occur on average every 340 years, the last significant event being in 1755. There are also indicators of more recent events. Ashfall (tephra) is a widely distributed eruption product with potential impacts on public health, primary production and infrastructure. Lahars would flow radially along river valleys around the mountain, destroying structures and causing flooding. Slope instability or sector collapse could occur as a result of an earthquake or eruption, with similar but more extensive consequences than a lahar.

- **Flooding – lower Waitara river**
  Flooding of the lower Waitara river has long been considered as a potential threat to the community. River training works and stop banks have been constructed to reduce risk to the Waitara township. Primary concerns relate to the failure of flood protection works or the exceeding of design limits during an event.

- **Damaging winds or tornado**
  Because of their high probability and potentially widespread consequences, high winds are significant hazard to Taranaki. A number of major cyclones have passed over the region, and are predicted to increase in frequency and intensity as a result of climate change. On average, one tornado occurs in the Taranaki region each year. The majority are small, but on a larger or more numerous scale, they have the potential to cause injury and fatalities.

- **Hazardous substance spill, industrial widespread or major oil spill**
  Manufacture and use of hazardous substances are every day occurrences in Taranaki. A large spill has the potential to be catastrophic, with far reaching effects on public health, natural and economic environments.

- **Lifeline utility failure: Major urban water supply failure or contamination**
  Water supply disruption through failure or contamination while unlikely could result in economic losses for reliant industries and public health risk. Water supply contamination or disruption may occur as a result of another event such as ashfall from a volcanic eruption.

- **Lifeline utility failure: Information and Communication Technology failure (ICT)**
  With increasing dependence on information and communication technology, a long term failure could become a significant event. While recent audits have not identified any issues for security of supply in the future, there is the potential for a natural disaster or unexpected event to cause loss of power supply, overloading or network

damage. Consequences include effects on financial services, reliant industries and public safety through associated infrastructure failure.

- **Significant structure failure**
  The failure of a significant structure typically comes about as a consequence of another event, such as an earthquake or flood. The Patea Dam was identified by the hazard analysis as a significant structure with potential to cause significant immediate impact in the event of a structural failure or overtopping event.

- **Infectious human disease/pandemic**
  Risks to public health, whether as a primary source or secondary source of risk, are a significant threat to Taranaki. A pandemic can overwhelm the resources of a society due to the exceptional number of people affected. The impacts of a pandemic manifests as a loss of human capacity, affecting infrastructure, essential services, and food supply.

- **Biosecurity incursion**
  The Taranaki CDEM Group has identified that incursions by harmful organisms is a significant threat to Taranaki. Animal diseases such as foot and mouth or Bovine Tuberculosis can reduce livestock productivity, and/or causing collapse of export trade. Some diseases are highly contagious and have the potential to affect humans. The Ministry of Primary Industries and Biosecurity NZ are the lead agencies for response to such incursions.

3. Risk reduction

This section describes how Taranaki will reduce the risks posed by natural and technological hazards. Current and proposed future reduction activities are outlined.

Risk reduction is the process of *"identifying and analysing long-term risks to human life and property from hazards; taking steps to eliminate these risks if practicable, and, if not, reducing the magnitude of their impact and the likelihood of their occurring"*[33].

The CDEM Group is to manage hazard risks (as far as practicable) within acceptable levels. This involves balancing the opportunity for and costs of such management proportionately to the likely benefits from doing so. Risk reduction (avoidance and mitigation measures) is a key means, especially to manage the potential for further growth. However the costs of doing so (financial costs, social and economic opportunities forgone, accounting for existing use rights and history of development) may constrain what can be done, therefore risk prioritisation is important.

The CDEM Group prioritises reduction activities taking into account the impact on human life and safety, the economy and the built and natural environment as well as the manageability of the risk and the likelihood of it occurring (detailed in the risk analysis in Chapter 2). The Group uses this knowledge to develop practical, achievable objectives and methodologies to reduce risk in the region. The Group aims to take a holistic approach to coordinating reduction activities among key stakeholders as a community, to create resilience in the community.

Reduction principles

- Member organisations will operate risk-based management of hazards;
- all agencies will work together to reduce risk;
- risk reduction is an essential element of comprehensive emergency management.

3.1. Issues

The CDEM Group has identified a number of issues relating to risk reduction:

- Taranaki has a complex hazardscape with a wide range of hazards. Some good hazard analysis material exists, but there are gaps in other areas. These areas required further scientific input and analysis.
- There is a general lack of awareness by some stakeholders of the hazards faced by the region.
- Hazard management, risk assessment and implementation of mitigation measures are fragmented and lack consistency across a broad range of organisations.
- There is a need to develop a common understanding and interpretation of the purpose and status of reduction activities and practices.

[33] Department of Internal Affairs 2007. National Civil Defence Emergency Management Strategy www.civildefence.govt.nz

- Risk reduction is often perceived as being a high cost compared with the other 4Rs in that the economic benefits of preventing losses over time are hard to demonstrate compared to the costs of implementing reduction measures. The upfront costs of reduction infrastructure are often difficult for a small population base to fund, especially where benefits are to accrue over a longer term, or fall outside the region.

3.2. Current risk reduction activities and opportunities

The Taranaki CDEM Group is conducting the following risk reduction activities:

- Supporting ongoing research about Taranaki hazards and risk;
- risk mitigation through flood control programmes, building controls etc;
- educating the community about hazards and risks.

Ongoing improvement to knowledge of Taranaki's unique hazardscape is a core objective for the Taranaki CDEM Group. A comprehensive hazard analysis was undertaken for the first Plan in 2004, and reviewed again in 2010/11 (see chapter 2). This analysis has been used to identify priorities for improvements in relation to specific hazards in Taranaki, and projects have been incorporated into specific actions in the five year work plan to ensure the effective management of significant hazards.

Most risk reduction efforts in Taranaki currently focus on flood mitigation through river control programmes. Risk reduction is also built into national building codes (earthquake/wind/flooding protection) and land use planning. In hindsight of recent natural disasters, the importance of risk reduction through these avenues has been highlighted. In addition, individual agencies such as lifeline utilities design and upgrade their networks to have resilience to hazards (for example, minimum storage volumes in pump stations to allow time to respond to pump failure and battery/standby generator backups at telecommunication sites).

The formation of the Hazards Advisory Group (HAZAG) in 2012 gives the opportunity for the Group to promote a better understanding of the hazards that are present in Taranaki, and of the options for avoiding or reducing the societal risks arising from those hazards. The HAZAG works with the Taranaki Seismic and Volcanic Advisory Group (TSVAG) and the Hazardous Substances Technical Liaison Committee (HSTLC) to ensure a collaborative approach and promote efficiency and effectiveness in risk reduction across all hazards.

The CDEM Group plays an important role in facilitating the spread of risk reduction information, and ensuring hazard knowledge is partnered with appropriate policies. However, risk reduction is also the responsibility of individuals, communities and organisations, including government at the local and national levels, and many others such as those organisations that manage infrastructure. All key stakeholders need to have ownership of the risk reduction objectives to implement them across their field of activities and in plans and policies.

3.3. Legislation, policies and plans that influence risk reduction

Risk reduction is a continuous process, undertaken under numerous statutory and non-statutory instruments. These include:

- The Resource Management Act 1991 and its heirachy of documents including the Regional Policy Statement and District/Regional Plans;
- The Local Government Act 2002 and its instruments including Long Term Plans;
- The Building Act 2004 and the associated territorial authority Building Policies;
- The CDEM Act 2002 and its hierarchy of instruments, with this Group Plan being an important component
- Other non statutory instruments including structure plans, asset management plans, etc.

3.4. Objectives and activities for reduction

The goal for reduction is *'To reduce the risks from hazards to Taranaki'*. The objectives and key activities for reduction described below will guide the five year work programme implemented by the Taranaki Emergency Management Office.

	Current status	**Key activities**
Objective 2a Increase the understanding by the Taranaki community of the hazardscape and associated risks.	As part of the review of the Group Plan, the risk profile for Taranaki has been updated. This knowledge is disseminated to the community through the Public Education programme, and is accessible through the CDEM website. A number of research projects are currently underway, including a liquefaction study and tsunami inundation modelling.	1. Continue to support hazard research and complete hazard research projects 2. Ensure the community is aware of hazards and has access to up to date information 3. Implement Public Education Plan (2011-2016) as set out in annual work plans 4. Ensure actions for significant hazards are completed within the set timeframe.
Objective 2b Undertake long term, strategic reduction of the risks from hazards through collaborative planning with stakeholders and the implementation of such plans.	Risk reduction activities are currently undertaken through a range of statutory and non-statutory groups. There are ongoing programmes to reduce risk, but better coordination is required.	1. Foster the formation of the Hazards Advisory Group (HAZAG) to ensure better coordinated risk management in the region. 2. Facilitate information exchange on risk reduction with key stakeholders 3. Incorporate knowledge of risks into land use planning

4. Readiness

This section provides an overview of preparedness and resilience of communities and CDEM in Taranaki.

Readiness is defined as *'developing operational systems and capabilities before a civil defence emergency happens, including self-help and response programmes for the general public, and specific programmes for emergency services, lifeline utilities and other agencies*[34]*'*.

The CDEM Group is to coordinate the activities of its members, the community, and other key partners to ensure that Taranaki is as prepared as possible for future emergencies through education, regular consultation and engagement. This involves ensuring CDEM agencies maintain and enhance their readiness, and encouraging Taranaki communities to become more prepared.

Readiness principles

- Maintain and improve community awareness of hazards, particularly those that are not as high profile, and ensure this awareness turns into actual planning and preparation activities.
- Ensure that the community is capable of responding appropriately to warnings.
- Ensure that the methods of raising awareness and capability are targeted to the Taranaki community, and business community.

4.1. Issues

The current issues in relation to readiness in Taranaki are:

- There is anecdotal evidence that only a small proportion of Taranaki organisations have effective business continuity plans in place.
- There are low levels of preparedness in the community.
- There is little understanding of the roles and responsibilities of CDEM in the community.
- The knowledge and acceptance of legislative responsibilities needs to be kept at a high level in the face of competing demands for attention, particularly at the executive and elected levels.
- Some progress has been made in developing response and recovery capability and capacity, however opportunities exist to enhance the ability of councils and partner response organisations.
- There is a need to continue to further enhance and foster relationships with key stakeholders (including iwi/marae groups; community groups).
- Emergency management systems and technology are to be aligned with Emergency Management Information Systems (EMIS) and emerging technologies as they become available.

[34] Department of Internal Affairs 2007. National Civil Defence Emergency Management Strategy www.civildefence.govt.nz

4.2. Readiness responsibilities in the Taranaki CDEM Group

All members of the Taranaki CDEM Group have distinct responsibilities for improving readiness and preparedness in Taranaki.

4.2.1. Taranaki Emergency Management Office (TEMO) & TRC

TEMO coordinates interagency responses to emergencies, and is maintained in a high state of readiness. In partnership with Taranaki Regional Council (TRC) public information and policy officers, TEMO is also responsible for:

- maintaining relationships and robust communication networks with Taranaki CDEM Group partners and other agencies;
- coordinating and delivering public education;
- developing CDEM strategy and policy;
- CDEM professional development;
- coordinating the development of inter-agency response plans to specific hazards;
- supporting communities to prepare for emergencies through liaison with community boards and groups;
- coordinating development of community volunteer capability;
- educating local communities about hazards and how to prepare and respond to them.

4.2.2. CDEM advisory groups

Advisory Groups are a source of interested, trained, experienced personnel who provide specialist advice on operational planning across the 4Rs and expertise to assist in the running of the EOC. Advisory Groups ensure effective liaison between CDEM and key stakeholders in the community, and are a key pathway to sector networks. See appendix II for the full terms of reference of each advisory group. The groups are as follows:

Hazardous Substances Technical Liaison Committee (HSTLC)

The main purpose of the Committee is to provide the skills and expertise to support, in an advisory capacity, integrated agency planning activity that addresses the readiness for, and response to hazardous substance incidents.

Rural Advisory Group (RAG)

The RAG provides advice to the CDEM Group on rural issues, enables a forum for planning across the sector in terms of continuity plans, participates in the development of the Group Plan and represents the rural sector with regard to CDEM matters in Taranaki.

Welfare Advisory Group (WAG)

WAG has the responsibility of providing advice to CDEM Groups on welfare issues, providing a forum for planning across the sector in terms of continuity plans and participation in the development of the Group Plan.

Lifelines Advisory Group (LAG)
LAG has the responsibility of providing technical advice to the CDEM Group on lifeline issues, providing a lifelines forum to address integrated CDEM planning and preparedness, and participation in the development of the Group Plan.

Taranaki Seismic and Volcanic Advisory Group (TSVAG)
TSVAG has the purpose of providing expert comment to the CDEM Group on the Taranaki Volcano-Seismic Network annual report, enabling a forum for discussion on issues relevant to volcanic hazards, as well as assisting in the development of volcanic hazard planning documents and the Group Plan.

Taranaki Hazards Advisory Group (HAZAG)
The purpose of the HAZAG is to promote a better understanding of the hazards (natural and man-made) that are present in Taranaki, and of the options for avoiding or reducing the societal risks arising from those hazards. The HAZAG will co-operate with the Taranaki Seismic and Volcanic Advisory Group, and the Hazardous Substances Technical Liaison Committee to promote efficiency and effectiveness in hazard and risk management.

Health Emergency Management Group (HEMG)
The HEMG is a Taranaki District Health Board committee that, amongst other responsibilities, provides advice to the CDEM Group via the CEG on issues relevant to health, including the discussion of contingent capability for emergencies across the health sector in Taranaki, Emergency Operation Centre activation from a health perspective and CDEM perspectives and assisting with the development of the Group Plan. The HEMG utilises the Taranaki Health Emergency Forum (formerly the Health Advisory Group) to aid discussion on health matters relating to emergency management.

4.3. Public education

National and regional research into community awareness and preparedness suggests that, despite an apparent high level of awareness of hazards and disasters, and a general understanding that each individual must take some responsibility for preparing for adverse events, individuals and communities are still not as prepared as they need to be to deal with and recover from disasters when they happen.

The 2010 Emergency Preparedness/Awareness survey revealed that 62% of the community believe they are prepared for an emergency[35]. Readiness of the community will improve when communities are engaged and involved in planning for an emergency, and this is identified as a priority by the CDEM Group.

Public education has been identified as the foundation for improving levels of community resilience. The Public Education Plan outlines the Taranaki CDEM

[35] Taranaki Regional Council. 2010. Emergency Preparedness/Awareness Survey and Focus Group.

Group's approach to public education. This plan is consistent with MCDEMs National Public Education Programme, which is embodied in the *Get Ready – Get Thru* promotion.

4.4. Professional development

Professional development ensures that everybody involved in CDEM understands their roles and perform them effectively in an emergency.

CDEM professional development remains the responsibility of the relevant agencies and authorities. Training will be provided for key pre-identified operational positions, namely:

- Controller and alternates;
- Recovery Manager;
- Welfare Manager;
- Lifelines Utilities Coordinator;
- Public Information Manager;
- EOC staff.

Professional development will be consistent with the MCDEM Competency Framework or, will meet relevant NZQA standards.

4.5. Exercises

Exercises play an important role in the evaluation of agency capability to execute one or more components of a response or recovery scenario and are undertaken on a regular basis. Exercises simulate a situation in order to test procedures and enable participants to practice defined roles. An exercise programme is to be developed to ensure there is regular involvement from stakeholders and a clear budget is outlined. Debriefing and incorporating lessons learnt from these exercises is also important, which is done by identifying projects to address shortfalls through the five year work plan.

4.6. Supporting plans and standard operating procedures

Flowing down from the Group Plan are a number of functional plans, contingency plans and standard operating procedures (SOPs) that are required to give effect to the operational arrangements of CDEM in Taranaki. Key documents include:

- Operational plans eg 5 year work plan, annual business plan.
- Contingency plants for specific hazards, eg Flood response plans
- Standard operating procedures eg, TEMO Operational guidelines
- Functional plans eg. Recovery Plan, Welfare Plan

These plans are reviewed annually to ensure relevance, and are stored in the Taranaki Regional Council document management system. Operational plans are maintained in the Emergency Management Office. The relationship of plans and SOPs within the Taranaki CDEM framework is detailed in appendix III.

4.7. Business continuity management

The resilience of the Taranaki region relies on the ability for essential services to operate normally as soon as possible after an emergency. All government departments, local authorities and lifeline utilities are required to plan for the management of any significant risk to the continuity of their business. The role of the Taranaki CDEM Group is to encourage these agencies to fulfil this responsibility to ensure the recovery of their business, and the local economy.

4.8. Goals, objectives and activities for readiness

The goal for readiness is *'To increase community awareness and understanding of, and preparation and readiness for emergencies"*. The objectives and key activities below form the basis for the five year work plan implemented by the Taranaki Emergency Management Office.

