

**Civil Defence Emergency Management  
Group Meeting  
Tuesday 1 March 2022 at 11.00am**

# **AGENDA**



## Civil Defence Emergency Management Group Meeting Agenda

Meeting to be held via audiovisual link  
on Tuesday 1 March 2022, commencing at 11.00am

**Recommendations contained in the agenda are NOT decisions of the meeting. Please refer to minutes for resolutions.**

### MEMBERSHIP OF THE CIVIL DEFENCE EMERGENCY MANAGEMENT GROUP MEETING

Chair, NRC Councillor, Rick Stolwerk

WDC Mayor Sheryl Mai	KDC Mayor Jason Smith	FNDC Councillor Dave Collard
NZ Police Representative Superintendent Tony Hill	FENZ Representative Commander Wipari Henwood	NEMA Representative Chloe Marshall (Observer Status)

### KARAKIA / WHAKATAU

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<b>1.0 NGĀ MAHI WHAKAPAI/HOUSEKEEPING</b>	
<b>2.0 NGĀ WHAKAPAHĀ/APOLOGIES</b>	
<b>3.0 NGĀ WHAKAPUAKANGA/DECLARATIONS OF CONFLICTS OF INTEREST</b>	
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**TITLE:** Confirmation of Minutes - 2021 11 10 Civil Defence  
Emergency Management Group Meeting Minutes  
Unconfirmed

**From:** Laura Exton, Community Resilience Executive Assistant

**Authorised by** Victoria Harwood, Pou Tiaki Hapori - GM Community Resilience, on 22  
**Group Manager/s:** February 2022

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### Ngā mahi tūtohutia / Recommendation

That the minutes of the Civil Defence Emergency Management Group meeting held on Wednesday 10 November 2021 be confirmed as a true and correct record.

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### Attachments/Ngā tapirihanga

Attachment 1: 2021 11 10 CDEM Group Minutes - unconfirmed [↓](#) 

Civil Defence Emergency Management Group Meeting  
10 November 2021

## Civil Defence Emergency Management Group Meeting Minutes

Meeting held via audiovisual link  
on Wednesday 10 November 2021, commencing at 11.00am

### **Tuhinga/Present:**

Chair, NRC Councillor, Rick Stolwerk  
WDC Mayor, Sheryl Mai  
KDC Alternate Representative, Councillor Anna Curnow  
FNDC Councillor, Dave Collard  
NZ Police Alternate Representative, Inspector Al Symonds  
FENZ Alternate Representative, Graeme Quensell  
NEMA Representative, Malinda Meads (Observer Status)

### **I Tae Mai/In Attendance:**

#### **Full Meeting**

NRC CEO, Malcolm Nicolson  
NRC Chair, Penny Smart  
NRC Group Manager - Community Resilience, Victoria Harwood  
Northland CDEM, Graeme MacDonald  
Northland CDEM, Jenny Calder  
Northland CDEM, Mana Wright  
Northland CDEM, Sarah Boniface  
Northland CDEM, Shona Morgan  
Northland CDEM, Evania Arani  
Northland CDEM, Bill Hutchinson  
NRC Councillor, Colin Kitchen  
WDC Councillor, Nicholas Connop  
NZ Police (seconded to NDHB), Chris McLellan  
NRC Digital Coordinator - Social and Content, Papanui Polamalu  
NZDF, Peter Johnson  
FENZ, Mal Tipton  
Design Composites, Chris McCluskey

**The Chair declared the meeting open with a karakia at 11.02am.**

Civil Defence Emergency Management Group Meeting  
10 November 2021

### **Ngā Mahi Whakapai/Housekeeping (Item 1.0)**

The Civil Defence Emergency Management Group meeting was held via audiovisual link due to COVID-19 Alert Levels and protocols. Members were advised that to ensure public access to the meeting, it was being livestreamed.

### **Ngā whakapahā/Apologies (Item 2.0)**

#### **Moved (Mai / Rick)**

That the apologies from KDC Mayor Dr Jason Smith, NZ Police Superintendent Tony Hill, and Fire and Emergency NZ Commander Wipari Henwood for non-attendance be received.

**Carried**

### **Nga whakapuakanga/Declarations of Conflicts of Interest (Item 3.0)**

It was advised that members should make declarations item-by-item as the meeting progressed.

### **Confirmation of Minutes - 2021 08 09 Civil Defence Emergency Management Group Meeting Minutes Unconfirmed (Item 4.1)**

**Report from Laura Exton, Community Resilience Executive Assistant**

#### **Moved (Stolwerk/Mai)**

That the minutes of the Civil Defence Emergency Management Group meeting held on Wednesday 8 September 2021 be confirmed as a true and correct record.

**Carried**

### **Receipt of Schedule of Actions (Item 4.2)**

**Report from Laura Exton, Community Resilience Executive Assistant**

#### **Moved (Collard/Stolwerk)**

That the Civil Defence Emergency Management Group Schedule of Actions be reviewed and receipted.

**Carried**

### **NEMA Monthly Update (Item 5.1)**

**Report from Graeme MacDonald, Emergency Manager**

#### **Moved (Stolwerk/Mai)**

That the report 'NEMA Monthly Update' by Graeme MacDonald, Emergency Manager and dated 3 November 2021, be received.

**Carried**

Civil Defence Emergency Management Group Meeting  
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## **2022 Meeting Dates (Item 6.1)**

**Report from Graeme MacDonald, Emergency Manager**

**Moved (Stolwerk/Collard)**

That the report '2022 Meeting Dates' by Graeme MacDonald, Emergency Manager and dated 3 November 2021, be received.

**Carried**

## **CEG Chair's Report (Item 6.2)**

**Report from Tony Phipps, CDEM Coordinating Executive Group Chairman**

**Moved (Stolwerk/Collard)**

That the report 'CEG Chair's Report' by Tony Phipps, CDEM Coordinating Executive Group Chairman and dated 3 November 2021, be received.

**Carried**

## **Northland CDEM Group Plan 2021 - 2026 (Item 6.3)**

**Report from Jenny Calder, Emergency Management Recovery Specialist**

**Moved (Stolwerk/Mai)**

1. That the report 'Northland CDEM Group Plan 2021 - 2026' by Jenny Calder, Emergency Management Recovery Specialist and dated 21 October 2021, be received.
2. That the 'Northland CDEM Group Plan 2021-2026' be approved in accordance with S.48, Civil Defence Emergency Management Act 2002.

**Carried**

## **Northland CDEM Group, CEG and Group appointments (Item 6.4)**

**Report from Graeme MacDonald, Emergency Manager**

**Moved (Stolwerk/Curnow)**

1. That the report 'Northland CDEM Group, CEG and Group appointments' by Graeme MacDonald, Emergency Manager and dated 3 November 2021, be received.
2. That the Civil Defence Emergency Management Group approves the appointment of Darren Edwards, General Manager – Strategic Planning & Policy, Far North District Council, as a Group Controller, in accordance with Section 26 (2), Civil Defence Emergency Management Act 2002.

**Carried**

**Secretarial Note:** Tony Phipps (GM Advisor, NRC and retiring CDEM Coordinating Executive Group (CEG) Chair) noted that he is retiring as CEG Chair. In the CEG's 10 November 2021 meeting, Victoria

Civil Defence Emergency Management Group Meeting  
10 November 2021

*Harwood (GM – Community Resilience, NRC) was nominated and appointed as the CEG Chair effective 10 November 2021.*

**Secretarial Note:** *Tony remains as a Group Controller until Christmas.*

**Secretarial Note:** *Committee Secretary to update Wipari Henwood's (FENZ) job title to District Manager, and Graeme Quensell's (FENZ) job title to Group Manager.*

### **COVID-19 Delta Resurgence Debrief (Item 6.5)**

**Report from Shona Morgan, Emergency Management Response Specialist**

**Moved (Stolwerk/Curnow)**

That the report 'COVID-19 Delta Resurgence Debrief' by Shona Morgan, Emergency Management Response Specialist and dated 3 November 2021, be received.

**Carried**

### **Summer Season Drought Assessment (Item 6.6)**

**Report from Murray Soljak, Emergency Management Communications Specialist**

**Moved (Collard/Stolwerk)**

That the report 'Summer Season Drought Assessment' by Murray Soljak, Emergency Management Communications Specialist and dated 3 November 2021, be received.

**Carried**

### **FENZ Presentation - Northland Multi-Agency Coordination Centre Update (Item 6.7)**

**Report from Graeme MacDonald, Emergency Manager**

**Ngā mahi tūtohutia / Recommendation**

That the report 'FENZ Presentation - Northland Multi-Agency Coordination Centre Update' by Graeme MacDonald, Emergency Manager and dated 3 November 2021, be received.

**Secretarial Note:** *Chris McCluskey, Design Composites, spoke to the presentation.*

### **Whakamutunga (Conclusion)**

**The meeting concluded with a karakia at 12.24pm.**

**TITLE: Receipt of Schedule of Actions**

**From:** Laura Exton, Community Resilience Executive Assistant

**Authorised by** Victoria Harwood, Pou Tiaki Hapori - GM Community Resilience, on 22  
**Group Manager/s:** February 2022


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**Ngā mahi tūtohutia / Recommendation**

That the Civil Defence Emergency Management Group Schedule of Actions be reviewed and receipted.

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**Attachments/Ngā tapirihanga**

Attachment 1: CDEM Group Schedule of Actions - as at 10 11 2021 [↓](#) 



CDEM Group - schedule of actions						as of 10/11/2021
Action Item	Meeting date	Item	Action	Responsible staff	Status	Notes
2	8/09/2021	Item 6.7 Multi-Agency Coordination Centre Verbal Update	Report on the Multi-Agency Coordination Centre to go to the Northland Forward Together meeting on 23 November 2021.	Graeme Macdonald	In Progress	10/11/2021 - it was agreed that this should be moved to a Northland Forward Together in 2022.
3	8/09/2021	Item 1.0 Ngā Mahi Whakapai / Housekeeping	In other business, it was noted that a drought risk assessment for the 2021/2022 summer should be put in the next meeting agenda on 10 November 2021.	NCDEM	Completed	10/11/2021 - an item was included in the 10 November 2021 agenda.