	Current status	Key activities
Objective 1a Increasing community and business awareness and understanding of risks and appropriate readiness measures through public education and consultation.	The National Public Education Programme (2006-2016) provides the overall direction for developing and delivering public education while local and regional strategies offer specific advice about local hazards, risks and preparedness steps. This has been incorporated into the Taranaki CDEM Public Education Plan 2011-2016 adopted in 2011. A significant portion of the CDEM Groups work is undertaken as readiness initiatives. The Taranaki Regional Council Education Officer delivers the '*Whats the Plan Stan'* teaching resource to schools. Emergency Management Officers present awareness programmes and conduct training programmes for community groups and local stakeholders, and deliver promotional material, newsletters and media releases to the community. The CDEM website is maintained regularly, and contains hazard information, tips for improving preparedness, and links to other helpful websites.	1. Implement CDEM Public Education Plan 2011-2016 as set out in annual work plans 2. Review the Public Education Plan in 2016. 3. Promote engagement with iwi and marae organisations.
Objective 1b Increasing community participation in hazard and risk management decisions	Planning at the local government level involves the development of Long Term Plans (LTPs). Taranaki CDEM seeks community input and participation in decisions relating to hazard risk management in these processes, and maintains close relationships with key stakeholders through advisory groups, community groups and public consultation in the plan review process. It is important that the objectives of the Group Plan are reflected in Long Term Plans.	1. Implement CDEM Public Education Plan 2011-2016 2. Maintain and improve links and communication with advisory groups and stakeholder agencies 3. Engage with District and Regional Council LTP teams to ensure that LTPs reflect objectives of the CDEM Plan.
Objective 1c Improve implementation of community preparedness measures, through community-based planning and engagement	Delivery of CDEM can be reliant on volunteers from the community, however recruiting and maintaining volunteer involvement can be challenging, and volunteer numbers are declining in the volunteer sector. Business continuity planning is in place for all lifeline utilities, and is being rolled out to other agencies. The 2010 readiness survey revealed that 62% of the community believe they are prepared for an emergency. The Taranaki community participated in the 2010 'Taranaki Blowout' campaign with enthusiasm – with 990 households, 59	1. Improve and maintain volunteer involvement through community engagement 2. Promote business continuity planning 3. Promote *'Get ready, Get thru'* messages. 4. Survey community to assess readiness 5. Seek and/or respond to opportunities to address community groups.

	Current status	Key activities
	schools and 175 local businesses taking part. 88%of participants indicated that they had taken positive action to become more prepared after participating in Taranaki Blowout. Community groups are targeted in education campaigns, with EMOs aiming to complete 60 presentations to community groups each year and promote the *'In your hands'* DVD. EMOs will also increase resilience in the business community by promoting business continuity planning.	
Objective 1d Improve community preparedness through leadership and commitment to CDEM at political and executive levels.	It is important that the community understands the role of CDEM. CDEM only tends to become high profile in the immediate wake of an emergency event. Maintaining a higher profile on an ongoing basis will help to keep the community awareness raised. This needs to be championed at the highest level. The Public Education Plan recognises the importance of increasing public understanding of the role of the CDEM Group.	1. Maintain a CDEM Group and CEG with active membership that reports regularly to the public and councils 2. Provide professional development opportunities appropriate for executives/politicians.
Objective 3a[36] Enhance the professional development and competency of all CDEM personnel	Professional development is currently ad hoc but is prioritised for key operational positions, such as controller, EOC staff etc. Training during the life of this plan will be centred around the new Emergency Management Information System (EMIS) A commitment from senior management for allocation of resources and staff release time is a priority for professional development to grow.	1. Complete a development needs analysis to identify how specific response roles should be performed and how they are being performed and to identify gaps to addressed in the professional development programme. 2. Develop a professional development strategy and programme to address the gaps identified by the development needs analysis. 3. Maintain a calendar of relevant training and development opportunities and make it available to CDEM agencies/stakeholders 4. Develop an exercise programme that aligns with the professional development strategy, is consistent with the National Exercise Programme, and the CDEM Competency Framework, that are multi-agency inclusive and ensures more regular participation.
Objective 3b Enhance CDEM's and the community's capability and capacity to respond to and manage civil defence emergencies.	The current list of plans, strategies and SOPs is contained in appendix III. A capacity and capability review was conducted in 2010 and has been the basis for considerable development of Taranaki CDEM.	1. Maintain standard operating procedures, functional plans and contingency plans 2. Explore opportunities for the alignment of CDEM planning documents with local councils 3. Review plans and procedures in light of updated hazard knowledge. 4. Align emergency management systems and technology with EMIS and other emerging technologies.

[36] Note objectives 3a and 3b are response objectives, also detailed in the response section, but are closely linked to readiness.

5. Response

This section outlines the CDEM Group's response principles, objectives, priorities, information flows and the organisational framework that is used when responding to emergencies.

Response describes the '*actions taken immediately before, during or directly after a civil defence emergency to save lives, protect property and support communities to recover*[37]'. While the first priority during an emergency is the safety of life, response planning aims to minimise all the effects of an emergency and ensure that people are given early support to recover.

The Taranaki CDEM Group's response arrangements have been established to ensure that all available resources are effectively applied to emergencies that affect Taranaki. Command, control and coordination of incidents, emergencies and disasters is dealt with using the Coordinated Incident Management System (CIMS), the nationally agreed and recognised response mechanism for interagency emergency response.

5.1. Issues and priorities

Generally the more widespread and serious hazards are assessed as more difficult to respond to, because resources will be stretched across the region. In terms of effort applied to response, a slightly higher rating is given to areas where specific contingency plans are in place, such as floods and human pandemic. Other hazards were generally rated as 'moderate' in terms of effort applied as similar response systems are in place for most CDEM emergencies. See appendix IV for the full analysis of response capabilities.

Overall, professional development of staff, and interagency /intergroup cooperation were identified by the 2010 MCDEM capability assessment as priorities for improving response in Taranaki.

5.2. Criteria for response

The level of emergency determines the extent of the involvement and activation of CDEM, and whether or not a declaration is required.

5.2.1. Levels of emergency

The Taranaki CDEM Group recognises five levels of emergency that are consistent with the National CDEM Plan. The decision tree in Figure 3 below outlines the decision making process for determining the level of emergency for the event, and the extent of CDEM involvement. Larger scale events will require CDEM Group co-ordination, whereas during smaller events, the Group will play a support role to the lead agency.

[37] Department of Internal Affairs 2007. National Civil Defence Emergency Management Strategy www.civildefence.govt.nz

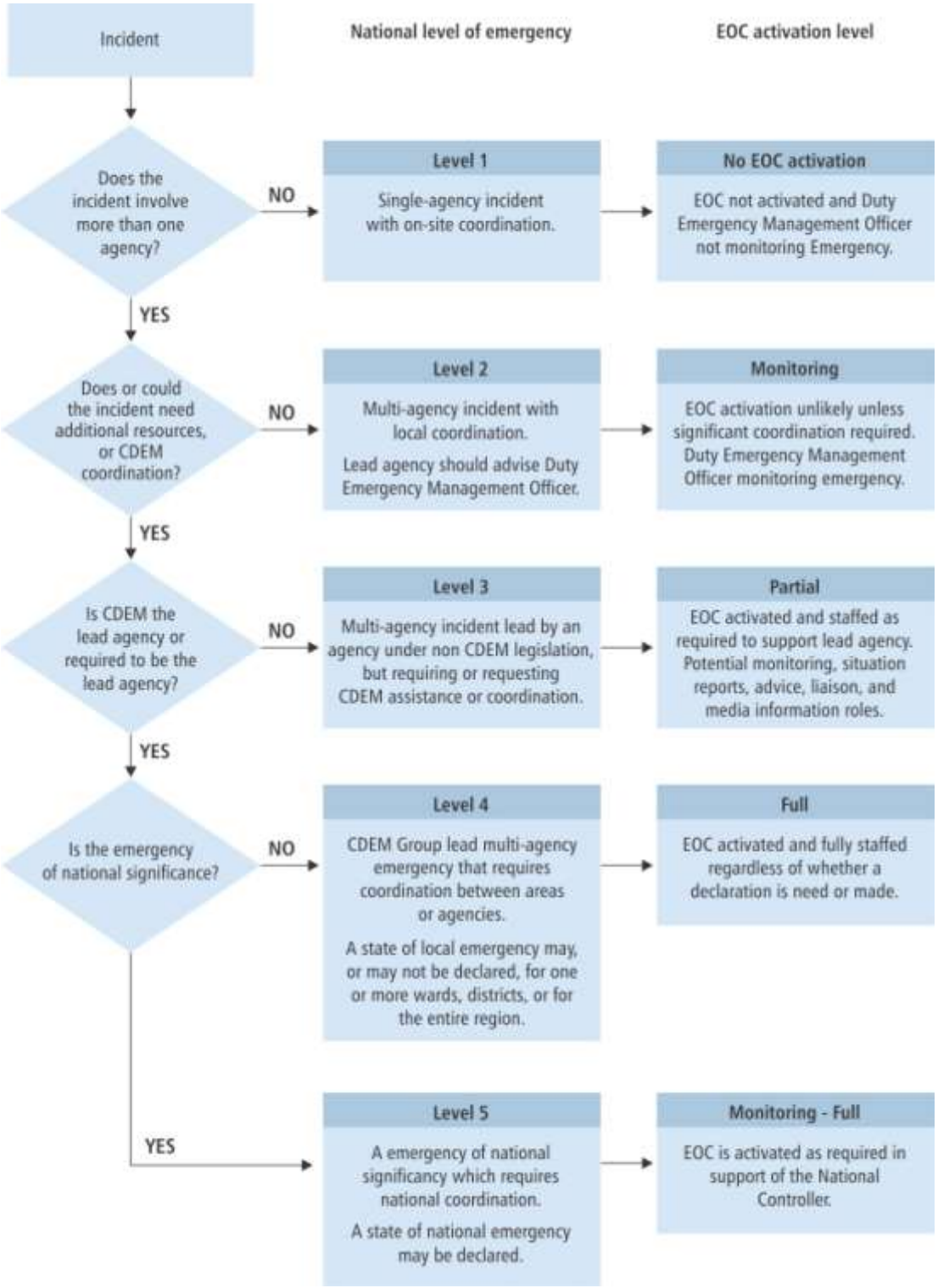


Figure 2 Level of emergency decision tree

5.2.2. Declaration

Declaring a state of emergency allows the Group controller to oversee the response by all agencies, to allow for a more effective, co-ordinated operation. A declaration also allows heightened public awareness.

The Act enables a declaration to be made across either the whole CDEM Group area, or for a defined part of the area, such as a ward or district.

A state of emergency expires seven days after the time and date on which the state of emergency comes into force[38], and may be extended[39] or terminated[40] at any time depending on the circumstances.

Who can declare a state of local emergency?
In Taranaki, any CDEM Group representative may declare a state of local emergency for any part of the region. However, in identifying the need to declare a state of local emergency, the emergency management staff of the EOC shall contact the first available CDEM Group representative in the following order:

1. The CDEM Group representative (ie the Mayor) for the area affected; or
2. The Chair of the CDEM Group; or
3. Any other available member of the CDEM Group (any one Mayor of any Territorial Authority in Taranaki, or the Chairman of the Taranaki Regional Council.

Where the area affected covers more than one district, in the first instance responsibility lies with the Taranaki Regional Council representative of the CDEM Group to declare a state of local emergency on behalf of the Group. Any of these representatives are authorised to declare, extend or terminate the state of local emergency for any part of the Taranaki region.

In the event that none of these representatives are available, the Minister of Civil Defence may declare a state of emergency within the region.

5.2.3. Activation

The CDEM Group may receive warnings or requests from a number of different sources. In order to respond to these notifications the CDEM Group maintains a 24/7 contact capability which will enable a duty Emergency Management Officer to respond.

When determining an appropriate response to any event, the duty EMO will take into account:

- information on the nature and scale of the event
- response already provided by any other party
- advice or requests from any responding party
- potential for escalation
- risk to persons, property, services, or general community wellbeing
- nature of any further assistance that could be required or offered, including the provision of information

[38] Section 70 of the Civil Defence Emergency Management Amendment Act 2012
[39] Section 71 of the CDEM Act 2002
[40] Section 72 of the CDEM Act 2002

The Taranaki Emergency Management Office (or an alternative EOC) and Emergency Centres are activated at the direction of a Controller. The duty Emergency Management Officer will contact a Controller (in the first instance, the Group Controller, or if the Group Controller is unavailable, any Alternate Controller) to provide a recommendation and obtain instructions regarding activation.

5.3. Evacuation

The decision to evacuate will be made by the lead agency and will be put into effect using the legal powers contained in the legislation of the lead agency. Responsibility for evacuation remains with the lead agency but other agencies may support the evacuation by deploying their resources to support the decision.

Depending on the circumstances, the responsibility for evacuation may rest with CDEM, fire, or other organisations with the legal power to evacuate. Where CDEM takes the decision to put an evacuation in place, it will remain the responsibility of CDEM but will be supported by other emergency services and organisations.

5.4. Warning procedures

Response is generally initiated by the receipt of a warning. The processes for receiving and broadcasting warnings are as follows.

5.4.1. National Warning System

MCDEM issues National advisories and warnings to CDEM Groups and other key emergency response agencies for events with potentially adverse consequences. MCDEM is responsible for tsunami warnings, issued via the National Warning System.

The Taranaki CDEM Group has procedures in place to facilitate an effective response following receipt of a national warning message. The National Warning System is tested by MCDEM quarterly; the Taranaki CDEM Group must be able to acknowledge the receipt of a test message within 30 minutes.

5.4.2. Taranaki CDEM Group Warning system

Methods for disseminating key messages depend on the event type and particular community affected. Public warnings will be issued in accordance with the Group Public Information Management Plan, managed by the Public Information Team. The general public can be alerted to an impending emergency using a variety of systems, including radio and television, and text messages.

Text alerts can be sent to subscribers to the 'OPTN' service, to alert them to an emergency situation. The messages are short and advise people to listen to their radios, or go to the TRC website for further information.

Warning systems need to be part of public education activities to ensure the community knows when and how to respond appropriately. In some cases, there may be opportunities to utilise existing networks (eg. social media) or collaborate with other agencies to disseminate messages (eg power companies).

5.4.3. Other agencies involved

There are a number of agencies involved in the surveillance, monitoring, assessment of hazards and issuing alerts and warnings to incidents or events that may be a pre-cursor to an emergency (refer table 5).

Table 5 Agencies Responsible for Warning CDEM Group and the Public

Hazard alerts/warnings	Monitoring/Surveillance Agency
Volcanic activity alerts and warnings Earthquake notifications	GNS Science
Tsunami (distant and regional sources)	MCDEM
Public health warnings	Ministry of Health and the Taranaki District Health Board
Forecasting and alerts/warnings/watches/outlooks/advisories for heavy rain, gales, snow, thunderstorms, swells, surge, volcanic ash	NZ MetService and NIWA (forecasting)
Flood warnings for major rivers, including interpretation of meteorological information	Taranaki Regional Council
Animal disease outbreaks and pest invasions	Ministry of Primary Industries (MPI)
Terrorism	NZ Police
HSNO incidents	Fire Service or the Department of Labour

5.5. Roles and responsibilities in a response

The role of the Taranaki CDEM Group in response is to coordinate the activities of its members, the community and others to ensure that response to any emergency in Taranaki is timely and effective, making best use of available resources. The extent of the Group's involvement depends on the level of emergency.

5.5.1. Emergency Operation Centres

Taranaki Emergency Management Office

TEMO is the Emergency Operations Centre for Taranaki. TEMO is well equipped and ready to respond to an emergency.

The following diagram (figure 4) outlines the basic operational structure of the EOC in an emergency response, based on the Co-ordinated Management System (CIMS).

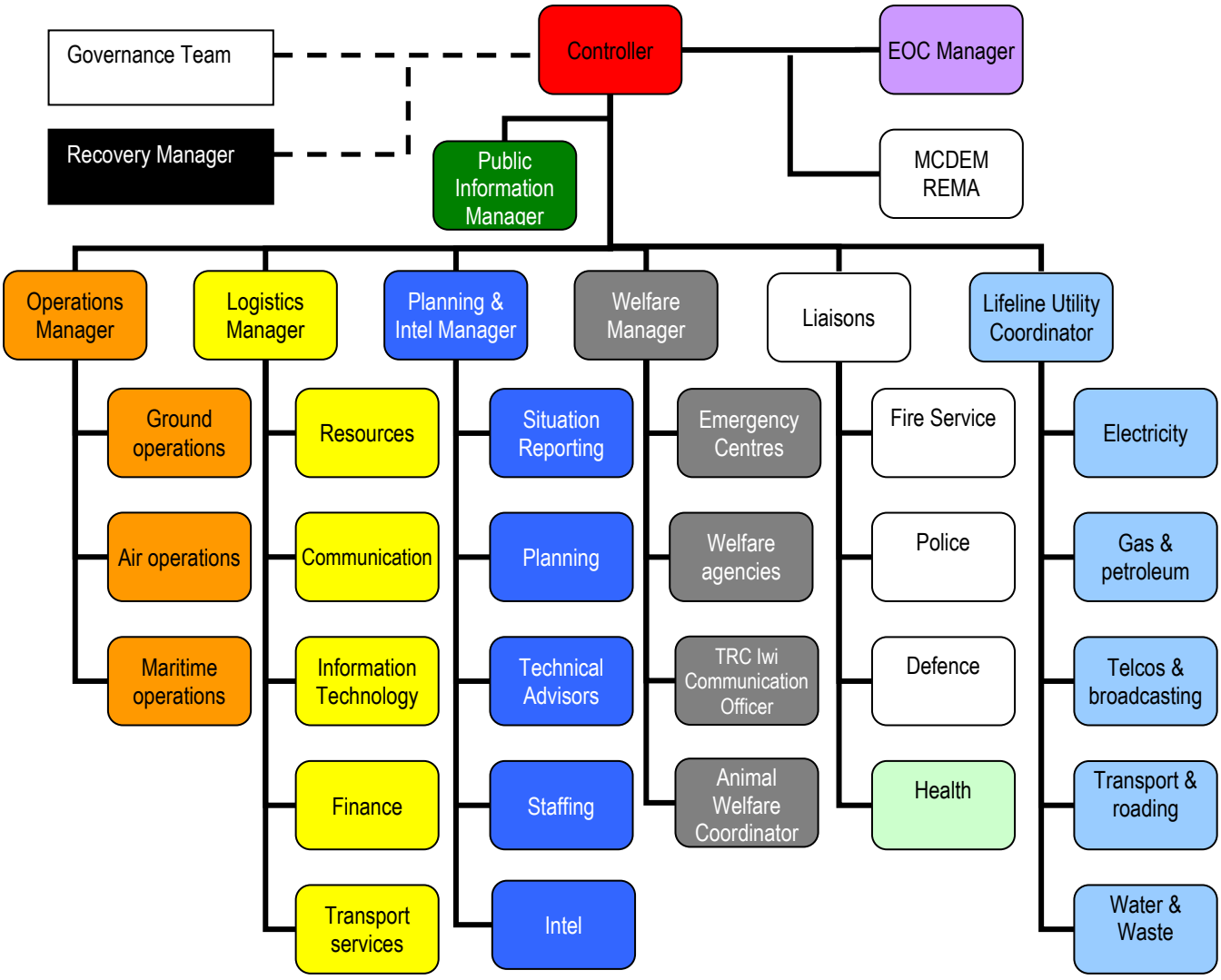


Figure 3 EOC Operational Structure

Other emergency co-ordination points

Other key locations for emergency management functions include:

- **Individual agency EOCs;** as a lead or supporting agency (for example during the 2009 Flu Pandemic the Taranaki District Health Board set up an EOC to coordinate information and resources for the Taranaki region).