**TITLE:** NEMA Monthly Update

**From:** Graeme MacDonald, Emergency Manager

**Authorised by** Victoria Harwood, Pou Tiaki Hapori - GM Community Resilience, on 22  
**Group Manager/s:** February 2022

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### Whakarāpopototanga / Executive summary

Attached for the information of the group is the NEMA monthly update for January 2022.


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### Ngā mahi tūtohutia / Recommendation

That the report 'NEMA Monthly Update' by Graeme MacDonald, Emergency Manager and dated 9 February 2022, be received.

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### Attachments/Ngā tapirihanga

Attachment 1: NEMA Monthly Update - January 2022 [↓](#) 

**To: Coordinating Executive Group (CEG) Chairs**  
**Cc: CDEM Group Managers, NEMA Senior Leadership Team and Regional Emergency Management Advisors.**

Tēnā koutou katoa,

Welcome back to a new and exciting year for emergency management. I hope many of you have managed to set some time aside for your families and get some well-earned rest. I acknowledge however not everyone was able to fully step away from their emergency management roles.

The CDEM Sector is a critical function of Central and Local Government and it only functions as well as it does thanks to your continued support. The past couple of years have been especially difficult for those in the CDEM Sector and it is clear the worst effects of the pandemic have been significantly dampened thanks to your efforts. It has been no easy feat, especially with the number of concurrent events that have taken place, so I'm sure that I speak on behalf of all of those in Aotearoa when I thank you for your remarkable leadership, none of which has gone unnoticed. I ask that you relay to your teams that their extraordinary mahi is recognised and immensely valued.

I am sure that you are all aware of the devastating effects of the Hunga Tonga-Hunga Ha'apai volcano eruption on Tonga. This event has given us a stark reminder of the tsunami threat faced by Aotearoa and has raised the importance of a nationally uniform understanding of tsunami warnings and advisories. To support us in achieving this, we have created the attached public information guide for your use. Please direct any questions to Roger Ball ([roger.ball@nema.govt.nz](mailto:roger.ball@nema.govt.nz)).

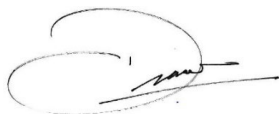
On the topic of information sharing, I would like to thank you for your continued support to the Trifecta Programme and your engagement with the Trifecta webinars earlier this month. We look forward to receiving your written feedback through the survey on our [online platform](#), which will remain open until February 11.

The remainder of this letter includes our latest Trifecta and COVID-19 updates; introduces a number of significant projects within the communications and public education space; provides an update on the progress of NEMA's 24/7 Monitoring, Alerting, and Reporting (MAR) Project; introduces a significant partnership for NEMA; and recognises a number of internationally significant appointments.

To end my message, I would like to reiterate that the CDEM Sector cannot remain as successful as it is without each and every one of you. As such, I want to emphasise that looking after our personal health and wellbeing – and that of our whānau - must remain a priority, as we must look after ourselves if we are to effectively look after our communities.

As the pandemic moves past the challenges of the current variant, I hope to get around the country and meet with you face to face. In the interim we will continue to work as closely as we can with you to ensure we keep communities safe.

Ngā mihi



**Dave Gawn**  
Te Tumu Whakahaere, Te Rakau Whakamarumarū  
Chief Executive, National Emergency Management Agency

## Trifecta

Contact: [Trifecta@nema.govt.nz](mailto:Trifecta@nema.govt.nz)

Thank you to those able to attend the online introductory sessions in the week of 17 January. The six sessions were well attended with over 350 external people able to join. The discussions at the meetings were highly constructive and provided us with valuable insights, including positive feedback.

We heard concerns regarding the timeframe for engagement, and connection to other reforms. We are aware an earlier introduction would ensure time for local government submissions ahead of Triennial Local Body Elections. There will also be opportunities for engagement on the work to review the CDEM Plan and Guide.

We look forward to receiving written feedback on the policy proposals via the [online platform](#) before the closing date of 11 February 2022. You are welcome to contact [Trifecta@nema.govt.nz](mailto:Trifecta@nema.govt.nz) if you have any questions about how to complete the online feedback.

This is not a formal consultation or public consultation, rather we seek feedback on early options before final policy proposals are provided to Ministers, from the perspective of emergency management professionals. When the Bill is introduced to the House, Cabinet papers will be proactively released, and Regulatory Impact Statements (which include options analysis, costs, and benefits) will be shared. The opportunity for formal submissions (e.g. from CDEM Groups and local authorities) at the Select Committee process, will allow more time for your internal engagement and with the benefit of further detail.

We have done our best to ensure that the online introductory session invites and supporting material were provided to CEGs, but we are aware that some CEG members may not have received this. NEMA does not hold a central mailing list of local emergency management staff, please email [Trifecta@nema.govt.nz](mailto:Trifecta@nema.govt.nz) so we can update our distribution lists. Thanks again for your support to ensure this reaches the right people.

Minister Allan is hosting a stakeholder engagement meeting with Māori practitioners in the Emergency Management System on February 16<sup>th</sup> to gather their views and ideas to inform the design of the policy, from their perspective. She would also like to hold an engagement meeting with Mayors and Chief Executives before then. More on this once the details are confirmed.

## COVID-19

Contact: Roger Ball (Manager, National Operations) [roger.ball@nema.govt.nz](mailto:roger.ball@nema.govt.nz)

New Zealand is now moving into a new phase of the pandemic with the Government preparing for Omicron spreading rapidly in the community and consequential impacts on the Health sector, workforces and supply chains in particular. I appreciate this also affects the local government space and the essential services provided to your communities. As you will be aware, the Government is implementing a three phased approach with changes to testing, case investigation, contact tracing, isolation and quarantine requirements at each phase (information can be found [here](#)).

CDEM Coordinating Executive Groups will need to factor in Omicron, and the Government's new approach, into their readiness and response planning for both COVID and concurrent emergency events.

NEMA continues to support the All-of-Government response to COVID-19 as New Zealand moves into COVID Protection Framework Red setting and Phase One. We are working to understand the implications of the essential worker 'test to return' approach in Phase Two. This involves helping to identify essential staff across sectors including local government and

CDEM functions. We are working closely with central agencies and CDEM Groups to advocate for the CDEM sector's needs during this time of rapid national and regional planning.

CDEM Groups will not be required to provide COVID-19 welfare support under the Care in the Community programme to ensure they can focus on other emergency responses. However, they may engage or provide support at a regional level if requested and agreed with all agencies involved, potentially through the Regional Leadership Group coordination. Potential support includes coordination or assistance with distribution of kai boxes, if commercial and provider capacity is overwhelmed.

Should CDEM Groups agree to support the Care in the Community response, there is no expectation that new assessment systems are set up – these are already in place between Health and MSD. MSD is working on how it could potentially cover costs of any support that CDEM may provide – where it falls outside NEMA's reimbursement provisions. Any services and related cost recovery will need to be agreed prior to any work undertaken.

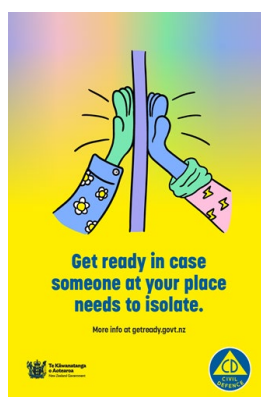
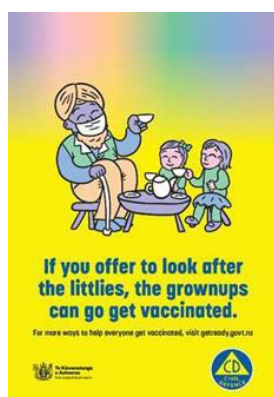
CDEM Groups are asked to continue their active support to Regional Leadership Groups in coordination of the Government's phased response to Omicron. Thank you again for your ongoing work to support the All-of-Government response to the COVID-19 pandemic.

## Get ready for COVID-19 campaign

Contact: Anthony Frith (Manager Communications): [Anthony.frith@nema.govt.nz](mailto:Anthony.frith@nema.govt.nz)

NEMA and the CDEM sector continue to collaboratively support the COVID-19 response. The latest (and most colourful!) contribution is our "Get Ready for COVID-19" campaign. This positive, practical and gently humorous campaign, which can be found on social media, online advertising, and street posters, promotes getting ready for COVID-19 through two calls to action – helping others get vaccinated, and getting your household prepared for self-isolation.

The two-pronged campaign leverages CDEM's established credibility in promoting household preparedness and "neighbours helping neighbours". The campaign has been developed in close collaboration with the Unite Against Covid unit and the Ministry of Health. The [Get Ready](https://getready.govt.nz) website has also been updated with a dedicated page promoting COVID-19 preparedness.



## Public Education

Contact: Anthony Frith (Manager Communications): [Anthony.frith@nema.govt.nz](mailto:Anthony.frith@nema.govt.nz)

### ***Te Hīkoi a Rūaumoko***

Approximately 740 kura, kaupapa, and decile 1 – 6 schools across Aotearoa have received copies of Te Hīkoi a Rūaumoko – Rūaumoko's Walk. This book has been written for tamariki mokopuna to help teach them about the natural warning signs of tsunami.

The writing of this book was a joint venture between Hawke's Bay Emergency Management Group, Te Puni Kōkiri, Ngāti Kahungunu Iwi, Te Ūranga Waka, and the Ministry of Education. This book can be found online at <https://www.hbemergency.govt.nz/assets/Documents/Education/Ruaumokos-Walk-Te-Hikoi-a-Ruaumoko.pdf>

### ***Protect our Whakapapa activity book***

NEMA is collaborating with Creative Natives on a pilot project to develop and distribute an emergency preparedness activity book, under the Protect our Whakapapa brand, to Māori communities in remote rural areas. Protect our Whakapapa is a grassroots kaupapa that shares simple, practical information and resources from a Māori worldview. The initiative will enable NEMA to reach communities that we have difficulty reaching through our standard channels and it will educate tamariki and their whānau about emergency preparedness through play.

6,000 copies of the activity book, together with a bag and colouring pencils, will be distributed to communities in Tairāwhiti, Te Waipounamu and Muruwhenua, targeting local primary schools, kura, hauora, rūnanga, marae, community groups, clubs, whare wānanga, and groups, kaupapa and whānau that have or teach young children.