- **Emergency Centres:** Emergency Centres provide the point of contact for many agencies to interact with impacted communities. They are temporary facilities usually established at a prearranged venue such as a school, marae, hall or sport complex to provide immediate welfare and information needs of an impacted community. Emergency Centres can also be set up in other venues to suit the needs of the community depending on the type of emergency.

- **Alternative EOCs:** in the event that the TEMO is compromised, or if an event is centred far from New Plymouth, an alternate EOC may be set up at Taranaki Regional Council in Stratford, or South Taranaki District Council in Hawera. Deployment to these sites is to be exercised.

5.5.2. Controllers

The CDEM Group has appointed a Group Controller and alternates in accordance with Sections 26 and 27 of the CDEM Act (2002). The primary role of the Controller during response is to assess impacts, prioritise response measures, monitor agencies and coordinate and allocate resources where required. Taranaki CDEM has a well-established and experienced cadre of controllers, with robust procedures in place for their appointment in an emergency.

5.5.3. Other Group EOC managers

Group Planning and Intelligence Manager*:* Responsible for the collection, collation and evaluation of information relevant to the emergency; the development of high level plans to respond to the emergency; and the recording and storage of all information and records involving the EOC.

Group Logistics Manager*:* Responsible for management of the movement and welfare of EOC staff, EOC IT and communications systems; tracking Group expenditure; receipt and coordination of public donations of money, goods and services; coordination of the distribution of regional and national logistical supplies.

Group Public Information Manager: Responsible for providing a media management function for the emergency; the distribution of key emergency information in accordance with the Public Information Management Plan; managing visitors to the EOC and managing the flow of information in and out of the EOC.

Group Welfare Manager: The Welfare Manager has the overall responsibility for those people who have been displaced from their homes by an emergency and the coordination of community welfare in accordance with the Group Welfare Plan.

EOC Manager: Responsible for ensuring the operability of the EOC during a response and providing advice to the Group Controller and Incident Management Team.

Lifeline Utility Coordinator: Responsible for coordinating communication to and from all the lifeline utility organisations and reporting to the Incident Management Team.

Recovery Manager: Responsible for developing the recovery action plan and coordinating the activities of all the organisations participating in the recovery effort.

Advisory Group Coordinators: as appropriate, provide specialist advice.

5.5.4. Volunteer management

Volunteers play a significant part in any response and recovery operation, especially after large-scale and highly-publicised disasters. A database of trained volunteers is maintained by the Emergency Management Office. Volunteers are called upon to

participate in training and exercises, and assist in the running of the EOC and emergency centres in an emergency[41].

5.5.5. Welfare management

The term 'welfare' means *the response the CDEM sector and their welfare partner agencies will deliver to those people (individuals, families/whanau and communities) directly affected by an emergency*. This includes provision of food, shelter, clothing, financial assistance, psychosocial (psychological and social) support and extends throughout response and recovery.

During the response phase, the following are typical activities that may be coordinated by the Welfare Manager:

- registration of evacuated and affected persons;
- provision of emergency clothing;
- provision of emergency catering or food provision to isolated persons;
- identification and provision of emergency accommodation;
- immediate personal support services including the identification of agencies with the capacity to put in place services that mitigate the effects of trauma on individuals and communities;
- immediate domestic animal care;
- confirmation of locations for emergency centres and support for their operation to suit the requirements of the event;
- liaise with all welfare service agencies and ensure their supporting needs are met;
- managing welfare delivery by coordinating agencies;
- monitoring welfare provision against arising needs;
- identifying gaps and supporting responding welfare agencies.

The Welfare Advisory Group supports the Welfare Manager in this role. Trained professionals and volunteers are available and exercised ready to staff emergency centres, for which locations are listed in the Group Welfare Plan.

5.5.6. Public Information Management (PIM)

The appropriate management of public information and the media are critical elements in the response and recovery phase of any event. The continuity of information during response and recovery is important to enable members of the public to take appropriate action to protect themselves.

The Controller, via the Public Information Manager, needs to provide timely and accurate information. The media is the primary means of disseminating such information, by providing up-to-date information quickly to a wide audience. The information it provides reduces the time and staff resources that local government would have to divert from response and recovery talks to deal with what could be an overwhelming number of public inquiries.

The Public Information team is made up of experienced communications staff from Local Authorities, and associated key agencies. The PIM team are engaged in an

[41] Those wishing to become a Civil Defence volunteer can email: emo@trc.govt.nz

emergency to ensure efficient information dissemination and media management in accordance with the CDEM Public Information Management Plan.

Social media

Recent events have highlighted the potential for social media to play a key role in the dissemination of key messages in an emergency. There are numerous pre-established networks in the community that are able to be utilised. The Group will implement national best practise guidelines for the use of these tools, and develop a social media strategy during the life of this plan.

5.5.7. Support from outside the Group

Some industries are able to provide resources for a regional response, often in the form of manpower, power generation and transport. These resources are coordinated through the Logistics desk at TEMO.

Marae and iwi organizations will often play a key role in supporting emergency management functions. Marae and iwi may also act as a conduit to Maori and the wider community, and may establish specific emergency centres and points of community co-ordination.

The Taranaki CDEM Group will follow the national arrangement for acquiring support from outside the area of the CDEM Group. When response support is required from outside the CDEM Group the Taranaki Emergency Management Office will contact the National Crisis Management Centre in Wellington. The NCMC will support the Taranaki response by identifying sources of the support requested and make the support available. In the unlikely event that NCMC is not operating the Taranaki CDEM Group will make direct contact with other CDEM Groups for support. During the life of this Plan, the Taranaki CDEM Group will seek to strengthen working relationships with neighbouring Groups.

5.6. Monitoring, debrief and incorporating learning

During a state of emergency, the Group Controller will ensure that the functions and powers of the CDEM Group and Group Controller are exercised in a responsible and considered manner and that the level of response is appropriate to the situation.

There will be a multi-agency debrief at the conclusion of any significant event. This debrief allows for those participating in or liaising with the EOC to evaluate the response and provide opportunities for improvement which can be incorporated into future planning. There may be several stages – a hot debrief immediately after the event, and a more detailed debrief a few days or weeks after, depending on the size of the event.

Communicating relevant findings to key stakeholders and the public following the debrief is an effective way to raise awareness of the role of CDEM in an emergency. A copy of the findings will be communicated to all relevant agencies involved in the event, and the CEG will oversee the implementation of corrective actions. Projects developed from lessons learnt from exercises and emergency events are incorporated into the five year work plan, for enhancement of future responses.

5.7. Goals, objectives and activities for response

The goal for response is *'To enhance Taranaki's ability to respond to emergencies'*. The objectives and key activities for response below form the basis for the five year work plan to be implemented by the Taranaki Emergency Management Office. Note there is some overlap between the readiness and response objectives.

	Current status	Key activities
Objective 3a Enhance the professional development and competency of all CDEM personnel	As detailed in readiness section 4.2	As detailed in readiness section 4.2
Objective 3b Enhance CDEM's and the community's capability and capacity to respond to and manage civil defence emergencies.	MCDEM has invested in EMIS – a national Emergency Management Information System that will be rolled out over the life of this plan. Warning systems are in place. TEMO is maintained in a ready to respond state. Upgrade in progress in line with roll out of EMIS	1. Review activation procedures to integrate with EMIS 2. Maintain communication networks to ensure readiness for a response to an emergency 3. Continually maintain the *Taranaki CDEM Public Information Management Plan* for engagement of PIM team in an emergency. 4. Equip and maintain an Emergency Operations Centre (EOC) for an effective CDEM response 5. Ensure that advisory groups and relevant key agencies and stakeholders are involved in response where appropriate 6. Maintain a watching brief on the use of social media in an emergency event, and develop a social media strategy

6. Recovery

This section sets out the planning arrangements, frameworks, structures, responsibilities and the processes for helping the community to recover from an emergency. The transition from response to recovery, the Recovery Managers role, financial arrangements during recovery and the recovery exit strategy are also covered.

Recovery is defined as '*the coordinated efforts and process to effect the immediate, medium and long-term holistic regeneration of a community following a disaster*[42]'. The process of recovery is to re-establish the quality of life of the community following an emergency. Recovery starts as soon as possible in the local community and addresses the social, economic, natural and built environments.

Recovery operates without discrete legislative powers and relies in large part on the active collaboration of partners and stakeholders for its effectiveness. The role of the Taranaki CDEM Group in recovery is to coordinate the activities of its members, the community and others to ensure that recovery from an emergency in the Taranaki Region is timely and effectively and makes use of available resources. The Taranaki CDEM Group has a Recovery Plan and this section provides a summary of arrangements detailed therein[43].

6.1. Principles and priorities

The following principles apply for guiding recovery activity:

- facilitating the process of recovery that is both effective and efficient;
- empowering the community to become resilient;
- maintaining the wellbeing of the community;
- guiding an appropriate level of co-operation and co-ordination within and across organisations involved in emergency management.

The Taranaki CDEM Group and the MCDEM have identified the following priorities for recovery:

- improving and strengthening links between north and south Taranaki and with rural communities and iwi/marae organisations;
- improving understanding of the CDEM Group of recovery arrangements in place;
- working with the private/economic sector (eg Chamber of Commerce, Venture Taranaki) for business continuity planning;
- developing a needs assessment in conjunction with the rolling out of EMIS;
- developing and testing use of social media to create ongoing dialogue for assessment of community needs.

[42] Focus on Recovery: A Holistic Framework for Recovery in New Zealand: Information for the CDEM Sector [IS5/05]
[43] Refer to the Taranaki CDEM Group Recovery Plan for full details on recovery arrangements.

6.2. Recovery Management Structure

The Taranaki CDEM Group Recovery Plan contains a template for the Recovery Management Structure; this is based on the national recovery framework. The Recovery Structure comprises the Recovery Manager reporting to the Taranaki CDEM Group. Depending on scale of recovery required, it may also include four task groups co-ordinated by the Recovery Manager to facilitate recovery. Public information and administration staff, financial systems and office support has been identified within the Taranaki Regional Council to support the Recovery Structure. The CDEM Act provides for the appointment of Recovery Coordinator by the Ministry of Civil Defence and Emergency Management for a large scale event that is beyond the resources of the region to manage alone.

6.2.1. Group Recovery Manager

The Recovery Manager implements the Recovery Plan during peace time and coordinates recovery after an emergency. In the event of an emergency, a Recovery Manager will be appointed; if the Recovery Manager is unavailable, the alternate Recovery Manager or a suitable alternative will be appointed. The appointment process is detailed in the Recovery Plan. The role of the Recovery Manager in an emergency is to co-ordinate the recovery activity within the CDEM Group to ensure:

- planning, prioritisation, and management functions are undertaken;
- effective reporting mechanisms are in place;
- central government is informed of local and regional issues;
- recovery resources are identified and obtained as required;
- information is provided on the impact of the event on the affected area;
- emerging issues identified and solutions sought.

In peace time, the Recovery Manager:

- attends meetings of the Coordinating Executive Group, Welfare Advisory Group, Lifelines Advisory Group, and Rural Advisory Group;
- undertakes training and participates in exercises;
- develops a work programme to further develop and strengthen recovery arrangements for the region and incorporate learning from training exercises;
- maintains a working relationship with the Group Controller and the Senior Emergency Management Officer.

6.2.2. Recovery task groups

The key role of each task group is to represent and support the interest of that sector and contribute to the resolution of issues and development of recovery goals and co-ordinate tasks among participating agencies. The terms of reference and suggested membership of each task group are detailed in the Recovery Plan and summarised below:

Social Environment: coordinate the efforts of agencies that have significant recovery roles in the social environment, whether legislative or voluntary, to care for the social recovery of the community. May include health, welfare or safety and wellbeing subtask groups.

Natural Environment: Minimise the impact on the natural environment, which may have consequences on the social, built, and economic environments. May include wastes, biodiversity, or natural resources subtask groups.

Built Environment: Establish priorities for reconstruction/recovery of infrastructure, engineering lifelines, services, buildings and the rural sector considering mitigation opportunities; and to advise the Group Recovery Manager on priorities and options and their likely effects on the community. May include residential, commercial, or lifeline utilities subtask groups.

Economic Environment: Coordinate the efforts of agencies involved in the restoration of economic recovery. May include businesses, infrastructure or government subtask groups.

6.3. Recovery Planning

6.3.1. The CDEM Group Recovery Plan

The Taranaki CDEM Recovery Plan has been developed and exercised. A full review of the Plan is due, after this CDEM Group Plan becomes operative. The Recovery Plan details the procedures and systems that will be used by the Taranaki CDEM Group in the recovery phase of an emergency situation in Taranaki.

6.3.2. Community involvement

Active engagement and involvement of key stakeholders and the community in recovery planning provides a framework for re-establishing the wellbeing of the population following an emergency. A number of existing structures are in place for community involvement in recovery planning, particularly with CDEM advisory groups and relationships with organisations such as St John, District Health Boards, lifeline utility companies and the Red Cross. The Recovery Manager actively participates in all CDEM advisory groups to ensure community involvement in recovery planning.

6.4. Operational arrangements

6.4.1. Transition from response to recovery

The Recovery Manager commences recovery activities on the first day of the response phase to become familiar with the situation, liaise with the Controller, and make the necessary preparations to execute a smooth transfer from the response to the recovery phase of the emergency.

During this time, the Controller continues to exercise the statutory power to direct and co-ordinate all resources provided with the Recovery Manager focusing on preparation for the recovery task.

The transition from response to recovery incorporates:

- The preparation of a recovery plan by the recovery manager immediately prior to the termination of the response phases;

- acknowledgement of the transfer of control and accountability from the Controller to the Recovery Manager;
- the establishment and agreed terms of reference for the Recovery Manager including funding, expenditure authority and reporting requirements;
- transfer of responsibilities and outstanding issues from the response phase which continue into the recovery phase;
- a transition briefing.
-

6.4.2. Recovery processes

The following methods and actions guide the achievement of recovery objectives and provide a systematic way of organising tasks and activities both before and after activation. Each of these steps is outlined in detail in the Recovery Plan.

1. **Appointment of Recovery Manager:** The role of the Recovery Manager in an emergency is to co-ordinate the recovery activity within the CDEM Group and to liaise with the National Recovery Manager. Generally, the Group Recovery Manager will be appointed to the role, however alternatives are on hand if the Group Recovery Manager is not available.

2. **Costs:** The salary of the Recovery Manager for routine work is part of the annual operating budget for Taranaki CDEM. Extraordinary workload (together with any costs arising from a recovery event) is an unbudgeted item. An estimate of likely unbudgeted costs for any recovery operation should be prepared as soon as practicable and discussed within the Group to confirm funding arrangements.

3. **Communication:** a media briefing may be held following the handover from response to recovery to outline the scope and current priorities for recovery, reinforce selected key messages to target audiences, and to reflect on positive aspects of the response phase. Community recovery will occur more quickly if individuals understand the process of recovery and actively participate in the process.

4. **Preparation of transition report:** prepared by the Group Controller, details status and extent of damage at the time of transition from response to recovery in social, physical, economic and natural environments; status of resources available; and response action plan (noting any actions incomplete).

5. **Needs and impact assessment:** conducted to gain early and accurate information about the impact of the event of individuals, the community and physical infrastructure.

6. **Recovery Action Plan:** This plan will document the actions to be taken to assist the recovery operation in consultation with key personnel. This includes: preparing a situation report, schedule of meetings, actions outstanding from response phase, short term and long term priorities for recovery, and development of an exit strategy.

7. **Exit strategy:** every recovery phase is required to have an end. An exit strategy enables and encourages communities to regain control as soon as possible. Outlines the handover responsibilities for the Recovery Manager, the recovery

office, the task groups and the public information management and any support teams. Withdrawal of formal recovery structures from the impacted community must be planned and staged and the responsibility of outstanding tasks and actions must be assigned and acknowledged.

8. **Debriefing:** The CDEM Group will hold appropriate and timely debriefs and reviews following an emergency, including the recovery process. Debriefs will be done both internally within the Group and externally with key stakeholders to allow for learning and improvement to occur. Post event learning is an essential aspect of both the planning process and successful recovery. Lessons learnt can be incorporated into reducing the risk from future emergencies.

6.5. Objectives and activities for recovery

The goal for recovery is *'To enhance Taranaki's ability to recover from emergencies.'* The objectives and key activities for recovery below form the basis for the five year work plan implemented by the Taranaki Emergency Management Office.