### ***New preparedness campaign programme***

In the first half of 2022, NEMA will be developing a new preparedness campaign programme which seeks to reverse Aotearoa's trend of complacency in emergency preparation during peacetime. Through utilising targeted campaigning for Māori and Pacific people, this campaign will evolve from a "one size fits all" approach, to one that seeks to appeal to these communities' values, lifestyles, strengths and barriers.

Acknowledging the many communities within Aotearoa, NEMA has committed significant resource into researching Culturally and Linguistically Diverse communities (particularly Asian communities) to inform future preparedness campaigns targeting them.

### ***Get Ready website – advice for disabled people.***

NEMA has redesigned the advice for disabled people section within the Get Ready website to improve its accessibility and usability. This work, particularly the wording and structure of the pages, was well supported by the Ministry of Social Development. The new format provides a series of pages that are easy to navigate and hold relevant information. The content includes specific advice for people who have mobility issues, hearing or visual impairments, or use disability assist dogs, as well as general advice on preparedness planning.

This updated section can be found at <https://getready.govt.nz/advice-for-disabled-people/>

### ***National Tsunami Evacuation Map***

NEMA is currently building an online map which will allow people anywhere in Aotearoa to find out if they are in a tsunami evacuation zone. The map will take tsunami evacuation data from the sixteen different regional maps and it will be built with accessibility in the front of mind.

This national map is expected to be ready in the first half of 2022 and will initially be released as a public education tool on the Get Ready website. Once complete, this will be promoted with an awareness campaign encouraging people to familiarise themselves with their evacuation zones.

### **NEMA 24/7 Monitoring Alerting and Reporting Centre**

Contact: Nick Davies (Team Leader, Duty Operations) [nick.davies@nema.govt.nz](mailto:nick.davies@nema.govt.nz)

Work is continuing towards the development of the operating model for the new 24/7 centre which will go live on 30 June 2022. This centre will ultimately replace NEMA's on-call duty system and will monitor the inputs of a range of partner organisations (e.g. GNS Science, MetService, CDEM groups, etc). Once established, this will provide NEMA with real-time situational awareness of potential and emerging risks. NEMA looks forward to having a dedicated 24/7 team, as this will enable greater response times, information quality and flow, and ability to continue with non-response work programmes.

This project has now moved into a phase of significant recruitment, with the 17 positions advertised now being shortlisted. This recruitment includes 5 Watch Leaders and 12 Watch Officers. Strong interest has been received and we look forward to filling these roles soon.

### **MoU signed between NEMA and the Ministry of Pacific People's**

Contact: Alan Cassidy (DCE, Strategic Enablement) [Alan.Cassidy@nema.govt.nz](mailto:Alan.Cassidy@nema.govt.nz)

The first of December marked NEMA's second anniversary and the formalisation of a significant partnership between NEMA and the Ministry for Pacific Peoples (MPP). The Chief executives of NEMA and MPP together signed a Memorandum of Understanding (MoU) between the organisations. This MoU will better enable progress towards a safe and resilient Pacific community in Aotearoa by empowering them before, during, and after emergencies.

The MoU formalises a strategic relationship instigated by Carolyn Schwalger, NEMA's former Chief Executive, to ensure Pacific peoples' values, experiences and aspirations are at the centre of government emergency management decision making.

The Senior Leadership Teams of both agencies were to meet in February to develop a first joint NEMA and MPP agency work programme and to give effect to the MoU. This meeting is now being rescheduled due to the Red COVID Protection Framework setting.



## Pacific Tsunami Warning System: Meeting of the Intergovernmental Governance Group

Contact: Jo Guard [Jo.Guard@nema.govt.nz](mailto:Jo.Guard@nema.govt.nz)

New Zealand has been a member of the Pacific Tsunami Warning System (PTWS) since it was established in 1965. New Zealand, and more specifically NEMA, relies heavily upon the operational arm of the PTWS for notifications of Pacific based earthquakes that may trigger a tsunami. Since the catastrophic Indian Ocean tsunami of 2004, the PTWS expanded its focus to cover holistic tsunami hazard-risk mitigation by establishing working which focus on hazard identification, coordination between national warning centres and emergency management, emergency management response, and public awareness. Over the years, New Zealand has been active in all these structures.

The PTWS is governed by an Intergovernmental Coordination Group (ICG) which meets every two years. The ICG met virtually over four days throughout November-December and a number of New Zealanders were elected to structures of the PTWS:

- David Coetzee (NEMA): Vice Chair of the ICG/PTWS; and member of the Disaster Risk Management & Awareness Working Group
- Sarah-Jayne McCurrach (EQC): Co-Chair of the Working Group on Understanding Tsunami Risk; Co-Chair of the Task team on the UN Ocean Decade; and Co-Chair of the Task Team on Future Goals and Performance Monitoring
- Bill Fry (GNS Science): Chair of the Tsunami Detection, Warning & Dissemination Working Group; Chair of the Task Team on Integrated Sensor Networks; and member of the Task Team on the UN Ocean Decade
- Ashleigh Fromont (NEMA): Chair of the Disaster Risk Management & Preparedness Working Group (replacing David Coetzee who has been chairing this Working Group for a number of years), and member of the Task Team on Minimum Competence Levels for Tsunami Warning Centres
- Benita Murray (NEMA): Member of the Tsunami Detection, Warning & Dissemination Working Group and the Task Team on Integrated Sensor Networks
- Sara Mitchell (NEMA): Member of the Exercise Pacific Wave Task Team (in the past, NEMA's own Jo Guard played a pivotal part in the establishment of this exercise regime, Co-Chairing the Task Team from 2011 to 2018).

Exercise PacWave is a biennial tsunami exercise conducted across the Pacific Ocean basin. The next exercise will be held during the period September to November of 2022. NEMA's Exercise Team will be in touch about NEMA's involvement in this exercise closer to the time. In the meantime, check out [this video](#) that was made in the lead-up to this meeting of the ICG to promote the IOC's Pacific Wave Exercises; it also tells a bit more about the PTWS.



**TITLE:** Northland CDEM Group Plan - Targets and actions

**From:** Graeme MacDonald, Emergency Manager

**Authorised by** Victoria Harwood, Pou Tiaki Hapori - GM Community Resilience, on 22  
**Group Manager/s:** February 2022

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### Whakarāpopototanga / Executive summary

The purpose of this report is to provide an overview of progress in delivering the targets and actions outlined in the Northland CDEM Group plan.

This is the first report of these activities and a very broad overview has been produced. The report will be refined and developed for future meetings.

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### Ngā mahi tūtohutia / Recommendation

That the report 'Northland CDEM Group Plan - Targets and actions' by Graeme MacDonald, Emergency Manager and dated 22 February 2022, be received.

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### Attachments/Ngā tapirihanga

Attachment 1: Northland CDEM Group Plan targets and actions  

NORTHLAND CIVIL DEFENCE EMERGENCY MANAGEMENT GROUP PLAN 2021 - 2026

## 1. Maori Engagement

Objectives	Actions	Comment
1.1 Māori and CDEM have strong alignment, support, connections and understanding	<ul style="list-style-type: none"> <li>• A focus on Whakawhanaungatanga with Iwi to establish strong bonds between Iwi and the Northland CDEM Group</li> <li>• Networks at operational level developed through training, forums and collaborative planning opportunities</li> <li>• Effective organisational structures in place that support and result in improved engagement</li> <li>• Understanding of one another's expectations and practices</li> <li>• Efficient use of resources and Kaitiaki responsibilities across all levels of the CDEM sector</li> <li>• Effective and genuine engagement supports relationships that are based on trust and confidence</li> </ul>	<ul style="list-style-type: none"> <li>• Engagement is/has occurred across a range of iwi agencies, particularly in readiness for Covid response.</li> <li>• A relationship specialist has been assigned from within the CDEM professionals.</li> </ul>
1.2 Whānau, Hapū, Iwi, Marae and businesses are resilient and able to respond to and recover from emergencies	<ul style="list-style-type: none"> <li>• Support and engage with Māori in promoting emergency management understanding</li> <li>• Assist communities/Marae in the development of response plans and preparedness plans</li> <li>• Link businesses into support networks and promote business continuity planning</li> <li>• Sites of cultural significance, wāhi tapu, taonga, specific community values and priorities are included in CDEM planning</li> </ul>	<ul style="list-style-type: none"> <li>• Northland CDEM has appointed 2 iwi representatives, and a third is to be appointed to the CEG.</li> <li>• Marae preparedness planning has commenced</li> </ul>

NORTHLAND CIVIL DEFENCE EMERGENCY MANAGEMENT GROUP PLAN 2021 - 2026

1.3 Communication networks and processes are robust	<ul style="list-style-type: none"> <li>• Develop protocols for reporting and engagement during an emergency event</li> <li>• Improve communication and learn from past events</li> <li>• Where possible meet kanohi ki te kanohi (face to face)</li> <li>• Understand and use methods of communication that work for communities</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Initial discussions have been started to enhance engagement and communications .</b></li> </ul>
1.4 Cultural competency of CDEM staff is improved	<ul style="list-style-type: none"> <li>• Our people develop increased awareness of tangata whenua values and are respectful of tikanga and Te Reo Māori</li> <li>• Our people understand how Māori respond to and recover from emergencies and how to provide support</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Professional development opportunities for CDEM professionals are being progressed including Te Reo.</b></li> </ul>

NORTHLAND CIVIL DEFENCE EMERGENCY MANAGEMENT GROUP PLAN 2021 - 2026

## 2. Hazard Risk Reduction

Objectives	Actions	
2.1 Northland CDEM Stakeholders and partners are engaged in long-term hazard risk reduction planning and activities	<ul style="list-style-type: none"> <li>• Maintain engagement with national, regional and local hazard advisors and the development of disaster resilience strategies, guidelines and plans</li> <li>• Inform and guide all Northland's councils to consider hazard risk reduction in their planning, policies, standards, consents, developments and infrastructure</li> <li>• Support hazard risk reduction activities amongst Northland CDEM stakeholders and partners</li> <li>• Support District Councils through Long-term Plans to upgrade infrastructure to improve resilience during drought conditions</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Engagement The NEMA Trifecta programme is underway that includes review of legislation, national plan and strategy. Northland CDEM is engaged in this process and will follow developments and progress, and when necessary provide input and feedback/submissions.</b></li> <li>• <b>Kaitia flood forecasting is current project being supported.</b></li> </ul>
2.2 The community is informed on hazard risk	<ul style="list-style-type: none"> <li>• Improve and promote region wide hazard information across multiple platforms</li> <li>• Leverage CDEM stakeholder and partner capacity to distribute hazard risk information to communities</li> </ul>	
2.3 The knowledge and understanding of Northland's hazard risk profile is increased	<ul style="list-style-type: none"> <li>• Support new hazard research, analysis and modelling in Northland</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Kaitia flood modelling as per agenda item.</b></li> </ul>

NORTHLAND CIVIL DEFENCE EMERGENCY MANAGEMENT GROUP PLAN 2021 - 2026

### 3. Readiness

Objectives	Actions	
3.1 Communities and businesses understand their risks and are prepared	<ul style="list-style-type: none"> <li>• Support and provide tools to enhance community response and Marae preparedness planning</li> <li>• Work with priority groups to assist them with preparedness planning</li> <li>• Link businesses to support networks and promote business continuity planning</li> <li>• Engage and coordinate with stakeholders and partners delivering community preparedness education messages</li> <li>• Promote public education and information to build preparedness</li> <li>• At risk populations are informed and prepared to respond appropriately to tsunami</li> <li>• Maintain a programme of installing, inspecting and updating tsunami information boards across the region</li> </ul>	<p><b>Marae preparedness programme has commenced. (See agenda item)</b></p> <p><b>Community response plans reviews continue. (See agenda item).</b></p> <p><b>National tsunami messaging public info programme shifting to “know your zone” from “Long Strong Gone.”</b></p> <p><b>Annual review underway/part completed.</b></p>

NORTHLAND CIVIL DEFENCE EMERGENCY MANAGEMENT GROUP PLAN 2021 - 2026

<p>3.2 Northland CDEM sector preparedness arrangements enable response</p>	<ul style="list-style-type: none"> <li>• Continue to provide emergency management professional development opportunities for the region</li> <li>• Attend professional development opportunities at the local, regional, national and international levels</li> <li>• Engage with and support emergency services, lifelines and the welfare coordination group</li> <li>• Maintain existing plans and operating procedures</li> <li>• Ensure capability and capacity of ECCs and EOCs across the region</li> <li>• Design and build a multi-agency emergency coordination centre for the region</li> <li>• Invest in technology to deliver improved response outcomes</li> </ul>	<ul style="list-style-type: none"> <li>• See agenda item re CIMS and courses.</li> <li>• A number of options are being explored for ongoing team and individual professional development.</li> <li>• Welfare and lifelines Group meeting are programmed for year. Engagement has occurred during recent responses ie Kaimaumau Fire, Karikari Fire, ex T/c responses.</li> <li>• See agenda item.</li> </ul>
<p>3.3 Northland operates a reliable and effective warning and alert system</p>	<ul style="list-style-type: none"> <li>• Maintain and test CDEM warning and alerting systems which can be activated 24/7 to warn people of CDEM hazards which may pose a threat to life</li> <li>• Ensure the Northland tsunami siren network meets the required national standards</li> <li>• Use new technology to enhance warning dissemination</li> </ul>	<ul style="list-style-type: none"> <li>• EMA test scheduled for May.</li> <li>• Tsunami Siren Network is being upgraded. Appointment made to Project Manage replacement programme.</li> </ul>

## 4. Response

Objectives	Actions	
4.1 Emergency responses are led and coordinated effectively	<ul style="list-style-type: none"> <li>Stakeholders and partners are adequately engaged during a response where CDEM is the lead agency</li> <li>Technical and scientific experts are involved to ensure decision making in an emergency is supported appropriately for accurate hazard analysis</li> <li>ECCs and EOCs operate effectively between stakeholders and partners across the region</li> <li>Use CIMS to deliver a coordinated across agency response</li> <li>Provide the appropriate response for the scale of the event</li> </ul>	<ul style="list-style-type: none"> <li>See agenda items re Tonga Volcanic eruption and tsunami, Kaimaumu Fire, ex T/c's that impacted Northland.</li> </ul>
4.2 Northland communities are assisted during an emergency	<ul style="list-style-type: none"> <li>Community response groups are engaged and supported during response</li> <li>Warnings are issued in a timely manner</li> <li>Collaborate with the Network of Networks Advisory Group</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing engagement and update of plans.</li> <li>See agenda item re Tutukaka marina, Kaumaumu Fire, ex T/c's.</li> </ul>
4.3 An accurate and widely understood common operating picture is developed and maintained	<ul style="list-style-type: none"> <li>Robust protocols are used to facilitate the sharing of information during an emergency using a variety of communications platforms</li> <li>GIS and other technology are utilised to enhance the level of situational awareness during a response</li> </ul>	

4.4 Recovery arrangements are implemented as soon as practicable following an emergency	<ul style="list-style-type: none"> <li>• Monitor response actions to help predetermine recovery outcomes and to assist with the development of the recovery plan</li> <li>• Include recovery in response action planning</li> <li>• Identify the recovery team and structure during the response phase of an emergency</li> </ul>	
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## 5. Recovery

Objectives	Actions	
5.1 Stakeholders and partners grow capability and capacity to recover from an emergency	<ul style="list-style-type: none"> <li>• Participate in relevant working groups, forums and networks</li> <li>• Support district councils to engage local recovery managers</li> <li>• Support district councils to strengthen their knowledge of recovery to achieve best possible outcomes across the natural, built, economic and social/cultural environments</li> <li>• Roles and responsibilities are clearly identified</li> <li>• Stakeholders and partners plan to enable an</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Recovery guidance and engagement in Kaimaumu Fires recovery planning and delivery.</b></li> </ul>
5.2 Communities and Marae undertake recovery planning	<ul style="list-style-type: none"> <li>• Work with Whānau, Hapū, Iwi, Marae and the wider community to promote recovery awareness through local level planning</li> </ul>	<ul style="list-style-type: none"> <li>• </li> </ul>



5.3 The economic sector across the region has capacity and capability to recover	<ul style="list-style-type: none"> <li>• Foster the development of recovery understanding and awareness through engagement with key contacts</li> <li>• Maintain liaison and engagement with the economic sector</li> <li>• Provide recovery information, links to services and support to the economic sector</li> </ul>	•
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## 6. Management and Governance

Objectives	Actions	
6.1 Transparent and equitable funding arrangements are in place to deliver CDEM work programmes	<ul style="list-style-type: none"> <li>• Allocate appropriate funds to relevant work programme priorities</li> <li>• Long-Term Plan funded projects are delivered on-time</li> </ul>	• <b>Both LTP projects are commenced and on time.</b>
6.2 Northland CDEM Group Plans, shared services and work programmes are nationally, regionally and locally aligned, agreed and supported	<ul style="list-style-type: none"> <li>• Northland CDEM Group Office work programme is aligned with National objectives and CDEM Group Plan objectives and priorities</li> <li>• Share Service level agreements are reviewed annually, and local CDEM work programmes aligned with the CDEM Group work programme</li> <li>• CDEM funding agreements are reviewed and updated annually</li> </ul>	• <b>NEMA AND Group and Group Managers are developing a joint strategy that will enhance and complement the alignment of work programmes and activities. h</b>

<p>6.3 Strong leadership and commitment to CDEM is demonstrated</p>	<ul style="list-style-type: none"> <li>• Continued engagement of District Council Mayors and Regional Council Chair in governance on the Northland CDEM Group Joint Standing Committee</li> <li>• Strengthen engagement and support for CDEM arrangements from Senior Management across all four Northland councils and on the Northland CEG</li> <li>• Political and executive attendance to CDEM professional development opportunities are encouraged</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Mayors and or their representatives are members of the joint committee.</b></li> <li>• <b>Regular updates and SLA review meetings occur with councils.</b></li> </ul>
<p>6.4 Effective CDEM organisational structures are in place</p>	<ul style="list-style-type: none"> <li>• CDEM Group structures are aligned with requirements of The Act, the National CDEM Plan Order 2015 and best practice guidelines</li> <li>• The CDEM Group Office reports quarterly to CEG and CDEM Group meetings</li> <li>• Ensure appropriate seniority level of attendance at both the Northland Lifelines and Northland Welfare Coordination Group meetings</li> <li>• Induct newly appointed elected members into their role within CDEM</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Group Plan was recently approved and the Northland CDEM Group arrangements align with the current legislation and guidelines.</b></li> </ul>

## 7. Monitoring and Evaluation

Objectives	Actions	
7.1 CDEM delivery aligns with the Northland CDEM Group Plan	<ul style="list-style-type: none"><li>• Local annual work programmes are developed in consultation with local councils.</li><li>• Group and Local annual work programmes are approved by the Northland CEG and CDEM Group</li><li>• Reporting on work programmes progress is undertaken at each CEG and CDEM Group quarterly meeting.</li><li>• Group and Local annual work programmes are approved by the Northland CEG each year</li></ul>	<b>Service Level Agreements have clear work programmes and are reviewed annually.</b>

**TITLE:** Northland CDEM Group, CEG and Group appointments

**From:** Graeme MacDonald, Emergency Manager

**Authorised by** Victoria Harwood, Pou Tiaki Hapori - GM Community Resilience, on 22  
**Group Manager/s:** February 2022

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## Whakarāpopototanga / Executive summary

### Executive summary/Whakarāpopototanga

This report provides an up-to-date list of members and key appointments for the Northland CDEM Group. The list of key appointments is also available on the same webpage as the Northland CDEM Group plan. The list has also been referenced in the group plan.

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## Ngā mahi tūtohutia / Recommendation

That the report 'Northland CDEM Group, CEG and Group appointments' by Graeme MacDonald, Emergency Manager and dated 22 February 2022, be received.