	Current status	**Key activities**
Objective 4a To encourage the strengthening of recovery capability and capacity across the wider community and within CDEM	A Group Recovery Plan has been developed and exercised. Recovery Training is available and well resourced.	1. Maintain a comprehensive Recovery Plan 2. Review the Recovery Plan (2012) 3. Incorporate recovery as a key component of exercises and professional development. 4. Develop mechanisms for incorporating lessons learnt from exercises into pre-event recovery planning.
Objective 4b To promote the implementation of recovery planning across the wider community.	The Recovery Manager sits on advisory groups to ensure all agencies are involved in recovery planning and are briefed on recovery issues.	1. Ensure involvement and further development of the Recovery Manager and alternates through participation in meetings, trainings, and exercises. 2. Ensure advisory groups and key stakeholders are appropriately involved in recovery planning and activities 3. Engage regularly with agencies involved in the recovery structure. 4. Ensure the CDEM Group is well briefed on recovery processes 5. Advocate integrated all-agency recovery planning including input from communities, local authorities, research providers, insurance providers, local authorities, and lifeline utilities.

7. Monitoring and evaluation

This section provides a basis for monitoring and evaluation of the CDEM Group Plan. It sets out the criteria and methods for measuring achievement of the Plan objectives and a process for Plan reviews. The means of monitoring legislative compliance is also outlined.

Monitoring and evaluation allows comparisons between actual and desired states and ongoing analysis and improvement of processes and outcomes. Monitoring involves tracking progress against a plan or performance against standards, generally using quantitative data. Evaluation is about measuring effectiveness; it compares what is happening against what was intended by the plan (the goals, objectives and targets) and interprets the reasons for any differences.

7.1. Contextual framework

Monitoring and evaluation is a requirement of Taranaki CDEM Groups under the CDEM Act. Relevant benchmarking documents include:

- the CDEM Act 2002 and National CDEM Strategy;
- Taranaki CDEM Group goals and objectives in the Group Plan;
- Taranaki CDEM Group 5 year work plan;
- Taranaki CDEM Group annual business plans;
- Taranaki CDEM Group annual report;
- public surveys and analysis;
- District and Regional Council Long Term Plans;
- the MCDEM Capability Assessment Tool.

The Group meets these by:

- undertaking a review of the CDEM Group compliance against the CDEM Act 2002;
- annual reporting on compliance to the CDEM Group;
- identifying the legislative provisions of the Acts (described in Section (3)(a) – (k)).

7.1.1. CDEM plan development

In the development and review of the CDEM Plan, the Plan will be reviewed for:

- **Accuracy:** checking whether supporting documents and other references in the plan are up-to-date and the CDEM Group is structured in the manner described.

- **Practicality:** by considering whether the CDEM Group, its local authority members, and partner organisations are capable of carrying out the functions described in the plan.

- **Coverage:** by considering the hazards described in the plan, management mechanisms, appropriate linkages between other agency plans and an integrated monitoring and review process that crosses the CDEM Act and the RMA frameworks.

- **Coordination:** by considering whether roles, responsibilities and functions are clearly defined, whether the goals and objectives of the CDEM Group Plan are aligned with the National CDEM Strategy and the CDEM Plan and Guide.

7.2. Monitoring the Taranaki CDEM Group Plan

It is not expected that, by the end of this plans life, the vision will be completely realised, or all the objectives met. Progress towards these goals will be evaluated regularly as follows:

- an annual report against the objectives, key activities and subsequent work plan will be provided to the CEG and CDEM Group;
- an annual check will be conducted to ensure the plan is still accurate and legislatively compliant;
- regular MCDEM capability assessments;
- conducting research to assess business and community readiness.

7.2.1. MCDEM Capability assessment tools

Under section 8 of the CDEM Act, the Director of Civil Defence Emergency Management has a function to "monitor the performance of CDEM Groups and persons who have responsibilities under this legislation". This will be undertaken primarily via the MCDEM Capability Assessment Tool. The Tool aims to create a standard assessment of emergency management capability in New Zealand. It consists of a set of key performance indicators and performance measures against which organisations can assess themselves or be externally assessed.

As well as providing an understanding of the organisational strengths, weaknesses and gaps, it also enables MCDEM to provide a nationwide picture of implementation of requirements of the CDEM Act and progress towards CDEM's high-level goals and objectives. The Taranaki CDEM Group has been externally assessed by the Ministry of Civil Defence and Emergency Management in 2010 as part of the three yearly cycle of external assessment. Outcomes identified through the assessment process have been incorporated into this plan.

8. Management and governance

This section describes the management and governance arrangements for the provision of CDEM in Taranaki. This includes how CDEM will be delivered, and the roles and responsibilities of the CDEM Group, CEG members, and the Emergency Management Office. Key appointments and funding arrangements are also detailed.

8.1. CDEM structure in Taranaki

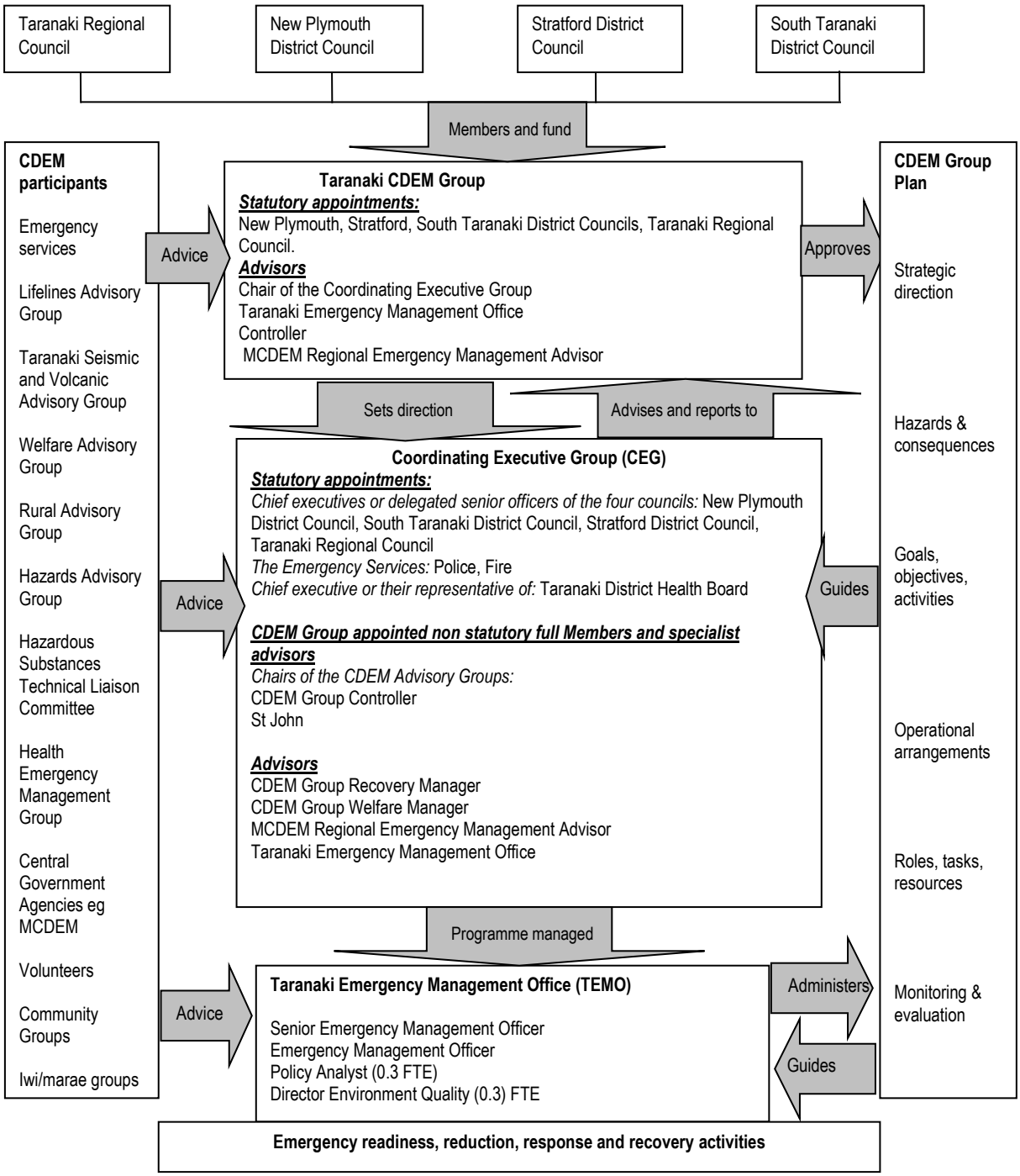


Figure 4 Structure of CDEM in Taranaki

8.1.1. Civil Defence Emergency Management Group (CDEM Group)

The Taranaki CDEM Group is a statutory committee of Council under section 12 of the CDEM Act 2002 with overall responsibility of setting the strategic direction and conducting business for CDEM in Taranaki.

Functions

- Ensuring hazards are effectively managed;
- setting the strategic direction for the Group via the Group plan;
- maintain and provide resources for effective CDEM including staff and training;
- provide assistance to other CDEM Groups;
- promote and raise public awareness;
- monitor and report on progress on implementation of plans.

8.1.2. Coordinating Executive Group (CEG)

The CEG implements the decisions of the CDEM Group and is able to commit the resources of the representative organisations to agreed projects and tasks. Prescribed functions are detailed in Section 20 of the CDEM Act.

The CEG comprises senior representatives from local authorities in Taranaki, and other organisations with defined emergency functions and roles, together with representatives of advisory groups.

Functions

- Provide advice on strategic direction;
- ensure work programmes and plans are reviewed and monitored regularly;
- coordinating input into annual planning processes;
- members to ensure effective liaison on and implementation of CDEM issues with their respective organizations.

8.1.3. Taranaki Emergency Management Office (TEMO)

The Taranaki Emergency Management Office ('TEMO') is located at 45 Robe Street New Plymouth. Two Emergency Management Officers (EMO's) are based at TEMO who coordinate and facilitate the 'day-to-day' planning and project work on behalf of the CDEM Group and CEG.
The functions of the EMOs include:

- advice and technical support to the CEG and the CDEM Group;
- project coordination and management, including the ongoing development, implementation, monitoring and review of the CDEM Group Plan and supporting documentation;
- coordination of regional CDEM policy and its implementation;
- management of contracts entered into on behalf of the CDEM Group or CEG;
- management of and administering CDEM Group Staff on behalf of the CDEM Group;
- providing for the training of key personnel for CDEM;
- monitoring and responding to, the adverse effects of emergencies on behalf of the CDEM Group and disseminating warnings;
- maintaining the Group EOC (TEMO) in a ready state;

- assisting with recovery operations on behalf of the CDEM Group;
- external liaison with the CDEM sector;
- Preparation, in consultation with CEG, of the annual report of the CDEM Group's activities, budget and performance to the Group for adoption;
- Representing the CDEM Group on national bodies and projects.

8.1.4. Key appointments

Although the CDEM Group retains the responsibility for CDEM in the region there are a number of authorities, functions and powers that need to be delegated (CDEM Act (2002) (Sections 18, 25-27)) to persons and/or positions as key appointments. The Controller, Welfare Manager and Recovery Manager play important roles during an emergency, also participating in CDEM planning and activities during peace time[44].

Controllers

The CDEM Group has delegated its powers under Section 85 of the CDEM Act to the Group Controllers. In accordance with Sections 26(1), 26(3) and 27(1) of the CDEM Act, the CDEM Group has appointed personnel to the positions of Group Controller and Alternative Group Controllers. The CDEM Group has not delegated any functions or powers to the Group Controller other than those inferred by Section 28(2) of the Act.

The following details the powers of the Group Controller that are delegated to the Group Controller by the CDEM Group under the CDEM Act (2002).

1. **General powers:** The Group Controller is delegated the authority to co-ordinate the activities (as are required to perform his/her duties) detailed in section 18(2).
2. **Power to require information:** The Group Controller is delegated the authority to require information to be provided under section 76.
3. **Information to obtain a warrant:** The Group Controller is delegated the authority to provide the necessary information under oath for a warrant to be issued under section 78.
4. **Receipt of information**: The Group Controller is delegated the authority to receive information seized under section 81.
5. **Emergency Powers:** The Group Controller is delegated the authority to exercise all the emergency powers conferred on the Group by section 85 and shall make reports on the actions undertaken at such intervals as are directed by the Chairperson of the Group. For the avoidance of doubt, the Group Controller retains the specific emergency powers conferred on Controllers in sections 86-92 and 94.

Recovery Manager

The role of the Recovery Manager in an emergency is to co-ordinate the recovery activity within the CDEM Group and to liaise with the National Recovery Manager.

[44] A list of key appointments can be provided on request to the Taranaki Emergency Management Office

Welfare Manager
The Welfare Manager has the overall responsibility for those people who have been displaced from their homes by an emergency and the coordination of community welfare.

8.1.5. Administration arrangements

The Taranaki Regional Council is the administering authority for the Taranaki CDEM Group (CDEM Act (2002) (Section 23)) and the CEG.

The administrative and related services the Taranaki Regional Council provides include:

- employment of the EMOs;
- secretariat for the CDEM Group and CEG (e.g. convening meetings, providing venues, organising agendas, providing minutes and catering);
- accountant for CDEM Group finances and budgets;
- publishing the CDEM Group's work programme, budget and performance (once adopted);
- entering into contracts with service providers on behalf of the Group.

8.2. Financial arrangements

The activities of the CDEM Group incur costs as part of:

Programmed Activities: Administrative and related services under Section 24 of the CDEM Act 2002 and the annual work programme.

Emergency Expenditure: Expenditure incurred by the Group in the lead up to, during and immediately after a declared state of emergency (e.g. reimbursement for cost of specialist advice).

8.2.1. Programmed activities

The Group is responsible for funding:

- administrative and related services under Section 24 of the CDEM Act 2002
- agreed annual work programme

Apart from any agreed direct contribution as its share of Group costs, each local authority member of the Group will be responsible for:

- meeting the costs of its representation of the CDEM Group and CEG.

Unless agreed otherwise, the costs of completing any specific agency actions as outlined in the annual work plan will be met by the local authority or agency concerned.

8.2.2. Expenditure in a civil defence emergency

In the lead up to a declared emergency
The Group is responsible for funding:

- all costs associated with the resourcing, activation and operation of the EOC;

- all reasonable direct expenses incurred by the Group Controller;
- all reasonable direct expenses (such as travel, meals and accommodation) incurred by recognised technical advisors when they are requested to attend meeting to provide specialist technical advice;
- local authorities are responsible for meeting all costs associated with their own CDEM personnel, facilities and resources.

During an emergency
Local authorities take full first line responsibility for dealing with the impact of disaster in their geographic and functional areas of responsibility. This includes the prior provision of the necessary physical and financial resources needed for response and recovery.

Each local authority is to be responsible for meeting all emergency expenditure incurred in its district or under its jurisdiction, and arising out of the use of its resources and services under the control of either the Group Controller or the Alternative Group Controllers.

A clear record of who authorises any expenditure and its purpose is required to be kept. The Group Controller will ensure all costs are properly accounted for.

8.2.3. Cost apportionment

Members of the CDEM Group have agreed to apportion the total administration costs of civil defence emergency management as follows:

- Taranaki Regional Council 50%
- New Plymouth District Council 35%
- South Taranaki District Council 12%
- Stratford District Council 3%

In an emergency, in the interim, costs will lie where they fall, or where a territorial authority requests a resource, the cost will lie with the relevant territorial authority or where the Group Controller directs a resource, the cost will be apportioned by agreed negotiation.

8.2.4. Recovering costs in a civil defence emergency

Upon termination of an emergency, the Group Controller will recommend to the CDEM Group which costs could reasonably be met by the Group. There may be circumstances where shared Group funding could be applied where there are widespread adverse regional impacts, and consequential regional benefits from localised response efforts to reverse these impacts.

Claims for government assistance are to be made by the organisation incurring the expenditure. When an emergency involves more than one district, the CDEM Group will co-ordinate and check respective local authority claims, independently prepare a claim for agreed Group costs, and submit the consolidated application.

8.2.5. Emergency recovery finances

The Recovery Manager is responsible for facilitating access to the Taranaki Disaster Relief Trust Fund by people affected by the emergency.

Taranaki Disaster Relief Trust Fund

A disaster relief fund is set up before or during an emergency in an area with the appropriate trust deed, trustees and administration. Members of that community apply for assistance and the trustees consider qualification for assistance on a case-by-case basis, allocating funding generally on items that can not be insured [i.e. fencing on farms]. The trustees are the mayors of New Plymouth, Stratford and South Taranaki District Councils, and the Chairperson of the Taranaki Regional Council. The Taranaki Regional Council administers, on behalf of the Taranaki Disaster Relief Fund Trustees, the Taranaki Disaster Relief Trust Fund.

All contributions for disaster relief from central government and other agencies must be made to the Taranaki Disaster Relief Trust Fund.

Other appeals and funds

During an emergency it is not uncommon for organisations, particularly radio and television, to initiate appeals for disaster relief. Funds raised and offered to the Taranaki CDEM Group for distribution should be deposited in the Taranaki Disaster Relief Trust Fund to ensure appropriate accountability and management. Financial assistance is the preferred form of aid.

8.3. Co-operation with other CDEM groups

8.3.1. Flexible support agreements

In accordance with Section 17(1)(f) of the CDEM Act, the CDEM Group will support other CDEM Groups in New Zealand. The basis of this support is outlined below.

The specific nature of support that the CDEM Group can provide during the response and recovery phases of an emergency will depend on the circumstances at the time and to what extent an emergency has affected each CDEM Group. The support may be in the form of:

- personnel (EOC staff, radio operators, rescue personnel, media liaison, other specialists);
- equipment (stock on hand of particular items or supplies or support when purchasing);
- logistics management (management of air, rail and other supply points outside of the other CDEM Group area that are being used for logistics transfer operations);
- evacuee Management (management of evacuees arriving from the affected area, including registration and arranging food, clothing and temporary accommodation).

The Group agrees to consult on priorities for resources, which includes without limitation, equipment, material, services and personnel. Competing demands for resources are always likely to be evident, particularly where the emergency affects both parties, and active consultation to resolve competing demands and achieve optimum resource allocation will have precedence over all other mutual support.