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## Background/Tuhinga

### Membership of the Northland Civil Defence Emergency Management Group:

- Cr Rick Stolwerk, Chairperson (NRC) - alternate Cr Colin Kitchen
- Cr Dave Collard (FNDC) - alternate Cr Kelly Stratford
- Mayor Sheryl Mai (WDC) - alternate Cr Nicholas Connop
- Mayor Jason Smith (KDC) - alternate Cr Anna Curnow
- Commander Wipari Henwood (Fire and Emergency NZ)
- District Commander, Superintendent Tony Hill (NZ Police)
- Chloe Marshall, observer (NEMA)

### Membership of the Coordinating Executive Group:

- Victoria Harwood (Chairperson, NRC)
- Andy Finch (FNDC)
- Sandra Boardman (WDC)
- John Burt (KDC)
- Inspector Al Symonds (NZ Police)
- Assistant Area Commander Graeme Quensell (Fire and Emergency NZ)
- Sarah Hoyle (Northland Health)
- Tony Devanney (St John Ambulance)
- Chloe Marshall (NEMA) in observer role
- Callum Chapman (Medical Officer of Health - Public Health)
- Russell Watson (Northland Lifelines Group)
- Claire Nyberg (Northland Welfare Coordination Group)
- Hone Dalton (Iwi Representative)
- Mariameno Kapa-Kingi (Iwi Representative)

**Group Controllers:**

- Graeme MacDonald
- Tony Phipps
- Claire Nyberg
- Simon Weston
- Sandra Boardman
- Victoria Harwood
- John Burt
- Alistair Wells
- Shona Morgan

**Local Controllers for the Whangarei District:**

- Simon Weston
- Sandra Boardman

**Local Controller for the Kaipara District:**

- John Burt

**Local Controllers for the Far North District:**

- Alistair Wells
- Jacine Wamington
- Darren Edwards

**Group Welfare Managers:**

- Claire Nyberg
- Shona Morgan
- Kym Ace
- Tess Dacre

**Local Welfare Managers;**

- Paula Urlich (WDC)
- Gemma Aspden (WDC)
- Alistair Wiseman (FNDC)
- Shayne Storey (FNDC)
- Jenny Rooney (KDC)

**Group Recovery Manager:**

- Jenny Calder
- Graeme MacDonald

**Local Recovery Managers**

- Janice Smith (FNDC)
- John Burt (KDC)

- Vacant (WDC)

**Kaipara Iwi Representative appointment**

For the information of the CDEM Group, to further develop the iwi and CDEM Group relationship it was recommended that Te Kahu o Taonui nominate a third iwi representative to be co-opted on to the CDEM CEG. Approval is being sought from the CDEM CEG in their 1 March 2022 meeting to co-opt Snow Tane as the third Iwi Representative, representing the Kaipara area.

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**Attachments/Ngā tapirihanga**

Nil

**TITLE:** CEG Chair's Report

**ID:**

**From:** Victoria Harwood, Pou Tiaki Hapori - GM Community Resilience

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### **Executive summary/Whakarāpopototanga**

This report provides a summary of activities undertaken by or directly related to the Northland Civil Defence Emergency Management Group over the period since the last CEG meeting on Wednesday 10 November 2021.

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### **Recommendation**

That the report 'CEG Chair's Report' by Victoria Harwood, Pou Tiaki Hapori - GM Community Resilience Chairperson and dated 22 February 2022, be received.

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### **Background/Tuhinga**

#### **Activations and response - Graeme MacDonald, Emergency Manager**

The Northland CDEM Group office has been particularly busy over the past 3 months, supporting responses to four separate large vegetation fires that required community evacuations in some instances; monitoring and responding to two separate ex tropical cyclone events; the Tonga volcanic eruption that generated a tsunami as well as the Omicron outbreak.

Several of the CDEM Group Office personnel have worked long hours, and some have worked consecutive days for long periods, and some worked across the Christmas and New Year period to ensure that CDEM services were delivered. The Group Office has also gone through a change in personnel since December with 3 new appointments.

In readiness for the Omicron outbreak, the Group Office developed protocols, including the provision for using Rapid Antigen Testing prior to Christmas and now has in place a regime where staff work in two separate cohorts. Combined with booster vaccinations, social distancing, mask wearing, appropriate ventilation, hygiene practices, two separate cohorts and the capability to carry out Rapid Antigen tests, every endeavour is being made to ensure that our critical CDEM people will be available through the outbreak to deliver CDEM services.

In terms of the Omicron outbreak the CDEM Group continues to be updated on a regular basis by NEMA and continues to be engaged with the Northland Regional Leadership Group (RLG). As has been seen over recent months, the CDEM sectors focus is on being available to respond to concurrent emergencies whilst the Health sector and partners prepare for and deliver services and funding for those impacted by Covid.

NEMA's Trifecta programme, including the legislation rewrite, has also added to the very busy workload for the group office.

It has been necessary to review work programmes during this very busy period and put a hold on some activities that we would usually attend to on an annual basis.

### **Personnel Movements and Appointments – Graeme MacDonald, Emergency Manager**

The Emergency Management Welfare Specialist, Claire Nyberg has moved to the newly created Emergency Management Tsunami Specialist role. Claire is to be acknowledged for her outstanding contribution to Welfare at the group and national level. She has Chaired the Northland Welfare Coordination Group and has led the development of welfare arrangements in the region. Claire has been deployed outside the region as a specialist Welfare Manager on numerous occasions and has been often sought out for her knowledge and experience in the Welfare sector.

The Tsunami Specialist role has been created to deliver a Tsunami Inundation response plan and to facilitate and oversee the delivery, installation, and commissioning of the upgraded Northland tsunami network.

Recruitment is underway to fill the Emergency Management Welfare Specialist role.

Tegan Capp recently returned to work after maternity leave to the Emergency Management Specialist role that delivers services for the Whangārei District.

Laura Exton has been appointed to the Emergency Management Specialist role that delivers services to the Kaipara District Council.

### **Northland CDEM Group Forum – Jenny Calder, Recovery Specialist**

The annual Northland CDEM Group Forum, usually held in May each year, has been cancelled for the 2022 year due to COVID. An early decision has been made as there is a significant amount of planning required to prepare for this event along with a significant budget.

### **Youth in Emergency Services (YES) Programme – Shona Morgan, Response Specialist**

Due to the current COVID environment and recent demand on the volunteer services in the Far North, the decision was made to postpone this year's YES Programme until 2023. This was due to be held in Kaitia and will be rescheduled for next year.

### **Whangārei District CDEM Activities –Tegan Capp, Emergency Management Specialist and Evania Arani, Emergency Management Specialist**

A WDC Controllers meeting was held on 8 February 2022. The agenda included the review of On Call Duty and Public Information Support arrangements, EOC capability post WDC Reset and plans to conduct EOC personnel recruitment over coming months.

The WDC Community Development Committee meeting was held on 17 February 2022. Along with the standing operations report, Northland CDEM provided an extensive summary of the Cyclone Cody and Hunga-Tonga-Hunga-Ha'pai volcanic eruption in Tonga on 15 January 2022, with particular emphasis placed on the surge impacts experienced in the Tutukaka Marina. Please refer to agenda item 6.5 for the full report.

EM specialist attended the **Tutukaka Community Research Meeting** to hear about the key findings of a research project that was conducted early 2021. The research was undertaken on behalf of the Tutukaka Coast Residents and Ratepayers Association using a mixed method approach consisting of a review of secondary data sources; a community survey with 675 local people participating and a series of interviews and focus groups. Some of the feedback that was received regarding Emergency planning included:

- Some vulnerable residents feeling overlooked or isolated,



- A lack of facilities available where people congregated during the March Tsunami evacuation event, and
- Most respondents (84%) were aware that there was a Tutukaka Coast Civil Defence Community Response Plan and knew where to find it.

The **Tutukaka Coast Community Response Group** have met and there was some good discussion on the results from the **Tutukaka Community Research meeting**. The group discussed possible solutions to some of the issues that were highlighted and have already started to action some of these including reviewing the current response plan, providing advice to the Ngunguru Retirement Village for their own evacuation planning as well as some potential education opportunities for the community around emergency preparedness, checking on neighbours and a pamphlet drop that includes a household emergency plan and a map of the Tsunami evacuation points in the area.

The **Parua Bay Community Response Group** is in the early stages of re-establishment as a subcommittee of the Parua Bay Residents and Ratepayers Association. EM specialist has met with the new coordinator a number of times to provide some guidance around the role and to start the conversation around what the group's immediate priorities might be. A plan has also been developed to help recruit some members for the group.

**Whangaruru South Community Response Group** have installed their self-funded Tsunami evacuation signage in the area. Evania Arani, EM Specialist, was invited out by the group in December to do a tour of the areas where the signs have been installed. The group, with help from Northland CDEM, has produced a Tsunami evacuation map/pamphlet for the area, with the response group distributing this to every household in the area during the Christmas holiday period. The group also used this as an opportunity to educate permanent residents as well as holiday makers on the evacuation zones in the area and to answer any questions they had. This group has been very proactive in their community and Northland CDEM commend them for all the time and hard work that they have put into their project.



The **Bland Bay/Whangaruru North Community Response Group** enquired about potential funding streams so they could replace a storage container that stores all their Civil Defence equipment. A site visit has taken place and due to the cost to replace the container other options were discussed and are being explored. Whilst visiting with the group it was also a good opportunity to catch up with them to find out if they have had experienced any issues over the past year. The 05 March 2021 Tsunami event was mentioned and how traffic congestion became an issue due to campers getting in their cars trying to get to higher ground. To help rectify this issue the group will look at zoning areas within the community and each zone having a designated evacuation point that should help to alleviate this issue. The community response group are also planning to review their

community response plan this year and will look to add appendices which will provide the detail of the zones and evacuation points so that the local campgrounds can be better prepared if any future Tsunami evacuations are required.

## **Far North CDEM Activities – Sarah Boniface, Emergency Management Specialist Far North; Bill Hutchinson, Emergency Management Specialist Far North**

### **Community Engagement**

Community engagement activities (kanohi ki te kanohi) have largely been restricted due to the ongoing COVID-19 and Omicron response, the precautionary measures taken due to the contact risk to CDEM Staff, and low vaccination rates in the Far North. Lack of internet speed and connectivity across rural homes means that some of the individuals we work with have restricted ability to use group online meetings as an alternate option. However, where appropriate and both COVID-19 protocols and the circumstances have allowed, meetings have been undertaken to maintain relationships and review or develop community response plans.

An overview of activities carried out includes:

- In November 2021, Far North EM Specialists were invited to sit on the newly formed **Te Hiku Community Response Group** to observe, advise and assist the group around issues related to Emergency Management. The self-forming group came together as a response mechanism to COVID-19 and the transition to self-management of COVID-19 in the community. At a national level, the Ministry of Health is now requesting community hubs stand up to help share the load that the pandemic has placed on our health system, ensuring that it is not overwhelmed. The establishment of this group has meant that Te Hiku will have the first Kaupapa Māori hub in Tai Tokerau to provide Manaaki (welfare, caring, kai, self-isolation support etc) to families with COVID in Te Hiku. To ensure a coordinated approach, the common operating system that has been adopted is CIMS (Co-ordinated Incident Management System) which aligns the group with the Ministry of Health and other government agencies.

Meetings attended and supported:

- All **Kaimaumau and Houhora community meetings** in response to the Kaimaumau fire and support the transition from response to recovery.
- Fire Emergency New Zealand's newly established Community Risk Management Team.
- Residents of **Tapuaetahi Beach** to initiate development of a Community Response Plan.
- **Waimamaku** to review Community Response Plan and establish new Community Group.
- **North Hokianga communities** due to extended power outage as a result of Cyclone Dovi.

### **Hunga-Tonga-Hunga-Ha'pai Volcano**

On 15 January 2022 while Northland CDEM were monitoring the approach of Cyclone Cody, bringing with it predicted high seas and easterly swells of 6-8 metres, a large volcanic eruption of the Hunga-Tonga-Hunga-Ha'pai Volcano in Tonga occurred.

Before the national tsunami advisories were issued for the volcanic eruption, Community Response Groups in Far North coastal areas observed sudden and unusual changes in sea conditions that closely resembled natural signs of tsunami and took the initiative to follow the emergency procedures in their Community Response Plans. Warnings and advisories had not been issued for land inundation.

These communities include Mahinepua, Opononi, Rarawa beach, Tapotupotu and Spirits Bay campgrounds. Actions taken by these communities included evacuating the immediate beach areas and low-lying camping grounds in proximity and contacting EM Specialists to relay their observations and provide a brief overview on what they were seeing and seek further information.

As the national advisories had not yet been issued, community information provided valuable in assisting Northland CDEM to establish a common operating picture on the threat to Northland's coastal areas, and undertake the appropriate actions in response. Again, this highlights the value and benefits of this type of community planning and relationship with communities.

Community Response Planning remains a priority and is a key part of "Readiness" in the Northland CDEM Group Plan - 2021-2028 (Section 6).

### **Hokianga water issues**

In January 2022 Northland CDEM were contacted by community members in the Northern Hokianga area who had been without running water for over a month. The raw bush line that supplies Motuti, Pangaru and surrounding areas had suffered infrastructure damage and as a result the treatment plant located at Waipuna Marae was not functioning. This is the only access to treated drinking water available for those without tank capacity at their homes.

Far North EM Specialists connected with other stakeholders; Te Puni Kokiri (TPK), Te Rarawa, Northern Regional Council (NRC) and the Ministry of Social Development (MSD); to remedy the situation. A three-part plan moving forward has been accepted by the stakeholders by way of short term, mid-term and long-term remedies where each stakeholder provides assistance financially. The Te Tai Tokerau Water Resilience Working Group (TTWRWG) NRC representative, Tony Phipps, has agreed to oversee the plan.

### **Tsunami Sirens Network**

Repairs and maintenance required to the Far North sirens identified at the time of the bi-annual siren test in September 2021 have been carried out by Top Energy. Northpower have scheduled priority repairs for the Whangarei district and Kaipara.

### **Kaipara CDEM Activities – Laura Exton, Emergency Management Specialist**

Laura Exton started in her role as Emergency Management Specialist - Kaipara on 17 January 2022. She has been working on familiarisation in the role, connecting with the Kaipara Emergency Operations Centre staff, and connecting with Community Response Group Coordinators. A key focus is on ramping up attendance at the CIMS trainings being held in Dargaville Town Hall in March.

Additional activities include:

- Meeting with a **Ruawai Community Response Group member** to discuss marae preparedness, an additional Civil Defence Centre to incorporate into their Community Response Plan, and potential CIMS training for key community members.
- Meeting with **Mangawhai Community Response Group Coordinators** to talk about the future of the group, revisions to their Community Response Plan, and ideas on how to communicate the emergency response plans to new community members.
- Attended the **Matakohe Community Group meeting** to meet the group and talk about Civil Defence and how we can support them, including assisting in a review to update their plan.

### Waikara fire response – as of 17 February 2022

On 15 February at 1800hrs the on-call Civil Defence Duty Officer was alerted to a fire in the Aranga / Waikara area, Kaipara District. At time of writing, the fire has burned through approximately 80ha, predominantly young pine forestry on Māori land.

FENZ were on the scene and have led the response. 30 people from the Waikara community evacuated their homes, and stayed with friends / whanau, at the Waipoua Forest HQ, or in cabins owned by local iwi Te Roroa in a village reserve. Some remained at the Waikara marae. Civil Defence worked with the Aranga School Principal to open up the school as an Assembly Point, however this was not needed in the end.

While FENZ had indicated that a return to their homes on the afternoon of 16 February was possible, Te Roroa alongside FENZ decided that they should not return to their homes until 17 February to ensure the safety of the community. At time of writing, the evacuated residents should be able to return to their homes on the afternoon of 17 February.

EM Specialist - Kaipara and EM Specialist - Partnerships visited the Incident Control Point on 16 February. The FENZ Incident Controller was happy with how things were progressing and planned to scale back the response that afternoon.

There have been no immediate welfare requests to date. The community are resilient and have been supporting each other. Te Roroa's fire-trained crew have been working with FENZ throughout the response to dampen hot spots and cut back scrub.

There were some concerns raised by community members with replenishing their water that was used by FENZ for the response. This is being investigated by FENZ.

The Waikara and surrounding communities have indicated their interest in creating a more formal Community or Marae Response Plan, as they have had a few fire incidents in recent years. This is a positive result as we have had limited contact with the community in this space to date. EM Specialist - Kaipara will continue to explore this opportunity with the community leaders.

### Capability Development – Shona Morgan, Response Specialist

#### Coordinated Incident Management System (CIMS) Training

Registrations for CIMS training opened in January. So far, training in March (Dargaville and Whangārei) and May (Whangārei) has been loaded onto the registration portal. Below is the number of current registrations:

Date and Location	Number of Registrations (as of 15 Feb 2022)
<b>March</b>	
Dargaville CIMS	7
Dargaville EOC Exercise	2
Whangārei CIMS	15
<b>May</b>	
Whangārei CIMS	7
Whangārei EOC Exercise	2

Welfare	6
Intelligence	2

Should the covid situation in Northland escalate as anticipated, all CIMS training will be postponed to a later date.

With the establishment of the Central Care Coordination Hub and the Kaupapa Maori Hubs across Northland in recent weeks (to coordinate Northlands covid response) there has been an increased demand for CIMS training. Our current training programme does not meet this demand and the need for more flexible, easily accessible training is necessary.

Currently, Northland CDEM is working with training providers to develop a bespoke, shortened version of CIMS training that will supplement the current programme. This new training will likely be a half-day session and be tailored to suit organisations and agencies, such as those working in these Hubs, and that sit outside the emergency services sector. While our current CIMS training is NZQA accredited, this proposed new training will not be.

#### **National Exercise Governance Group – Shona Morgan, Response Specialist**

Below is an update from the National Exercise Governance Group meeting held on Tuesday 15 February.

**NEMA** - The Systems Capability team at NEMA has been restructured. The Exercise team and the Lessons Management team are now working as separate business units – Jo Guard is the acting lead for Lessons Management and Sara Mitchell is the acting lead for Exercises. The NEMA Exercise team now currently has 1.5 FTEs.

**Alpine Fault M8 (AF8)** - Cabinet have expressed a keen interest in running a Tier 4 (National plus external stakeholders) exercise around the AF8 scenario this year. NEMA is putting an options paper together for this. Numerous CDEM groups around the country are keen to participate and a few mentioned they would be interested in smaller activities in the lead up. There has been no firm date set for this yet.

**Group updates** - All CDEM groups who attended the online meeting are running various formats of exercise programmes this year. They vary in scale from small, tabletop function exercises to one local council which is running a full multi-day activation around AF8 including deployment of field teams. Despite the ongoing covid environment, there is still a keen appetite for training and exercising.

Meetings are held online every 2 months.

#### **Welfare Coordination Group – Claire Nyberg, Tsunami Management Specialist - Tsunami Projects**

A **Welfare Coordination Group (WCG) meeting** was held on **5 November** and the agenda covered updates on community Self Isolation and Quarantine (SIQ) and the Regional Leadership Group (RLG), an overview of the Health Improvement Practitioners (HIPs) and Health Coaches and an update on the iwi planning workshop (which has been postponed). The 2022 meeting schedule has not been finalised as we are waiting on the appointment of the new Group Welfare Manager.

The **WCG** have been **receiving the weekly vaccination reports** forwarded onto them from the Northland District Health Board (NDHB) and any other information from other sources which would benefit WCG members for their COVID response/support.

The **latest milestone from the Hearts and Minds Project**, which the Northland CDEM group have funded, has been received and the project recipient has received the second instalment of \$5,915. This milestone involved the completion of mapping support services in Te Tai Tokerau identifying 367 social support organisations. All 367 social support organisations have been contacted and invited to complete a Tai Tokerau Directory Registration Form to confirm contact details and support services.

The **Welfare Needs Assessment (WelNAS) project is on-going** with a landing page, survey questions and 3 reporting dashboards completed to user testing status. A show case of the product to date is being delivered to the Canterbury CDEM Group and they will be able to provide some initial feedback as welfare subject experts. There are a number of additional milestones before the Welfare Needs Assessment System (WelNAS) is ready to be rolled out to the needs assessment team and others.