The CDEM Act 2002 (Section 113) provides for the recovery of actual and reasonable costs associated with provision of assistance to other CDEM Groups. The Waikato and Horizons (Manawatu-Wanganui) CDEM Groups border the Taranaki region.

8.3.2. Collaborative planning

The CDEM Group will take all opportunities to share and co-ordinate planning and activities with other Groups for mutual benefits, and the CDEM Group will, wherever possible:

- maintain regular contact with other Groups and conduct face-to-face consultation when necessary and desirable share all plans and procedures to facilitate a common approach to planning and to ensure that coordination and coherency between plans of CDEM Groups is maximised.
- share access to data on hazards and the risk treatment measures that are being employed. Where CDEM Groups share a common hazard across the Group boundary, mutual agreement on risk treatment will be obtained before new measures are employed.
- keep others informed of training courses scheduled and access to courses will be available on a share permitting basis.
- keep others informed of exercises scheduled and encourage participating on the provision of observers from other areas.

Appendix I

Glossary of terms

Glossary of terms

4R's
Means the four areas of emergency management, as follows:

- *Reduction* - identifying and analysing long-term risks to human life and property from hazards; taking steps to eliminate these risks if practicable, and, if not, reducing the magnitude of their impact and the likelihood of their occurring.

- *Readiness* - developing operational systems and capabilities before a civil defence emergency happens, including self-help and response programmes for emergency services, lifeline utilities and other agencies.

- *Response* - actions taken immediately before, during, or directly after a civil defence emergency to save lives and protect property, and to help communities recover.

- *Recovery* - the coordinated efforts and processes to bring about the immediate, medium-term, and long-term holistic regeneration of a community following a civil defence emergency.

Act
Means the Civil Defence Emergency Management Act 2002.

Administrating authority
Means an administrating authority as required by section 23 of the CDEM Act, the Taranaki Regional Council is responsible for the provision of administrative and related services required by the Group.

Agencies
Means:
- Government agencies, including public service departments, non-public service departments, Crown entities, and Offices of Parliament;
- Non-government organisations; and
- Lifeline utilities.

Capability
Means the effectiveness of co-operation and co-ordination arrangements across agencies for the delivery of resources in the event of an emergency.

Capacity
Means the adequacy of resources in terms of quantity, and suitability of personnel, equipment, facilities and finances.

CDEM Group
Means a Civil Defence Emergency Management Group established under section 12 or re-established under section 22 of the Act. CDEM Group may at times be read to mean the Taranaki CDEM Group with regard to this Plan.

CEG
Means the Co-ordinating Executive Group established under section 20 of the Act, comprising representatives from local authorities, Emergency Services, District Health Boards, and CDEM Advisory Groups (refer to section 8.1.1 of this Plan).

CIMS
Means the New Zealand Co-ordinated Incident Management System. CIMS is an agreed method of incident management is to be employed by emergency responders for efficient incident management.

Civil Defence Emergency Management (CDEM)
Means the application of knowledge, measures and practices that:

- are necessary or desirable for safety of the public or property; and
- are designed to guard against, prevent, reduce or overcome any hazard or harm or loss that may be associated with any emergency.
- includes, without limitation, the planning, organisation, co-ordination, and implementation of those measures, knowledge and practices (section 4 of the Act).

Cluster
Means a group of agencies that interact to achieve common CDEM outcomes.

Community
May refer to specific individuals, agencies, stakeholders, organizations, local authorities, iwi authorities, community boards, community representatives etc. that may have a specific role, interest, or responsibility within civil defence.

Controller – Alternative Group
Means a person or persons appointed under section 26 of the Act to exercise the functions and powers of the Group Controller in the absence of the Group Controller.

Controller – Group
Means a person appointed under section 26 of the Act to exercise the functions and powers of the Group Controller or those functions and powers delegated by the CDEM Group during a state of local emergency within the group for which they are appointed.

Controller – Incident
Means the senior first responder to an incident. Incident control may transfer based on statutory or agreed responsibilities for control at particular incidents.

District Council's
Means district councils (in the case of the Taranaki CDEM Group area this includes the New Plymouth, Stratford and South Taranaki District Councils).

District Health Board
Means the provider of publicly funded health services for the population of a specific geographical area in New Zealand.

DoL
Means the Department of Labour.

Emergency
Means a situation that:

a) Is the result of a happening, whether natural or otherwise, including (without limitation) any explosion, earthquake, eruption, tsunami, land movement, flood, storm, tornado, cyclone, serious fire, leakage or spillage of any dangerous gas or substance, technological failure, infestation, plague, epidemic, failure of or disruption to an emergency service or a lifeline utility, or actual or imminent attack or warlike act; and
b) Causes or may cause loss of life or injury or illness or distress or in any way endangers the safety of the public or property in New Zealand or any part of New Zealand; and
c) Cannot be dealt with by emergency services, or otherwise requires a significant and co-ordinated response under the Act.

(Section 4 of the Act)

Emergency Centre (formerly called welfare centre)
Means the CDEM Group's local centres for direct involvement with the public for:

- the provision of advice and information about an emergency;
- temporary shelter for evacuees;
- registration of evacuees and relocation to accommodation; and
- the provision of aid to affected communities.

Emergency services
Means the New Zealand Police, New Zealand Fire Service, National Rural Fire Authority, rural fire authorities, hospital, health services (i.e. District Health Boards) and ambulance services (section 4 of the Act).

EMIS
Means Emergency Management Information Systems.

EOC
Means the CDEM Group's Emergency Operations Centre for the co-ordination of regional response activities by all responders, the management of Emergency Centres, and the care of communities. Normally this would be established at TEMO, but particular circumstances may necessitate an alternative location.

Evacuation
Means the temporary relocation (either spontaneous or organised) of all or part of a particular population or geographical region from a location that has been or is about to be affected by an emergency, to a place considered to be safe. Arrangements for pre-event and mandatory evacuation are detailed below.

Mandatory evacuation takes place when it is determined by the Police, NZ Fire Service or a CDEM controller that there is an absolute need to evacuate an area, usually on a large-scale and possibly for a long period of time (e.g. for more than 24 hours). Mandatory evacuation can be ordered under section 86 of the Civil Defence and Emergency Management Act 2002 and sections 28 and 28A of the Fire Service Act 1975. The Police or Fire Service will generally carry out this type of evacuation.

Pre-event evacuation occurs when the level of risk is uncertain and it is recommended to evacuate within a certain geographical area (e.g. suburb) or by risk factor (e.g. people with

certain health issues) until the level of risk is reduced. Pre-event evacuations may be further classed as either:

- **Voluntary:** where people are informed of a possible threat (e.g. an approaching cyclone), but no special evacuation measures (such as traffic control) are taken, and people may remain in the area if they choose.

- **Recommended:** when the threat (e.g. storm-surge) has a high probability of affecting people living in at-risk areas and they are encouraged to leave but the decision to do so is left to individuals. Evacuation plan support measures commence (e.g. transportation measures).

Self evacuation occurs when people decide to relocate from their usual home locations, either with or without instruction from authorities, but without making themselves known to such authorities.

Evacuee
Means a person unable or unwilling to stay in their usual place or residence as a result of an incident or emergency. May also be referred to as an IDP (Internally Displaced Person).

Fire service
Means the fire service units maintained by the New Zealand Fire Service, National Rural Fire Authority, rural fire authorities, airport rescue fire services, New Zealand Defence Force, and industrial fire brigades registered under section 36 of the Fire Service Act 1975, and other fire service resources owned by private organisations.

GIS
Means a geographic information system, which includes mapping software and its application with remote sensing, land surveying, aerial photography, mathematics, photogrammetry, geography and tools that can be implemented with GIS software. GIS captures, stores, analyses, manages and presents data that is linked to location.

GNS Science
Means the Institute of Geological and Nuclear Sciences.

HAZAG
Means the Hazards Advisory Group.

Hazard
Means something that may cause, or contribute substantially to the cause of, an emergency (section 4 of the Act) and involves all hazards, whether from natural or technological/human-made sources.

HSTLC
Means the Hazardous Substances Technical Liaison Committee.

Incident Controller
Means an Incident Controller in terms of the New Zealand Co-ordinated Incident Management System. This person may also be appointed by a Group Controller where a lead agency cannot be clearly identified or the incident is not discreet enough to allow normal incident management rules to apply.

Joint Committee
Means the CDEM Group, a Joint Standing Committee established under section 12 of the Act.

LAG
Means the Lifelines Advisory Group.

Lead agency
Means the organisation with current responsibility for managing an emergency.

Lifeline utility
Means an entity named or described in Part A Schedule 1 of the Act, or that carries on a business described in Part B of Schedule 1 of the Act. These include Radio New Zealand, Television New Zealand, International Airports, specific provincial airports, specific port companies, the gas industry, the electricity industry, the water industry, the waste water and the sewerage industry, the telecommunication industry, the roading industry, the fuel industry and the rail industry.

Lifelines Utility Coordinator (LUC)
Means a person appointed to coordinate the response of all lifeline utilities as defined by Schedule 1 Part A & B of the CDEM Act.

Local authority
Means a Regional Council or Territorial Authority (Local Government Act 2002).

Local emergency
Means a state of local emergency declared under section 68 or 69 of the Act.

MCDEM
Means the Ministry of Civil Defence and Emergency Management.

MPI
Means the Ministry of Primary Industries (formerly MAF)

MSD
Means the Ministry of Social Development.

National Civil Defence Emergency Management Plan Order
Means the National Civil Defence Emergency Management Plan made by Order in Council pursuant to section 39 of the Act.

National Controller
Means the person who is the National Controller in accordance with section 10 (section 4 of the Act).

National significance
Means any case where the Minister of Civil Defence or the Director of Civil Defence Emergency Management considers that:

- there is widespread public concern or interest; or
- there is likely to be significant use of resources; or

- it is likely that the area of more than one CDEM Group will be affected; or
- it affects or is likely to affect or is relevant to New Zealand's international obligations; or
- it involves or is likely to involve technology, processes, or methods that are new to New Zealand; or
- it results or is likely to result in or contribute to significant or irreversible changes to the environment (including the global environment).

NCMC
Means the National Crisis Management Centre.

NGO
Means a non-governmental organisation.

NPDC
Means the New Plymouth District Council.

NZFS
Means the New Zealand Fire Service.

Pandemic
Means an epidemic (a sudden outbreak) that becomes very widespread and affects a whole region, a continent or the world.

Peace time
Means then time where there is no emergency event to respond to or recover from, where the CDEM Group focus on readiness and reduction activities.

RAG
Means the Rural Advisory Group.

Recovery Co-ordinator
Means a Co-ordinator appointed by the Minister of Civil Defence under section 29 of the Act if the Minister is satisfied that a CDEM Group is unable to effect recovery. A Recovery Co-ordinator is responsible to the Director of Civil Defence Emergency Management and may have all the functions, duties and powers of a Group Controller.

Recovery Manager
Means a Manager appointed by the CDEM Group to give effect to Group co-ordination of recovery during and following an emergency.

Regional Council
Means a regional council named in Part 1 of Schedule 2 of the Local Government Act 2002. Regional Council may at times also be read as meaning the Taranaki Regional Council.

Risk
Means the chance of something happening that will have an impact on people and/or property – measured in terms of consequences and likelihood (refer to section 2).

SDC
Means the Stratford District Council.

SITRep
Means a situation report in an emergency issued by the CDEM Group.

STDC
Means the South Taranaki District Council.

State of emergency
Means a state of national emergency or a state of local emergency (section 4 of the Act).

State of local emergency
Means a state of local emergency declared under section 68 or section 69 (section 4 of the Act).

State of national emergency
Means a state of national emergency declared under section 66 (section 4 of the Act).

TCERT
Taranaki Community Emergency Response Team

TDHB
Means the Taranaki District Health Board.

TEMO
Means the Taranaki Emergency Management Office of the Taranaki CDEM Group located at 45 Robe Street, New Plymouth.

Territorial authority
Means a city council or a district council named in Part 2 of Schedule 2 of the Local Government Act 2002.

TRC
Means the Taranaki Regional Council.

TSVAG
Means the Taranaki Seismic Volcanic Advisory Group.

WAG
Means the Welfare Advisory Group.

Appendix II

Terms of Reference of CDEM Advisory Groups

Terms of Reference of CDEM Advisory Groups

Introduction

In this appendix, terms of reference are outlined for each advisory group. The following two clauses apply to all groups:

Intellectual Property

Intellectual property rights will be respected and held confidential as appropriate.

Working together

All members are expected to contribute positively to the functions of the Committee and should have the ability to negotiate on behalf of their organisations. The way in which this is undertaken is by Members:

- Actively participating in meetings
- Drawing on their own knowledge/experience where relevant
- Communicating and disseminating relevant information back to their organisations
- Working collaboratively, constructively, and cooperatively towards the shared objectives, with respect for others views
- Recognising others ways of working and their obligations to their organisations
- Sharing information freely between members
- Providing a safe place for discussion (media not present)
- Acting in good faith, with openness, honesty, integrity and impartially.

Welfare Advisory Group (WAG)

Purpose

The purpose of the Welfare Advisory Group (WAG) is to:

- Provide advice on welfare related issues to the Civil Defence Emergency Management Group through the Co-ordinating Executive Group.
- assist the CDEM Welfare Manager to coordinate the provision of welfare services in an emergency
- provide advice on welfare issues to the Controller during an emergency.

Functions

The key roles to be delivered by the WAG are:

During the Reduction Phase:

- seek funding from the CDEM Group for relevant projects;
- provide information to the welfare sector on reduction initiatives.

During the Readiness Phase:

- seek opportunities to network and train with CDEM in readiness for adverse events and support CDEM readiness planning and training;
- provide education to the welfare sector on CDEM readiness initiatives designed for the family and the business.
- ensure agencies on the WAG have business continuity plans in place;
- ensure the WAG has plans in place for the provision of welfare services.

During the Response Phase:

- provide sufficient resources for an effective welfare response;
- assist the CDEM emergency response effort in establishing priorities for assistance to communities and individuals affected by the adverse event;
- provide technical welfare advice to CDEM Emergency Operations Centres that may enhance emergency response efforts;
- continue to provide welfare services, counselling, liaison and advice to the affected communities and individuals.

Term of the Group

The Group will be ongoing.

Members

Members will comprise appropriate representatives from:

Emergency Management Officers
Animal Welfare Co-ordinator
Child Youth and Family Service
Ministry of Social Development (MSD)
New Zealand Red Cross
North Taranaki Neighbourhood Support
Salvation Army
Taranaki District Health Board

Te Puni Kokiri (TPK)
Recovery Manager
Bishops Action Foundation
MCDEM
Victim Support, New Plymouth
Victim Support, Stratford
Victim Support, Hawera
Rural Support Trust
NZ Housing Corporation
Accident Compensation Corporation
Inland Revenue Department
Ministry of Education

Governance
The WAG is governed by the Chair, the Regional Commissioner from the Ministry of Social Development. If required a deputy will be appointed from the WAG.

Sub-committees
Sub-committees to be established as required.

Relationships with other organisations and their committees
The Group liaises with the Rural Advisory Group (RAG), the Co-ordinating Executive Group (CEG), Taranaki Emergency Management Office and the Civil Defence Emergency Management Group (CDEM Group). The Chair of the WAG is a specialist advisor to the CEG.

Communications
The Public Information Management team is to prepare a key list of messages. During an emergency all communication messages are to be disseminated via the Group Controller.

Frequency of meeting
The WAG will meet 4 times a year (minimum).

Meetings are not public meetings as set out in the Local Government Act 1974 and Local Government Official Information and Meetings Act 1987.

Reporting
The WAG will be administered by the Taranaki Regional Council.

Taranaki Seismic and Volcanic Advisory Group (TSVAG)

Purpose

The Taranaki Seismic and Volcanic Advisory Group (TSVAG) shall be an advisory group to the Taranaki Civil Defence Emergency Management Group (CDEM Group) to provide a forum for discussion and planning for issues relevant to seismic and volcanic hazards in the Taranaki region.

Functions

The functions of the TSVAG are to:

During the reduction phase:

- provide a forum for discussion of issues relevant to the seismic and volcanic hazards and risks, and the provision of advice to the Co-ordinating Executive Group or Group Controller as appropriate;
- in conjunction with the CDEM Group, coordinate research relevant to hazards and risk so that information gathering is more effective and efficient;
- advise on the development of informed land use planning and infrastructure design for seismic and volcanic hazards;
- provide input into educational material in relation to reduction of risk from the volcanic and seismic hazards.

During the readiness phase:

- assist with the development of volcanic hazard planning documents deemed necessary by the CDEM Group;
- assist with the development of the Taranaki CDEM Group Plan;
- assist with the development and implementation of volcano and seismic awareness outreach programmes and educational resources;
- advise the Taranaki Regional Council of research activities of relevance being undertaken on the volcanic and seismic hazard in or relevant to the Taranaki region;
- provide expert comment on the annual Taranaki Seismicity report prepared by GNS.

During the response phase:

- provide advice and guidance to the Taranaki CDEM Group in response to a volcanic or seismic event.

During the recovery phase:

- provide advice and guidance to the Taranaki CDEM Group on recovery following a volcanic or seismic event .

Composition

The composition of the TSVAG will be determined by the CDEM Group in order to provide expert scientific advice on readiness, reduction, response and recovery issues relating to Taranaki volcanic and seismic hazards. The CDEM Group may also co-opt members as required.

Membership will comprise appropriate representatives from:

Taranaki Regional Council	(2 members)
GNS Science (GNS)	(2 members)
Massey University	(2 members)
University of Auckland	(2 members)
Department of Conservation	(1 member)
Victoria University	(1 member)
Ministry of CDEM	(1 member)
Earthquake Commission	(1 member)

Representatives from surrounding CDEM Groups will be invited to participate in the annual meeting of the TSVAG and as otherwise determined from time to time by the TSVAG.