**Needs Assessment training scheduled** for 18 February has been postponed to later in the year when the COVID risk is potentially lower, and a variety of staff can interact safely.

The **Financial Assistance Cluster met** on 16 February, chaired by Ministry of Social Development and it was well attended by supporting agencies and others. Updates were given by members on financial assistance available to support the on-going COVID response. The cluster will meet twice yearly or by exception moving forward.

#### **Lifelines Coordination Group – Tegan Capp, Emergency Management Specialist - Whangārei**

The New Zealand Lifelines Council (NZLC) Online Forum was held on 11 February 2022. The agenda included presentations and updates on the national review of fuel stockholdings, post-earthquake arrangements for critical buildings and infrastructure, an update from NEMA on legislative planning in 2022 and the proposed name change of Lifelines Utilities to Critical Infrastructure, an overview of significant infrastructure resilience research projects underway, a presentation on planning emergency levels of service for lifeline utility services in Wellington and an overview of Transpower's resilience planning arrangements.

The National Lifelines Utilities Forum is set to be held in Queenstown on 29 and 30 September 2022. Registration is open [here](#).

The Northland Lifelines Group quarterly meeting is scheduled for 3 March 2022 and in line with Covid red settings, will be hosted online.

#### **Māori and relationship engagement update - Mana Wright, Emergency Management Partnership Specialist**

**Welfare Planning workshop** - this workshop focussed on ensuring access to welfare support during emergencies. It was originally set to take place at the end of November 2021 after an initial delay due to the Delta lockdown (Aug-Sep 21). Due to the expected Omicron COVID surge, the workshop has been postponed until mid-2022. This decision is based on the level of agency and stakeholder interaction that has occurred since the inception of this workshop, how the initial scope of the workshop does not meet user requirements and will allow for additional lessons learnt to be incorporated with wider understanding of how the community hubs have functioned, and full

engagement from our key partners in person.

**Trifecta review of Iwi and Māori participation.** This review focusses on how to best recognise and support Māori participation in the Emergency Management system, exploring the role, participation, representation, funding, and planning involvement. Currently, Iwi and Māori representation is not currently provided for in legislation, the role played by iwi and Māori in emergency management is not sufficiently recognised - strategically or operationally. A national meeting held on the 16 Feb 2022, was facilitated with key Iwi representatives across the motu, relevant Emergency Management professionals, and other stakeholders to examine the intricacies and effects that this Bill will have and how to better enable the legislation.

Some the key elements discussed during the hui focussed on reviewing four key aspects: Iwi participation, disproportionately affected people, Critical infrastructure, and Clarifying Roles and responsibilities. Following on from the previous four key elements, discussions continued to how this review can enable the government and OGAs to work more collaboratively – In partnership – to achieve greater consistency with our treaty partners. This was also supported using stronger language to reflect partnership of treaty throughout the Bill i.e., Manaakitanga rather than welfare. Regionally led; whanau, hapu, marae, iwi as the OOM for the access to support/process for enabling resilience building. Additional discussions were centred around how to enable our Rangitahi to develop awareness and subsequently access to the EM sector – Cadetships, Iwi led Marae response planning, internships etc.

Overall, the trifecta review and consultation were widely accepted and well received – it was noted the compressed timeframe for consultation; however, the feedback is always welcome, in any form to the Minister.

**Other points.** NEMA are reviewing a strategy for the YES program and the Marae engagement program with draft documents expected in the coming months.

**Māori and Pasifika Emergency Management (EM) professional's hui** - a hui is set to take place in mid-to-late 2022, with key Māori and Pasifika EM professionals. This hui will look to cover engagement methods, information and process sharing, coupled with better integration across the EM sector in New Zealand.

**Key Agency Engagement** - on 26 January 2022 an initial hui took place with Northland Civil Defence and Te Puni Kōkiri's new Senior Advisor - Regional Partnerships and Operations. The intent of this meeting was to understand the new role, the portfolio's responsibilities (Water Resilience and Civil Defence) and identifying opportunities to enable a joint effort moving forward.

### **Key Community Engagements**

Through the last quarter of 2021, engagement and marae response planning took place for marae in Tinopai. This response plan was further supplemented by a physical site visit on 26 November 2021 by Northland CDEM and the FENZ Community Engagement team.

Engagement with a Ruawai Community Response Group member, with direct links to numerous Iwi and Māori within the Kaipara District, took place on 28 January 2022. They have highlighted the continued effects of COVID in the Kaipara, how they are continually helping, and are deeply aware of

the benefits of training and working with Civil Defence.

On 9 February 2022, a meeting between FENZ, Neighbourhood Support, and NCDEM was held to cover community engagement opportunities in the Far North in the short term, with scope for further opportunities across Northland.

### **Communications – Murray Soljak, Emergency Management Communications Specialist**

Communications demands since the previous meeting have mirrored the major events – COVID-19 through the transition to the traffic light system and over the holiday break, the Kaimaumu fire, Cyclones Cody and Dovi, and tsunami activity in Northland following the eruption at Hunga Tonga-Hunga Ha’apai volcano in Tonga (along with the tsunami assessment from the M6.4 Kermadec area earthquake two weeks later).

Consistent with what is taking place elsewhere, an element of people coming to the CDEM Facebook page are doing so in order to voice their protest against COVID-19 restrictions or the Government in general. The level of intolerance is beyond what has been experienced in the past (again consistent with what is taking place elsewhere) and has flowed into other topics. Although we minimise our use of the option to switch off comments, this has become necessary at times for most organisations with any level of involvement in the COVID-19 response.

Unexpectedly, the page has maintained and made a very slight gain (~ 575) in follower numbers from the end of November through to mid-February (although again, a number of these are not supportive and are only maintaining the connection to have somewhere to vent their displeasure).

As of 10 February, in response to rising case numbers nationwide, the Ministry of Health adopted a less detailed version of its 1pm updates, which in turn has reduced the time involved in summarising these.

A positive has been seeing an effective doubling of numbers of people following the Northland Fire and Emergency NZ page as a result of the quality and frequency of updates on the Kaimaumu fire on that page.

NEMA has indicated that a **nationwide test of the Emergency Mobile Alerts platform** has been tentatively scheduled for May.

Formerly held in November each year, this test has been cancelled for the past two years, largely due to the number of uses of the system for genuine events over that time (including COVID-19 Alert Level changes in 2020 in particular) and heightened levels of public anxiety.

The **next six-monthly test of the tsunami siren network will take place on Sunday 3 April**, accompanied by the usual lead-up publicity and with the support of Community Response Groups and other volunteers.

### **Deployments – Jenny Calder, Emergency Management Recovery Specialist**

On Tuesday 1 February, the Met Service issued a Red weather warning, with heavy rainfall forecast for Westland and Buller Districts. Major impacts on the region were expected including slips, road closure, flooding, and infrastructure damage.

Forecast rain intensities and river level rises coinciding with king tides meant the Westport township was likely to see significant flood inundation similar to that experienced in July 2021.

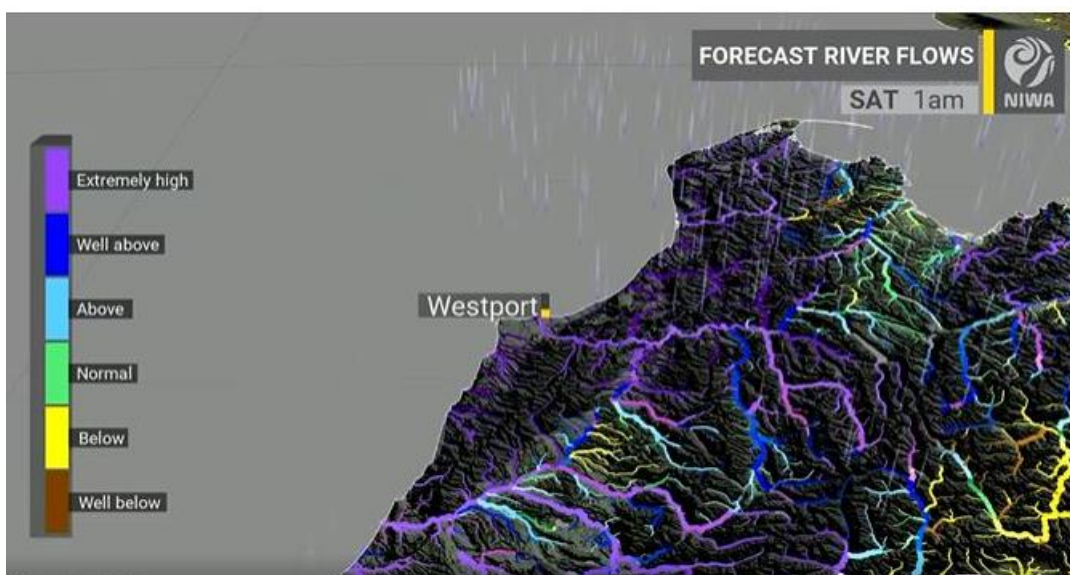


An ECC was established at Greymouth to support the EOCs located at Buller (Westport), Franz and Westland (Hokitika). The Buller EOC declared a state of emergency on 2 February at 1435hrs.

Jenny Calder deployed on Wednesday 2 February as part of the NZ EMAT team and was placed into the ECC in a Group Welfare Manager role.



Powerhouse Road and Christmas Creek, Westport, 4 February 2022



NIWA NZ river flow modelling, showing Saturday 5 February 2022.

**Key taskings and learnings** from the response include:

#### **Mass Evacuation planning**

As river levels and rain intensified, a plan was put in place to support the evacuation of the Westport township as sheltering in place would not be feasible. A Mass Evacuation Site was established and resourced to provide basic shelter, water, food, and sanitation.

- Mass Evacuation Centres should be pre-identified where possible
- Identifying resources required to stand up a Mass Evacuation Centre including human resources takes time and can put strain on local/regional businesses
- Prioritisation of shelter, food, basic health care and sanitation for evacuees

- Needs assessments can be overwhelming and electronic data collection should be used where possible

### **Welfare**

Evacuation Reception Centres were established in Greymouth to support those who were self-evacuating (prior to the Mass Evacuation Centre being established) and had nowhere to go.