Meetings

The TSVAG will meet on an annual basis to conduct routine business. Members may also request additional meetings of the TSVAG through the Taranaki Regional Council, if required.

Governance

The TSVAG will be chaired by a member of the TSVAG on a two-yearly rotational basis.

Reporting

The TSVAG will be administered by the Taranaki Regional Council, and minutes and outcomes reported to the CEG and CDEM Group.

Taranaki Rural Advisory Group (RAG)

Purpose

The purpose of the Taranaki Rural Advisory Group (RAG) is to:

- advise the Civil Defence Emergency Management Group through the Co-ordinating Executive Group;
- advise the Controller during an emergency;
- report to the Ministry for Primary Industries (MPI);
- liaise with the Welfare Advisory Group on welfare issues in the rural community
- provide a forum for rural issues

Objectives/Functions

The key roles to be delivered by the RAG are:

During the Reduction Phase:

- Seek funding from the CDEM Group for relevant risk reduction projects.
- Inform the Civil Defence Emergency Management (CDEM) Group and the Co-ordinating Executive Group (CEG) on the impacts of land use on natural hazards in Taranaki.
- Provide information to the rural sector on reduction initiatives.
- Develop and maintain a network of contacts for the rural sector throughout the Taranaki region.

During the Readiness Phase:

- Identify experienced rural practitioners in Taranaki who may take a lead role in supporting CDEM during adverse events which require a rural response.
- Seek opportunities to network and train with CDEM in readiness for adverse events and support CDEM response and recovery planning and training.
- Provide education to the rural sector on CDEM readiness initiatives designed for the family and the business.

During the Response Phase:

- Provide sufficient manpower to be an effective RAG. The RAG is to be located at the Federated Farmers Office in New Plymouth in the response phase.
- Provide a liaison person to be present at TEMO during the response phase.
- Assist the CDEM emergency response effort to establish priories for assistance to rural communities and individuals affected by the adverse event.
- Provide technical agriculture advice to CDEM Emergency Operations Centres that may enhance emergency response efforts.
- Continue to provide welfare services, counselling, liaison and advice to the rural community in conjunction with CDEM Welfare.
- Assist CDEM in accessing any emergency funding facilities available to the agricultural sector via MPI.
- Maintain reporting lines between CDEM and MPI.

During the Recovery Phase:

- Provide sufficient manpower to be an effective RAG. The RAG is to be located at the Federated Farmers Office in New Plymouth in the response phase.
- Provide a liaison person to the Recovery Structure during the recovery phase.

- Assist the CDEM and MPI recovery effort to establish priorities for assistance to rural communities and individuals affected by the adverse event.
- To liaise and support the Taranaki Rural Support Trust during recovery
- Provide technical agriculture advice to CDEM recovery structure and MPI that may enhance recovery efforts.
- Continue to provide welfare services, counselling, liaison and advice to the rural community in conjunction with CDEM Welfare.
- Assist CDEM in accessing any recovery funding facilities available to the agricultural sector.
- Maintain reporting lines to CDEM and MPI.

Term of the Group
The Group will be ongoing.

Members
Members will comprise appropriate representatives from:

Federated Farmers
Taranaki Rural Support Trust
PGG Wrightson
Road Transport Association
MPI Policy
Ministry of Social Development
Meat and Wool NZ
Fonterra
Taranaki Regional Council
District Councils
Chairperson of the Taranaki Regional Rural Fire Committee
NZ Forestry Association
Parininihi Ki Waitotara (PKW)
Taranaki Civil Defence Emergency Management
Ministry of Civil Defence Emergency Management
Dairy NZ
Livestock Improvement Co-operation
Tegel Foods Ltd
Taranaki Veterinarians Representative
North Taranaki Neighbourhood Support
AsureQuality
New Zealand Police
Representative from the Welfare Advisory Group
Department of Conservation

Governance
The RAG is governed by the Chair (i.e. the Regional President of Federated Farmers). If required a deputy will be appointed from either the Rural Support Trust or Federated Farmers.

Sub-committees
Sub-committees to be established as required.

Relationships with other organisations and their committees

- The Group liaises with the Welfare Advisory Group (WAG) and has a member on the Welfare Advisory Group.
- The chairperson of the Rural Advisory Group (RAG) is a member of the Co-ordinating Executive Group (CEG).
- The chairperson of the Rural Advisory Group (RAG) is a member of the Hazards Advisory Group (HAZAG)
- Reporting lines are to be maintained between RAG and MPI.

In a drought situation

Droughts have significant implications for the rural community, and the RAG would play a pivotal role in the response to and recovery from a drought in the Taranaki region.. In an emerging drought situation the RAG will be convened either by the chair or the regional council to discuss whether a drought declaration is required. If a drought declaration is deemed necessary the RAG will effectively become a drought committee and meet regularly to discuss recovery issues and assistance.

Communications

The CDEM Communication team is to prepare a key list of messages. During an emergency all communication messages from the RAG are to be authorised by the Group Controller. During peace time the Group is to utilise the Taranaki Regional Council's public information team.

Frequency of meeting

The RAG will meet 4 times a year (minimum).

Reporting

The Rural Advisory Group will be administered by the Taranaki Regional Council and outcomes reported to the CEG and CDEM Group. Federated Farmers are to act as backup administration, as and when required.

Hazardous Substances Technical Liaison Committee (HSTLC)

Purpose

The purpose of the Hazardous Substances Technical Liaison Committee (HSTLC) is to:

- Provide the skills and expertise to support, in an advisor capacity, integrated agency planning activity that addresses the readiness for, and response to hazardous substance incidents.
- Give effect to the CDEM Group Plan in all matters related to the above.

Objectives/Functions

The key roles to be delivered by the HSTLC are:

During the Reduction Phase:

- Consider and advise on the appropriate of land use controls delivered by the District Council, and if necessary, provide recommendations for the CDEM Group to consider as decisions.
- Advise on the appropriate management of facilities using hazardous substances (e.g. with storage and transportation)

During the Readiness Phase:

- Provide a forum for discussion of issues relevant to hazardous substances and the provision of advice to the Co-ordinating Executive Group.
- Assist with the development of hazardous substance incident action plans deemed necessary by the CDEM Group.
- Assist with the development of the Taranaki Civil Defence Emergency Management Group Plan.
- Establish working groups to address matters of specific concern (training, exercises, contingency planning etc.)
- Advise on such other matters as required by the Coordinating Executive Group.

During the Response Phase:

- Provide a specialist response group capable of providing expert advice for the safe and effective management of hazardous substance emergencies.

During the Recovery Phase:

- Actively promote incident debrief where required,[45] and make recommendations to the Coordinating Executive Group for improved future response and interagency cooperation.

Term of the Committee

The Committee will be ongoing.

Members

The composition of the HSTLC shall be divided into two distinct groups. The first group (tier 1) comprises emergency services and the principal statutory agencies that will attend

[45] Outside of the normal meeting schedule.

regular meetings of the HSTLC. The second group (tier 2) comprises agencies that may provide specialist advisors for initial response and emergency planning/training. Other agencies/bodies may join the committee by approval from the HSTLC.

Members will comprise appropriate representatives from:

Tier 1	Tier 2	
New Zealand Fire Service	Land Transport New Zealand	Port Taranaki Ltd
New Zealand Police	Maritime Safety Authority	Dynea NZ Ltd
St John Ambulance	Civil Aviation Authority	Ballance Agri-Nutrients Ltd
TDHB Public Health	Fonterra	Vector
Department of Labour	Shell Todd Oil Services	Contact Energy
New Plymouth District Council	Methanex New Zealand Ltd	Greymouth Petroleum
Stratford District Council	Kiwi Rail	
South Taranaki District Council	Dow Agro Sciences	
Taranaki Regional Council	New Zealand Police - CVIU	

Governance
The HSTLC will be chaired by the New Zealand Fire Service.

Frequency of meeting
The HSTLC will meet quarterly.

Reporting
The HSTLC will be administered by the Emergency Management Office of the Taranaki Regional Council, and minutes and outcomes reported to the CEG and CDEM Groups.

Sub-committees
Working groups may be established, within the HSTLC, to address matters of specific concern (e.g. training, exercises, contingency planning etc).

Relationships with other organisations and their committees
The Hazardous Substances Technical Liaison Committee (HSTLC) shall be an advisory group to the Taranaki Civil Defence Emergency Management Group, through the Co-ordinating Executive Group. The committee may also liaise with other advisory groups of the CDEM or other partners for mutual benefit.

Communications
During a declared civil defence emergency, all public communication messages are to be disseminated through the Group Controller. Incidents other than declared civil defence emergencies will require notification and appropriate action from various groups, depending on the scenario.

The following parties are deemed responsible to manage the incident in the following hazardous substances scenarios:

Police: where property or life is endangered, in the case of death, for traffic management, for management of evacuation procedures, and for management if the spill occurs on the road.
Taranaki Regional Council: to be notified when the incident involves discharge to air, land or water.
Department of Labour: to be notified of incident involves a hazardous substance in the workplace.
TDHB: to advise on the management of incidents where there are potential or actual public health issues.
EMO: when secondary assistance is required.
Ambulance: Where there are medical emergencies resulting from a hazardous scenario, or where a responding agency requests medical support.
Fire: responsible to contain and make safe any hazardous substance spilt or on fire and decontaminate any person or persons contaminated by a hazardous substance.

The NZ Fire Service is preparing on behalf of Taranaki CDEM, a multi agency incident response plan for hazardous substances. This plan is to include the identification of key agencies and key roles.

Funds

The HSTLC committee does not have the right to raise, hold or expend funds. Other than as specifically provided for and directed by the CDEM group. Costs of participation in HSTLC shall fall where they lie.

Taranaki Hazards Advisory Group (HAZAG)

Purpose

The Taranaki Hazards Advisory Group (HAZAG) shall be an advisory group to the Taranaki Civil Defence Emergency Management Group, through the Co-ordinating Executive Group.

The Taranaki Hazards Advisory Group will promote a better understanding of the hazards (natural and man-made) that are present in Taranaki, and of the options for avoiding or reducing the societal risks arising from those hazards. This promotion will be both to those within the Taranaki CDEM Group and to organisations outside the Group.

The chairs of the Taranaki Seismic and Volcanic Advisory Group, and the Hazardous Substances Technical Liaison Committee sit on the HAZAG to ensure cooperation and alignment between the groups and promote efficiency and effectiveness in hazard and risk management.

Objectives

Goals	Objectives
1) All hazards (natural and man-made) within Taranaki region are identified and their risk assessed.	a) Identify and inform the Group of any natural or man-made hazards and associated hazard zones within the Taranaki region. b) Pursue or access research that furthers knowledge and understanding of regional hazards.
2) All agencies that need to plan for emergency events are advised of hazards as identified by the HAZAG.	a) Assist in the preparation of the Group Plan with respect to hazard identification. b) Promote a better community understanding of the hazards that threaten Taranaki from both natural and man-made sources. c) Assist in the dissemination of information on regional hazards and risks. d) Identify agencies responsible for creating and managing response/emergency plans for each significant hazard, and report to the CEG identifying any deficiencies.

Composition

The group will be comprised of:

- The chair of the Co-ordinating Executive Group, or his/her representative;
- The chairs of the Taranaki Civil Defence Emergency Management Advisory Groups (TSVAG, HSTLC, WAG, RAG, LAG, HEMG), or their representatives;
- Two representatives from each of the three district councils, being generally representatives of planning and regulatory services, and of asset management/ engineering services;
- Three representatives of the Taranaki Regional Council, being generally the senior officer responsible for administration of civil defence emergency management by the Council, a policy analyst or other officer responsible for hazards, and an emergency management officer;
- Representatives of Emergency Services.

The Group will have the right to co-opt for the time being other participants as deemed necessary to achieving the Group's goals and objectives.

Duties related to Hazard Management (CDEM Act 2002)

The Civil Defence Emergency Management Act 2002 includes (section 3) a requirement for local authorities to co-ordinate, through regional groups, planning in the area of risk reduction and encourages co-operation and joint action.

The Act also requires every Civil Defence Emergency Management Group to prepare and approve a Group Plan. The plan should aim at reducing the risk that natural and man-made hazards pose to communities. Hazard identification is one step that must be taken before any risk reduction measures can be taken.

Meetings

The HAZAG will meet twice per year. These meetings will be scheduled prior to the Co-ordinating Executive Group meetings, to allow for reports to be presented.

The HAZAG may also meet on other occasions for presentations or discussions to help meet the above goals and objectives including but not limited to attending meetings hosted by other parties and/or events hosted by the HAZAG for the sake of other parties.

Annual Business Plan

The HAZAG shall prepare an annual business plan of projects and activities to help meet its goals and achieve its objectives. The plan shall be presented to the CEG and approved by the Taranaki CDEM Group prior to implementation.

Resources and Budget

The Taranaki Civil Defence and Emergency Management Group shall provide and fund administrative services.

The HAZAG may seek funding for business plan projects and activities from the Taranaki CDEM Group via the Coordinating Executive Group (CEG), or by contribution from HAZAG members, or from other parties subject to the prior approval to do so from the Taranaki CDEM Group.

Funding contributions shall be determined when the annual business plan is adopted by the HAZAG.

Governance

The chairperson shall be elected tri-annually at the first meeting following local government elections. The elected Chair of the HAZAG is a voting member of the Coordinating Executive Group and represents the interests of the HAZAG on that committee.

Decisions made by the HAZAG shall be by consensus. If consensus cannot be reached, decisions shall be by 3/4 majority.

Reporting

The Hazards Advisory Group will be administered by the Taranaki Regional Council, with outcomes reported to the CDEM Group and the CEG.

Lifelines Advisory Group (LAG)

Purpose

The Taranaki Lifelines Advisory Group (LAG) shall be an advisory group to the Taranaki Civil Defence Emergency Management Group, through the Co-ordinating Executive Group to provide a forum for discussion and planning for issues relevant to infrastructure services in an emergency.

Functions

The functions of the LAG are to:

During the reduction phase:

- Identify natural hazards zones within Taranaki which present hazard risks to key lifeline utilities. Advocate the inclusion of these zones in council district plans and in Council GIS or other information systems so that hazard risks are known when applications for land use consent are being considered.

- **During the readiness phase:**
  Identify and inform the CDEM Group of any issues that will assist lifeline utilities to fully meet the requirements of Section 60 of the CDEM Act 2002.
- Prepare an annual business plan of projects and activities to help meet its goals and achieve its objectives
- Advise the CDEM Group of the state of preparedness of lifeline utilities to respond to and recover from civil defence and emergency events.
- Address lifeline-related issues at a national level when appropriate.
- One attendee on behalf of the LAG shall participate in the annual National Lifelines Forum or equivalent. Reasonable and actual costs of travel and accommodation will be met by the Taranaki CDEM unless otherwise arranged.
- Identify hazards and risks from both natural and man- made environments that threaten lifeline utilities' business continuance.
- Assist in the preparation and give effect to the Group Plan in respect of any matters or actions relating to lifelines and infrastructure.
- Create understanding between lifeline utilities in preparation to enable full co-operation and co-ordination during emergencies, and other wise to generally foster collaboration in common or mutually beneficial partnerships.
- Provide opportunities for lifeline utilities to participate in CDEM exercises.
- Maintain Standard Operating Procedures for Lifeline Utility Coordinators for use in emergencies
- Identify interdependencies between lifeline utilities and with the key regional lifeline facilities (fire, police, hospitals)

During the Response phase:

- Respond to emergencies following the communication process and share information as stated in the Standard Operating Procedures.
- Provide a pool of trained lifeline utility co-ordinators to provide technical advice on lifeline utility issues for the Taranaki CDEM Group.
- Provide co-ordinated situation awareness of lifeline utility provision during an emergency event.

During the Recovery Phase:

- Technical advice on lifeline utility issues will be provided to the Taranaki CDEM Group.
- Assist the Recovery Manager in the planning and implementation of the recovery phase of the event.

Composition

The LAG is formed of utilities that provide infrastructure services to the community such as transportation, energy, communications, water and waste. Membership will comprise appropriate representatives from:

Transportation	Energy	Communications	Water and waste	Co-opted members
New Plymouth District Council	Powerco	Telecom	New Plymouth District Council	Taranaki CDEM Controller
Stratford District Council	Contact Energy	Vodafone	Stratford District Council	MCDEM REMA
South Taranaki District Council	Liquigas	Kordia	South Taranaki District Council	
New Zealand Transport Agency	Origin Energy			
KiwiRail	TrustPower			
Port Taranaki	TransPower			
New Plymouth Airport	Methanex			
	Shell Todd Oil Services			
	Vector			
	Todd Energy			

The LAG may change membership or invite observers as proposed.

Meetings

The LAG will meet four times per year. These meetings will be scheduled prior to the Co-ordinating Executive Group meetings, to allow for LAG reports to be presented to the CEG. The LAG may also meet on other occasions for presentations or discussions to help meet the above goals and objectives.

Resources and Budget

The Taranaki Civil Defence and Emergency Management Group shall provide and fund administrative services.

The LAG may seek funding for business plan projects and activities from the Taranaki CDEM Group via the Coordinating Executive Group (CEG), or by contribution from LAG members.

Governance

The chairperson shall be elected tri-annually at the first meeting following local government elections. The elected Chair of the LAG is a voting member of the Coordinating Executive Group and represents the interest of the LAG on that committee. The LAG shall also appoint one or more Lifelines Utilities Co-ordinators to represent lifelines within the EOC structure for operations.

Decisions made by the LAG shall be by consensus. If consensus cannot be reached, decisions shall be by 2/3 majority.

Reporting
The Lifelines Advisory Group will be administered by the Taranaki Regional Council and outcomes reported to the CEG and the CDEM Group.

Health Emergency Management Group (HEMG)

Purpose
The Health Emergency Management Group (HEMG) provides strategic direction and risk management covering the "4 Rs" of emergency management - risk reduction, readiness, response and recovery for Taranaki DHB.

The HEMG will be an advisory group to the Taranaki Civil Defence Emergency Management (CDEM) Group, through the Coordinating Executive Group

Definitions
Emergency - any event that may have an adverse influence on Taranaki DHB.

Functions
The group will:

- Identify any issues related to Emergency Reduction, Readiness, Response and Recovery and ensure that appropriate action plans are established and implemented.
- Ensure that Taranaki DHB complies with all legal requirements and national standards regarding emergency planning and response co-ordination.
- Oversee the development, maintenance and testing of the current Taranaki DHB related emergency plans.
- Provide advice, support and co-ordination in the event of an emergency or incident impacting on local and or regional health service provision. This includes responsibility for an initial response by evaluating the situation and implementing the appropriate response to coordinate or manage the emergency. This may involve establishing an Incident Management Team (IMT) and activation of the Taranaki DHB EOC.
- Identify training needs related to EM e.g. training key DHB staff in emergency response.
- Report to the CEO on issues of importance.
- Provide health related advice to the CDEM Group
- Assist with development of the CDEM Group Plan
- Liaise with the Taranaki Health Emergency Forum regarding issues of mutual concern.
- Liaise with TEMO, the Midland Regional EMG, the Ministry of Health and other DHBs in the event of a regional emergency affecting health services.
- Link to the SEPC and report to it as part of the Emergency Planning function

Governance
Manager : Quality/Risk
If the Chairperson is unavailable at any meeting, the members present shall appoint an Acting Chairperson for that meeting.

Membership
Quality/Risk Manager (Chairperson)
Ambulance Service Manager
Communications Advisor
ED Head of Department
Emergency Management Coordinator (Minutes)
Engineering Services
Hospital Operations Manager
Infection Control CNS
Medical Officer of Health

Principal HPO
Support Services Coordinator

Co-opting Power
The Committee/Meeting shall have the power to co-opt other members as required.

Quorum
A quorum shall consist of not less than half of the members (6)

Meeting Time Frame
Monthly or more regularly as required

Conflict of Interest
To be declared when a potential conflict exists with an agenda item. The Committee will determine the appropriate response.

Reporting Relationship

- Report to CEO
- Report to the Ministry of Health through Midland REMA
- Report to CEG

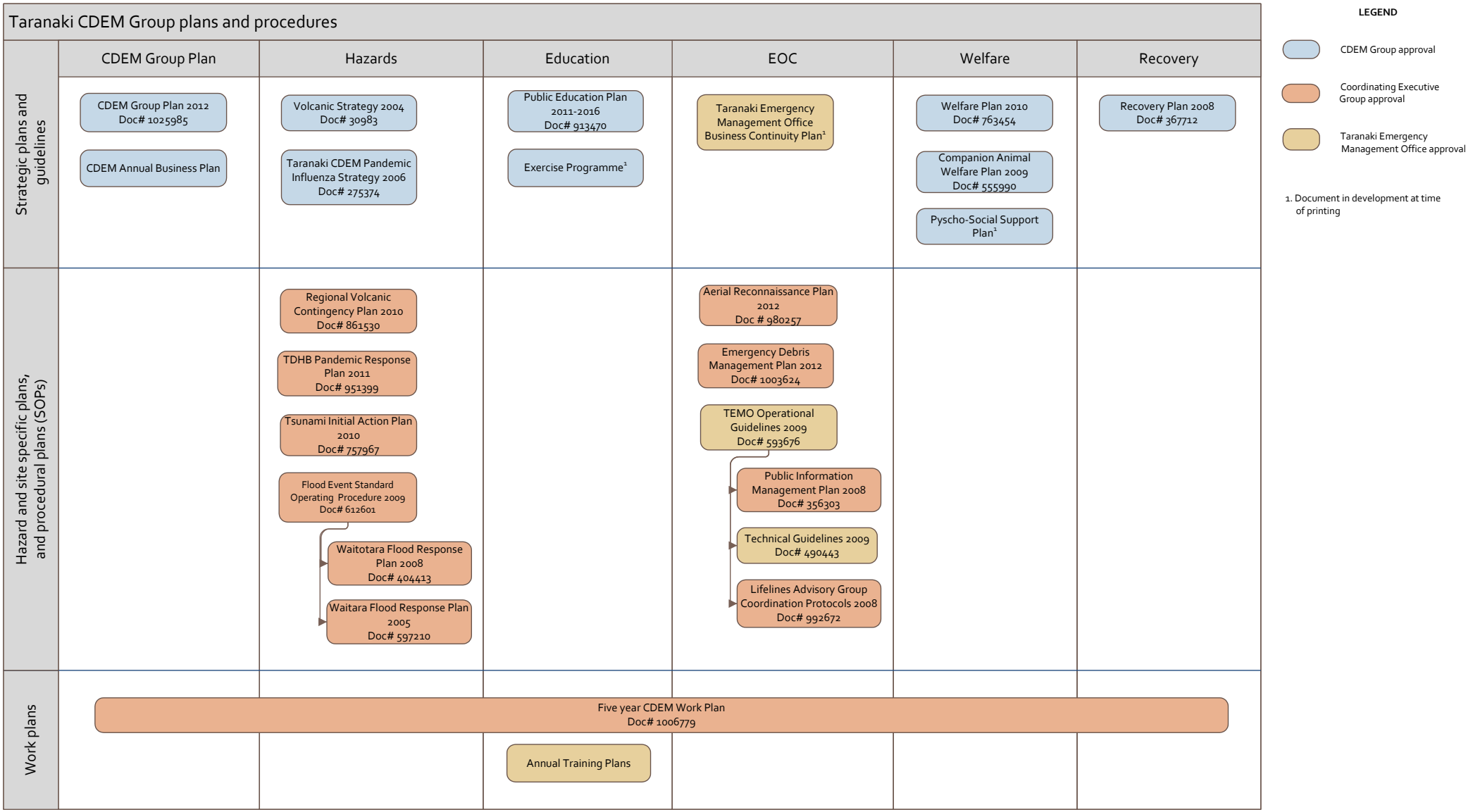
Minute Circulation
All members of the Committee

Abbreviations used

HEMP	Health Emergency Management Plan
EOC	Emergency Operations Centre
TEMO	Taranaki Emergency Management Office
SEPC	Safe Environment and Practice Committee
IMT	Incident Management team
HPO	Health Protection Officer
REMA	Regional Emergency Management Advisor
CEG	Coordinating Executive Group
HEF	Health Emergency Forum

Appendix III

CDEM Group Plans and Procedures


Taranaki CDEM Group plans and procedures
CDEM Group Plan
Hazards
Education
EOC
Welfare
Recovery
Strategic plans and guidelines
CDEM Group Plan 2012 Doc# 1025985
CDEM Annual Business Plan
Volcanic Strategy 2004 Doc# 30983
Taranaki CDEM Pandemic Influenza Strategy 2006 Doc# 275374
Public Education Plan 2011-2016 Doc# 913470
Exercise Programme[1]
Taranaki Emergency Management Office Business Continuity Plan[1]
Welfare Plan 2010 Doc# 763454
Companion Animal Welfare Plan 2009 Doc# 555990
Pyscho-Social Support Plan[1]
Recovery Plan 2008 Doc# 367712
Hazard and site specific plans, and procedural plans (SOPs)
Regional Volcanic Contingency Plan 2010 Doc# 861530
TDHB Pandemic Response Plan 2011 Doc# 951399
Tsunami Initial Action Plan 2010 Doc# 757967
Flood Event Standard Operating Procedure 2009 Doc# 612601
Waitotara Flood Response Plan 2008 Doc# 404413
Waitara Flood Response Plan 2005 Doc# 597210
Aerial Reconnaissance Plan 2012 Doc # 980257
Emergency Debris Management Plan 2012 Doc# 1003624
TEMO Operational Guidelines 2009 Doc# 593676
Public Information Management Plan 2008 Doc# 356303
Technical Guidelines 2009 Doc# 490443
Lifelines Advisory Group Coordination Protocols 2008 Doc# 992672
Work plans
Five year CDEM Work Plan Doc# 1006779
Annual Training Plans
LEGEND
CDEM Group approval
Coordinating Executive Group approval
Taranaki Emergency Management Office approval
1. Document in development at time of printing

Appendix IV

Risk profile process

Risk profile process

This appendix outlines the process of creating the risk profile for Taranaki, and explains the results in greater detail.

Background

The risk analysis, evaluation and prioritisation process for this plan was conducted through a combination of facilitated workshops with key stakeholders and analysis of available scientific hazard and historical event data. This was done in consideration of *The Directors Guidelines for CDEM Groups [DGL 09/09]* to ensure a nationally consistent approach.

While the risk profile is formed from a series of educated estimates on potential implications of an event, it assists CDEM to make informed decisions when planning risk reduction, readiness, response, and recovery activities.

A comprehensive list of hazards that pose risks to the communities of Taranaki was compiled (table 4). While the CDEM Group and Emergency Services will prepare for and manage for these hazards, some events may result in consequences that are beyond the capacity to be managed within the region. Hazards that are of national significance have been excluded from the in depth evaluation, as national plans and policies are likely to be in place to manage them (eg. terrorism, and economic failure).

Workshop one: risk analysis

The purpose of workshop one was to assess likelihood, consequences, and seriousness of the hazards that pose a risk to Taranaki.

Attendees:	
John Sutton	New Plymouth District Council
Peter Kreft	Metservice
Gill Jolly	GNS Science
Micheal Uddstrom	NIWA
Mike Broker	Taranaki District Health Board
Andrea Murray	Assure Quality
Peter Adamski	Rural Advisory Group Chairman
Louise McLay	Recovery Manager Taranaki CDEM Group
Ian Wilson	Ministry of Civil Defence
Gary Bedford	Taranaki Regional Council
Mike Langford	Taranaki Regional Council
Des Paulsen	Taranaki Regional Council
Lisa Crowley	Taranaki Regional Council
Andrew Cotter	Taranaki Regional Council
Ange Lenz	Taranaki Regional Council

Measures of the consequence of each hazard (Table 1) and the likelihood of each hazard (Table 2) were assessed using the indicators below.

Table 1 Measures of hazard consequence

Level	Descriptor	Detail description
1	Insignificant	No injuries, little or no damage, low financial loss
2	Minor	First aid treatment, minor building damage, medium financial loss
3	Moderate	Medical treatment required, moderate building and infrastructure damage, high financial loss
4	Major	Extensive injuries, high level of building and infrastructure damage, major financial loss
5	Catastrophic	Deaths, most buildings extensively damaged, and major infrastructure failure, huge financial loss

Table 2 Measures of hazard likelihood

Level	Descriptor	Detail description
A	Almost certain	Is expected to occur in most circumstances
B	Likely	Will probably occur in most circumstances
C	Possible	Might occur at some time
D	Unlikely	Could occur at some time
E	Rare	May occur in exceptional circumstances

The risk posed by each hazard could then be evaluated using the following risk matrix (Table 3). Table 4 on the following page shows the results of this analysis.

Table 3 Hazard analysis matrix

Likelihood	Consequences				
	1 Insignificant	2 Minor	3 Moderate	4 Major	5 Catastrophic
A Almost certain	Moderate	High	Very high	Extreme	Extreme
B Likely	Low	Moderate	High	Very high	Extreme
C Possible	Low	Moderate	Moderate	High	Very high
D Unlikely	Very low	Low	Moderate	High	Very high
E Rare	Very low	Very low	Low	Moderate	High

Table 4 Results of the risk analysis

	Likelihood	Consequence	Risk Rating
Damaging winds	Almost certain	Moderate/Major	VeryHigh/Extreme
Volcanic Eruption - Mt Taranaki – Volcanic lahars & assoc floods	Almost certain	Moderate	Very High
Slope instability (Eastern Hill Country)	Almost certain	Moderate	Very High
Biological – Biosecurity incursion	Possible	Catastrophic	Very High
Tornado	Almost certain	Moderate	Very High
Public Health threat – Infectious human disease and pandemic	Possible	Major/Catastrophic	High/Very High
Economic failure (recession/depression)	Possible	Major	High
Earthquake (local) – Inglewood fault	Possible	Major	High
Earthquake (local) – Waverley fault	Possible	Major	High
Earthquake (local) – Oaonui fault	Possible	Major	High
Earthquake (local) – Unknown faults	Possible	Major	High
Road network failure – Long term	Possible	Major	High
Information and Communication Technology failure – Long term	Possible	Major	High
Terrorism/external threat/nuclear threat	Unlikely	Catastrophic	High
Water supply contamination (Chemical or biological)	Rare	Catastrophic	High
Hazardous substance – Oil spill	Rare	Catastrophic	High
War	Rare	Catastrophic	High
Major transport accident – Roading	Unlikely	Major	High
Electricity (network local supply) failure – Long-term[46]	Unlikely	Major	High
Road network failure – Short term	Likely	Moderate	High
Flooding inundation– Lower Waitara River	Unlikely	Major	High
Flooding inundation – Eastern Hill Country	Almost certain	Minor	High
Flooding inundation - Stony River	Almost certain	Minor	High
Gas failure – high pressure gas pipeline	Unlikely	Major	High
Sea state - Marine waves	Almost certain	Minor	High
Slope instability (Mt Taranaki)	Likely	Moderate	High
Riverbed aggradation	Almost certain	Minor	High
Major transport accident – Air	Rare	Major/Catastrophic	Moderate/High
Extraterrestrial object	Rare	Major/Catastrophic	Moderate/High
River and stream bank erosion	Almost certain	Insignificant/Minor	Moderate/High
Flooding inundation – Lower Tongaporutu	Almost certain	Insignificant/Minor	Moderate/High
Volcanic Eruption - Mt Taranaki – Tephra (Ash fall)	Likely	Minor/Moderate	Moderate/High
Volcanic Eruption - Mt Taranaki – Pyroclastic flows	Possible	Moderate	Moderate
Tsunami	Likely	Minor	Moderate
Lightning	Almost certain	Insignificant	Moderate
Electricity (network local supply) failure – Short-term	Likely	Minor	Moderate
Hazardous substance – Local ground and water (spillage or leakage)	Likely	Minor	Moderate
Hazardous substance – Widespread/industrial (spillage or leakage)	Likely	Minor	Moderate
Drought	Possible	Moderate	Moderate
Flooding inundation – Lower Waitotara River	Likely	Minor	Moderate
Volcanic Eruption - Mt Taranaki – Earthquakes	Almost certain	Insignificant	Moderate
Structural failure (flood retention dams, stadiums (Yarrows), hospitals (TDHB))	Rare	Major	Moderate
Coastal hazard - Erosion	Almost certain	Insignificant	Moderate
Water failure – major urban supply – Long term	Rare	Major	Moderate
Water failure – major urban supply – Short term	Rare	Major	Moderate
Major transport accident – Marine/Port	Rare	Major	Moderate
Flooding inundation – New Plymouth Central Business District	Unlikely	Moderate	Moderate
Flooding inundation – Lower Waiwhakaiho	Unlikely	Moderate	Moderate
Severe Hail	Possible	Minor	Moderate

[46] Long term (unless otherwise stated) applies to emergencies lasting longer that one day, short term applies to emergencies lasting less than one day.

	Likelihood	Consequence	Risk Rating
Severe Frost	Possible	Minor	Moderate
Small structure failure	Possible	Minor	Moderate
Fire – Structural downwind effects	Unlikely	Moderate	Moderate
Information and Communication Technology failure – Short term	Unlikely/Rare	Moderate/Insignificant	Moderate
Water failure – small community supply (including drought) – Long term	Unlikely	Moderate	Moderate
Water failure – small community supply (including drought) – Short term	Possible	Minor	Moderate
National Event	Rare	Minor	Moderate
Earthquake – distant fault	Possible	Insignificant	Low
Sewerage failure – Long term	Unlikely	Minor	Low
Major transport accident - Rail	Unlikely	Minor	Low
Gas failure – local gas supply	Unlikely	Minor	Low
Fire – Vegetation downwind effects	Possible	Insignificant	Low
Volcanic Eruption - Mt Taranaki – Volcanic gases & acid rains	Likely	Insignificant	Low
Flooding inundation - Stratford	Unlikely	Minor	Low
Heat wave	Rare	Moderate	Low
Heavy snow beyond National Park Boundary	Unlikely	Insignificant	Very Low
Flooding inundation - Hawera	Rare	Minor	Very Low
Volcanic Eruption - Distant source – Tephra	Possible	Insignificant	Very Low
Volcanic Eruption - Distant source – Volcanic gases & acid rains	Rare	Insignificant	Very Low
Volcanic Eruption - Mt Taranaki – Lava flows	Unlikely	Insignificant	Very low
Flooding inundation – Opunake	Rare	Minor	Very Low

Work shop two: risk evaluation

The purpose of workshop two was to assess seriousness, manageability, and growth of hazards to complete the risk profile.

Attendees:

Ian Wilson	Ministry of Civil Defence
Gary Bedford	Taranaki Regional Council
Mike Langford	Taranaki Regional Council
Des Paulsen	Taranaki Regional Council
Lisa Crowley	Taranaki Regional Council
Samantha Jamieson	Taranaki Regional Council

The SMG risk evaluation model

The risk evaluation provides a useful way of determining priorities for significant CDEM Group risks. The SMG model is an adaptation of the 'SMUG' model used in the first generation Plans. The new model takes into account:

- The **'seriousness'** of the hazard consequence.
- The **'manageability'** difficulty in relation to the hazard.
- The likelihood that there will be **'growth'** in either the frequency of the hazard or the community exposure to the hazard.

The final score from this analysis allows for the priorities to be set for CDEM planning and results are shown in Table 9. Each component of the analysis is detailed below.

Hazard seriousness

Table 5 below shows the measures of hazard seriousness that were used. Table 6 below shows the how impacts on the four different environments were considered. In calculating the overall seriousness score, a higher weighting was given to the social area (50%), with 25%

weighting to built environment impact, 15% to economic and 10% to natural environment impact. This reflects the higher priority given by CDEM to human life and safety and community resilience. The weighted score is multiplied by 2 to give a total score out of 10.

Table 5 Measures of hazard seriousness

Level	Descriptor	Detail description
1	Insignificant	No injuries, little or no damage, low financial loss
2	Minor	First aid treatment, minor building damage, medium financial loss
3	Moderate	Medical treatment required, moderate building and infrastructure damage, high financial loss
4	Major	Extensive injuries, high level of building and infrastructure damage, major financial loss
5	Catastrophic	Deaths, most buildings extensively damaged, and major infrastructure failure, huge financial loss

Table 6 Social, built, economic and natural impact ratings

Community/Social Impact	
1.	No injuries or deaths and/or only little disruption to small number of aspects of society which are overcome almost immediately.
2.	Some minor injuries, and/or noticeable disruption to a few aspects of society in the short-term (a few days).
3.	Medical treatment required to a number of people, possibly 1-2 deaths, and/or several services are impacted to varying degrees for an extended period (weeks) but damage and service loss is temporary. Displacement of people from a small area for a long period of time.
4.	Extensive injuries/illness to hundreds of people, and/or most social services are severely impacted (cessation) for a long-term period (several weeks/months). Large numbers of permanent closures of businesses/services. Large numbers of displaced people for a long period of time.
5.	Extensive injuries/illness to hundreds of people, and/or normal fabric of society is permanently damaged. Massive loss of business and social services resulting in demographic and other changes. Psycho-social and similar effects take years to recover from.
Infrastructure/Built Impact	
1.	Insignificant.
2.	Light damage to buildings, structures of a temporary nature (a few days recovery). Services remain on-line or unavailable for a period of hours only.
3.	Variable light to medium damage to buildings and structures takings days to weeks to recover. Several services off-line for several hours (electricity) to days (water).
4.	Heavy damage to buildings and structures taking months to recover. Most services off-line temporarily, some taking months to restore (e.g. road/rail/ports).
5.	Extensive damage with complete loss of many buildings and structures. Many remaining structures are unrecoverable and condemned. All services off-line, several can never be recovered (e.g. ports).
Economic Impact	
1.	Costs <0.5% regional GDP (<$16m)
2.	Costs between 0.5% and 2% regional GDP (<$66m)
3.	Costs between 2% and 5% region GDP (<$165m)
4.	Costs between 5% and 10% regional GDP (<$330m)
5.	Costs > 10% regional GDP (>$330m)
Natural/Environmental Impact	
1.	Changes or natural perturbations in the environment which are temporary or of inconvenience only.
2.	Temporary changes that result in short term loss of access to, or benefit from the environment or its resource.
3.	he environment and its resources are still accessible, but permanent changes alter the manner in which it is accessed/benefited from.
4.	Permanent change. Significant loss of resource/amenity which can never be recovered and which has a major economic or social impact.
5.	Major permanent changes to the natural environment affecting social and economic viability of society. Permanent loss of economically vital natural resources such as energy resources (gas etc).

Hazard manageability

The manageability of the hazard is rated for each of the 4Rs area, using the ratings in Table 7 below. The manageability is a combination of how difficult it is to manage the hazard and the current level of effort applied (each category is scored as Low, Medium or High). The highest score of 5 is given to those hazards that are most difficult to manage and have the least effort applied, and vice versa for the lowers score of 1.

Table 7 Hazard manageability rating

Management difficulty	Current effort (4 Rs)	Rating
Low	High	1
Low	Medium	2
Medium	High	
Medium	Medium	3
High	High	
Low	Low	4
Medium	Low	
High	Medium	
High	Low	5

Hazard growth rating

The growth rating is a combination of the likelihood that the frequency of the hazard will increase and the likelihood that the community exposure to that hazard will increase and was calculated for each hazard using table 8 below.

Hazards that impact on wider communities and the economy are considered to have a moderate probability of increasing community exposure (because of the growing population increasing the number of people that will be potentially affected by hazards). Community exposure to infrastructure failure will increase even more significantly as society becomes increasingly dependent on technology.

Table 8 Growth rating

Event occurrence probability rise	Changing community exposure	Rating
Low	Low	1
Low	Medium	2
Medium	Low	
Medium	Medium	3
Low	High	
Medium	High	4
High	Low	
High	Medium	
High	High	5

Table 9 Risk evaluation scores

Hazard Identification	Seriousness			Manageability			Growth			Total		
	Social	Built	Economic	Natural	*Sub-total*	Reduction	Readiness	Response	Recovery	*Sub-total*		
Natural												
Volcanic Eruption - Mt Taranaki												
Tephra (ash fall)	2	4	4	5	**6.2**	4	4	4	4	**4**	**2**	**12.2**
Lava flows	1	2	1	3	**2.9**	3	3	3	3	**3**	**2**	**7.9**
Pyroclastic flows	1	3	3	3	**4**	3	3	3	3	**3**	**1**	**8**
Volcanic lahars & assoc, floods	2	3	4	3	**5.3**	3	3	3	3	**3**	**2**	**10.3**
Volcanic gases & acid rains	1	1	1	1	**2**	4	4	4	4	**4**	**1**	**7**
Earthquakes	1	1	1	1	**2**	3	3	3	3	**3**	**1**	**6**
Volcanic Eruption - distant source												
Tephra	1	1	1	1	**2**	1	1	1	1	**1**	**1**	**4**
Volcanic gases & acid rains	1	1	1	1	**2**	1	1	1	1	**1**	**1**	**4**
Earthquake - local fault (Worst Case Scenario)												
Inglewood fault	5	5	5	5	**10**	4	4	2	2	**3**	**2**	**15**
Waverley fault	5	5	5	5	**10**	4	4	2	2	**3**	**2**	**15**
Oaonui fault	5	5	5	5	**10**	4	4	2	2	**3**	**2**	**15**
Unknown faults	5	5	5	5	**10**	4	4	2	2	**3**	**2**	**15**
Earthquake - distant fault	1	1	1	1	**2**	2	2	1	1	**1.5**	**1**	**4.5**
Coastal hazards												
Erosion	1	1	1	1	**2**	1	1	1	1	**1**	**1**	**4**
Tsunami	2	2	2	1	**3.8**	3	3	2	1	**2.25**	**2**	**8.05**
Sea state (Marine waves)	1	1	2	1	**2.3**	1	1	1	1	**1**	**1**	**4.3**
Slope instability - Mt Taranaki	2	2	3	2	**4.3**	5	5	4	4	**4.5**	**4**	**12.8**
Slope instability - Eastern Hill Country	1	2	3	1	**3.1**	3	2	2	3	**2.5**	**1**	**6.6**
River and stream bank erosion	1	2	1	1	**2.5**	1	1	1	1	**1**	**1**	**4.5**
Riverbed aggradation	1	2	2	1	**2.8**	4	3	4	3	**3.5**	**2**	**8.3**
Flooding inundation												
Lower Waitara River	4	3	3	2	**6.8**	2	2	2	2	**2**	**3**	**11.8**
Lower Waitotara River	2	3	2	1	**4.3**	2	2	2	2	**2**	**2**	**8.3**
Lower Tongaporutu	1	2	1	1	**2.5**	2	2	2	2	**2**	**1**	**5.5**
Stony River	2	3	2	1	**4.3**	3	3	3	3	**3**	**2**	**9.3**
Eastern hill country	2	2	2	2	**4**	2	2	2	2	**2**	**1**	**7**
New Plymouth - Central Business District	2	2	3	1	**4.1**	1	1	1	1	**1**	**2**	**7.1**
New Plymouth - Lower Waiwhakaiho	2	3	3	1	**4.6**	2	2	2	2	**2**	**3**	**9.6**
Stratford	2	1	2	1	**3.3**	1	1	1	1	**1**	**1**	**5.3**
Hawera	2	1	2	1	**3.3**	1	1	1	1	**1**	**2**	**6.3**
Opunake	2	1	2	1	**3.3**	2	2	2	2	**2**	**1**	**6.3**
Heavy Snow beyond National Park Boundary	1	1	1	1	**2**	1	1	1	1	**1**	**1**	**4**
Severe Hail	1	1	1	1	**2**	1	1	1	1	**1**	**1**	**4**
Severe Frost	1	1	1	1	**2**	1	1	1	1	**1**	**1**	**4**
Lightning	1	1	2	1	**2.3**	1	1	1	1	**1**	**1**	**4.3**
Damaging winds	3	3	3	1	**5.6**	2	2	2	2	**2**	**3**	**10.6**
Tornado	3	3	3	1	**5.6**	4	4	4	4	**4**	**2**	**11.6**
Drought	3	1	3	2	**4.8**	3	3	3	3	**3**	**2**	**9.8**
Heat wave	3	1	1	1	**4**	1	1	1	1	**1**	**2**	**7**

Hazard Identification	Seriousness					Manageability					Growth	Total
	Social	Built	Economic	Natural	*Sub-total*	Reduction	Readiness	Response	Recovery	*Sub-total*		
Technological												
Lifeline Utility failure												
Electricity (network local supply) - Long-term	3	1	4	1	**4.9**	1	1	1	1	**1**	**2**	**7.9**
Electricity (network local supply) - short-term	2	1	2	1	**3.3**	1	1	1	1	**1**	**2**	**6.3**
Road network - Long-term	2	1	4	1	**3.9**	3	3	3	3	**3**	**3**	**9.9**
Road network - Short-term	2	1	2	1	**3.3**	3	3	3	3	**3**	**3**	**9.3**
Information and Communication Technology - Long-term (more than 8 hours)	3	1	5	1	**5.2**	3	3	3	3	**3**	**4**	**12.2**
Information and Communication Technology - Short-term (less than 8 hours)	3	1	3	1	**4.6**	2	2	2	2	**2**	**3**	**9.6**
Water - major urban supply - Long-term	4	1	5	1	**6.2**	3	3	3	2	**2.75**	**3**	**11.95**
Water - major urban supply - Short-term	2	1	4	1	**3.9**	1	1	1	1	**1**	**3**	**7.9**
Water - small community supply (including drought, as above) - Long-term	3	1	4	1	**4.9**	2	2	2	2	**2**	**2**	**8.9**
Water - small community supply (including drought, as above) - Short-term	2	1	3	1	**3.6**	1	1	1	1	**1**	**2**	**6.6**
Water supply contamination (Chemical or biological)	5	1	5	3	**7.6**	1	1	1	1	**1**	**2**	**10.6**
Sewerage - Long-term	2	1	2	2	**3.5**	3	3	3	1	**2.5**	**2**	**8**
Gas - high pressure gas pipeline	2	1	3	1	**3.6**	1	1	1	1	**1**	**2**	**6.6**
Gas - local gas supply – Long- term	3	1	3	1	**4.6**	1	1	1	1	**1**	**2**	**7.6**
Hazardous substance												
Local ground and water (Spillage or leakage)	2	1	2	3	**3.7**	3	3	3	2	**2.75**	**3**	**9.45**
Widespread (Industrial)	3	1	3	3	**5**	3	3	3	2	**2.75**	**3**	**10.75**
Oil Spill	4	2	4	5	**7.2**	3	3	3	3	**3**	**4**	**14.2**
Major transport accident												
Air	4	1	1	1	**5**	2	2	4	3	**2.75**	**2**	**9.75**
Roading	3	1	1	1	**4**	1	1	2	2	**1.5**	**2**	**7.5**
Rail	1	1	2	1	**2.3**	1	1	1	1	**1**	**1**	**4.3**
Marine/Port	1	3	3	1	**3.6**	1	1	2	1	**1.25**	**1**	**5.85**
Structural failure (inc. dam failure)												
Small structure	2	2	1	1	**3.5**	1	1	1	1	**1**	**1**	**5.5**
Significant structure (Flood retention dams, stadiums (Yarrows), hospitals (TDHB))	4	4	3	2	**7.3**	1	2	3	3	**2.25**	**1**	**10.55**
Fire												
Structural - downwind effects (smoke)	2	2	1	1	**3.5**	1	1	1	1	**1**	**1**	**5.5**
Vegetation **-** downwind effects (smoke)	1	1	1	1	**2**	1	1	1	1	**1**	**1**	**4**
Public health threat												
Infectious human disease and pandemic	5	1	5	1	**7.2**	3	3	5	3	**3.5**	**3**	**13.7**
Biological												
Biosecurity incursion (plants & animals)	4	1	5	4	**6.8**	3	4	4	5	**4**	**3**	**13.8**
Other												
War	5	5	5	5	**10**							
Terrorism/external threat/nuclear threat	5	5	5	5	**10**							
Economic failure (recession/depression)						Not assessed as matter of national significance						
Extraterrestrial object												
National Event	3	1	2	2	**4.5**	1	2	2	1	**1.5**	2	8

From this table, the hazards that exceeded a priority rating of 8 were extracted and put into a summary table which is what you see in the plan (table 10 below).

Table 10 Summary of hazard prioritisation

	Seriousness					Manageability					Growth	Total
Hazard Identification	Social	Built	Economic	Natural	*Sub-total*	Reduction	Readiness	Response	Recovery	*Sub-total*		
Seismic event - local fault	5	5	5	5	**10**	4	4	2	2	**3**	**2**	**15**
Oil Spill	4	2	4	5	**7.2**	3	3	3	3	**3**	**4**	**14.2**
Biosecurity incursion (plants & animals)	4	1	5	4	**6.8**	3	4	4	5	**4**	**3**	**13.8**
Infectious human disease & pandemic	5	1	5	1	**7.2**	3	3	5	3	**3.5**	**3**	**13.7**
Slope instability - Mt Taranaki	2	2	3	2	**4.3**	5	5	4	4	**4.5**	**4**	**12.8**
Information and Communication Technology failure – long term[47]	3	1	5	1	**5.2**	3	3	3	3	**3**	**4**	**12.2**
Volcanic eruption (Taranaki) Tephra (ash fall)	2	4	4	5	**6.2**	4	4	4	4	**4**	**2**	**12.2**
Flooding: Lower Waitara River	4	3	3	2	**6.8**	2	2	2	2	**2**	**3**	**11.8**
Major urban water supply failure - Long-term	4	1	5	1	**6.2**	3	3	3	2	**2.75**	**3**	**11.95**
Tornado	3	3	3	1	**5.6**	4	4	4	4	**4**	**2**	**11.6**
Hazardous substance spill – industrial – widespread	3	1	3	3	**5**	3	3	3	2	**2.75**	**3**	**10.75**
Water supply contamination (Chemical or biological)	5	1	5	3	**7.6**	1	1	1	1	**1**	**2**	**10.6**
Damaging winds	3	3	3	1	**5.6**	2	2	2	2	**2**	**3**	**10.6**
Significant structure failure (Flood retention dams, stadiums, hospitals)	4	4	3	2	**7.3**	1	2	3	3	**2.25**	**1**	**10.55**
Volcanic eruption (Taranaki) Volcanic lahars & assoc, floods	2	3	4	3	**5.3**	3	3	3	3	**3**	**2**	**10.3**
Road network failure - Long-term	2	1	4	1	**3.9**	3	3	3	3	**3**	**3**	**9.9**
Drought	3	1	3	2	**4.8**	3	3	3	3	**3**	**2**	**9.8**
Major transport accident - Air	4	1	1	1	**5**	2	2	4	3	**2.75**	**2**	**9.75**
Information and Communication Technology failure- Short-term	3	1	3	1	**4.6**	2	2	2	2	**2**	**3**	**9.6**
Flooding New Plymouth - Lower Waiwhakaiho	2	3	3	1	**4.6**	2	2	2	2	**2**	**3**	**9.6**
Hazardous substance Local ground and water (Spillage or leakage)	2	1	2	3	**3.7**	3	3	3	2	**2.75**	**3**	**9.45**
Flooding: Stony River	2	3	2	1	**4.3**	3	3	3	3	**3**	**2**	**9.3**
Road network failure - Short-term	2	1	2	1	**3.3**	3	3	3	3	**3**	**3**	**9.3**
Water - small community supply failure (including drought) - Long-term	3	1	4	1	**4.9**	2	2	2	2	**2**	**2**	**8.9**
Flooding: Lower Waitotara River	2	3	2	1	**4.3**	2	2	2	2	**2**	**2**	**8.3**
Riverbed aggradation	1	2	2	1	**2.8**	4	3	4	3	**3.5**	**2**	**8.3**
Tsunami	2	2	2	1	**3.8**	3	3	2	1	**2.25**	**2**	**8.05**
Volcanic eruption (Taranaki) Pyroclastic flows	1	3	3	3	**4**	3	3	3	3	**3**	**1**	**8**
Sewerage system failure - Long-term	2	1	2	2	**3.5**	3	3	3	1	**2.5**	**2**	**8**

[47] Long term applies to emergencies lasting longer than one day, short term applies to emergencies lasting less than one day.

Table 11 Significant hazards for Taranaki

Seismic event - local fault
Oil Spill
Biosecurity incursion (plants & animals)
Infectious human disease & pandemic
Slope instability - Mt Taranaki
Information and Communication Technology failure – long term
Volcanic eruption (Taranaki) Tephra (ash fall)
Flooding: Lower Waitara River
Major urban water supply failure - Long-term
Tornado
Hazardous substance spill – industrial – widespread
Water supply contamination (Chemical or biological)
Damaging winds
Significant structure failure (Flood retention dams, stadiums, hospitals)
Volcanic eruption (Taranaki) Volcanic lahars & assoc, floods

Significant hazards that are priorities for CDEM planning can now be identified from this process. In this plan, this has meant each hazard with a priority rating of 10 or more is a significant hazard (table 11).