Survey 123 was used to capture the needs assessment data as people arrived at the Mass Evacuation Centre allowing the ECC to provide immediate support to the EOC.

- Ensuring the processes are robust
- Managing in a Covid environment poses challenges and seeking advice from the Director of Health (Christchurch) provided good direction
- Ensuring people with heightened stress levels as a result of the July floods were able to link into services easily and without delay was a priority
- Connecting with welfare and social service providers early to ensure readiness enables agencies to be prepared.

### **Agency Liaisons**

Agency liaisons were co-located in the ECC and integrated with the CD team in the ECC.

- Emergency Services and agency liaison staff located in the ECC allowed issues to be managed as they arose and the immediate transfer of information was key in decision-making and situational awareness
- Proactive MPI (Animal Welfare) staff mobilised NGOs from outside the region to support the animal shelter established at Westport and had resources in place to establish a shelter in Greymouth without delay if required
- Red Cross provided staff for the Greymouth Evacuation Reception Centres and were key in ensuring we had trained and appropriate staff on site.

### **Information sharing**

A delay in information sharing was highlighted when information to the public was not the most up-to-date.

- Information sharing between the ECC and EOCs must be current and in real time
- The All of Government (AoG) fact sheet takes time to produce. We need to ensure the community are receiving the most up-to-date information
- Social media was the key communication tool but we need to include other forms of communications during and post-event.

The communities in the Buller and Westland Districts are resilient and resourceful; however the impacts of dealing with another major flood whilst still in recovery from the July 2021 event was evident on the faces of both staff and residents. They were all extremely grateful for the support of partner agencies from out of the region.



Mass Evacuation Centre, Westport



Mass Evacuation Centre, Westport

### Kaitaia Flood Forecast Model Project

The Northland Regional Council has commissioned the development of a flood forecasting model for Kaitaia. Lack of predictive flood forecasting in Kaitaia has been highlighted as a significant risk. Currently Kaitaia has approximately 1:30 year protection, if the Tarawhataroa River overtops or breaches the stopbanks, the nearby houses will be quickly inundated. The Awanui Flood Scheme upgrade works are designed to mitigate some of the risk, but a storm exceeding a 1:100 AEP or 1:100-year storm has the potential to overtop the Tarawhataroa stop banks.

The flood forecast model will enable more time to be given to CDEM by hydrology in response to a potential flooding situation in Kaitaia and for CDEM evacuation planning and response.

The project is being funded by the Northland Regional Council.

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### Attachments/Ngā tapirihanga

Nil

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### Authorised by Group Manager

**Name:** Victoria Harwood, Pou Tiaki Hapori - GM Community Resilience,  
**Title:** Civil Defence Emergency Management Manager  
**Date:** 22 February 2022

**TITLE:** Northland Water Resilience

**From:** Graeme MacDonald, Emergency Manager

**Authorised by** Victoria Harwood, Pou Tiaki Hapori - GM Community Resilience, on 22  
**Group Manager/s:** February 2022

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### Whakarāpopototanga / Executive summary

The Northland Regional Council established a Water Resilience Fund in its Long Term Plan 2021-31 and attached for the information of the group is a copy of the agenda item that sets out how the fund is being administered and distributed.

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### Ngā mahi tūtohutia / Recommendation

That the report 'Northland Water Resilience' by Graeme MacDonald, Emergency Manager and dated 22 February 2022, be received.


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### Background/Tuhinga

Nil

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### Attachments/Ngā tapirihanga

Attachment 1: NRC Agenda item - Water Resilience Fund [↓](#) 

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**TITLE: Water Resilience Fund - Criteria, Process and LTP Year 1 Allocation**

**From:** Tony Phipps (contracted advisor)

**Authorised by Group Manager/s:** Victoria Harwood, Pou Tiaki Hapori - GM Community Resilience, on

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**Executive summary/Whakarāpopototanga**

The Northland Regional Council established a Water Resilience Fund in its Long Term Plan 2021-31. The Water Resilience Fund provides \$500,000 per year to support improving water resilience infrastructure (water tanks and associated treatment and plumbing) for vulnerable communities via grants to community linked providers.

This report recommends criteria and process for making Water Resilience Fund grant allocations and makes recommendations for the grant allocations for 2021-22 FY. These recommendations have been made based on the guidance provided by Council at the Council workshop (15 December, 2021) on this matter.

Recommendations are made to allocate a total of \$477,600, being 95.5% of the first years Fund budget to two water resilience improvement projects:

- To Te Rūnanga o Whaingaroa : up to \$330,000 for Tūtū Te Wai.
- To Te Kotahitanga E Mahi Kaha Trust: up to \$150,000 for Waikotihe Puna and Te Kotahitanga Marae and Community Water Proposal.

These projects will provide water infrastructure including water collection and storage tanks, filters and associated plumbing to improve the water resilience and alleviate water poverty for some 110 households, three marae and a kohanga reo.

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**Recommendation(s)**

1. That the report 'Water Resilience Fund - Criteria, Process and LTP Year 1 Allocation' by Tony Phipps, (contracted advisor) and dated 22 February 2022, be received.
2. That the Council adopt the criteria and process for making Water Resilience Fund grant allocations as set out and recommended in this report.
3. That the Council make the following Water Resilience Fund grants for the 2021-22 FY:
  - To Te Rūnanga o Whaingaroa : up to \$330,000 for Tūtū Te Wai.
  - To Te Kotahitanga E Mahi Kaha Trust: up to \$150,000 for Waikotihe Puna and Te Kotahitanga Marae and Community Water Proposal.

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**Options**

No.	Option	Advantages	Disadvantages
1	As recommended.	Efficient and effective process that makes best use of existing information and learnings from the 2019-20	Some potential projects may be missed due to the process not including a

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		drought and collective advice from the Te Tai Tokerau Water Resilience Working Group.  Minimises the amount of work on applications for projects that would not be able to be funded.	formal public application process.
<b>2</b>	Including a public expressions of interest/application process.  (This option will be re-considered for possible inclusion in the process for future years.)	Likely to get more potential projects.	Work and resources applied to projects that do not receive grants.  A lengthier more costly process.

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## Considerations

### 1. Environmental Impact

The projects funded by the Water Resilience Fund grants recommended will significantly improve the water resilience and overall resilience of the recipient communities, reduce their need for emergency water supplies and improve their health and wellbeing.

There are no adverse environmental impacts expected from the recommendations.

### 2. Community views

The Water Resilience Fund was established through the Long Term Plan 2021-31 public process with community views on the Fund proposal and kaupapa being sort and considered by Council. The recommended criteria are strongly aligned to the kaupapa of the Fund and the process includes receiving advice from the Te Tai Tokerau Water Resilience Working Group.

### 3. Māori impact statement

The Water Resilience Fund was widely supported by Maori through the Long Term Plan process and the most water short predominantly Maori communities will benefit from the Water Resilience Fund grants. The grant allocation process includes advice from the Te Tai Tokerau Water Resilience Working Group which includes iwi representatives.

### 4. Financial implications

The total of the recommended grants, \$477,600, represents 95.5% of the Water Resilience Fund for the 2021-22 FY provided for in the Long Term Plan 2021-31. The remaining \$22,400 (4.5%) and any grant funds not fully utilised will remain in a Water Resilience Fund reserve for re-allocation.

### 5. Implementation issues

Once the Council has made the grants, implementation of the individual water resilience improvement projects is the responsibility of the grantees. While the grantees have been selected as capable providers, this is the first year of the Fund and these are the first projects

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of this kind. As the first grants have been made with less than half the FY left and with pandemic impacts including possible material supply delays and shortages, there is some risk that these first projects may not be completed within the FY. However, as it is intended to make grant payments in advance to enable the grantee/providers to purchase materials which are the largest cost components of these projects, it is likely that all payments of the allocated grants will be made before the end of the FY.

**6. Significance and engagement**

**7. Policy, risk management and legislative compliance**

The recommendations present no known significant policy or legislation compliance risks for Council. The Council is making grants to trustworthy and capable providers based on advice from a regional water resilience working group with wide and specialist representation. Responsibility for the management of operational risks and compliance is with the grantees.

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**Background/Tuhinga**

**The Water Resilience Fund**

As part of its response to the severe 2019-20 drought and the lack of water resilience and water poverty exposed, the Northland Regional Council established a Water Resilience Fund in its Long Term Plan 2021-31. The Water Resilience Fund provides \$500,000 per year to support improving water resilience infrastructure (water tanks and associated treatment and plumbing) for vulnerable communities via grants to community linked providers.

This report recommends criteria and process for making Water Resilience Fund grant allocations and makes recommendations for the grant allocations for 2021-22 FY. These recommendations have been made based on the guidance provided by Council at the Council workshop (15 December, 2021) on this matter.

**Criteria for Eligible Projects to Receive Water Resilience Fund Grants**

The following recommended criteria for eligibility for Water Resilience Fund grants were developed to align with the kaupapa of the Fund and on advice from the Te Tai Tokerau Water Resilience Working Group (TTWRWG: has mandate to co-ordinate and advise, with representation from iwi, central and local government) :

**Criteria**

1. The project will substantially improve water resilience of a community including households, that are not on an existing public water supply.
2. The benefitting community is identified as suffering from chronic water shortages and water poverty, and is housing or serving vulnerable people: elders, Kaumatua and Kuia, supporting unwell or disabled whanau, high number of whanau including tamariki.
3. Inadequate or poor state of water infrastructure is a primary cause of the water shortages.
4. Deliverability of solutions including infrastructure (tanks, treatment and associated plumbing).
5. The project provider (grantee) is trustworthy and capable with strong community links.

**Process for Identifying and Selecting Projects for Water Resilience Fund**

Year 1; 2021-22

The process for identifying and selection of projects for Water Resilience Fund grants for this first year of the Fund used the above criteria and was based on information and learning from the 2019-

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20 drought and using the collective knowledge and advice of the Te Tai Tokerau Water Resilience Working Group (TTWRWG).as follows:

1. Referring to Te Tai Tokerau Water Resilience Working Group for advice and support.
2. Based on list of potential projects compiled during and following 2019-20 drought response and applying the Criteria for Eligible Projects to Receive Water Resilience Fund Grants.
3. Identify potential projects and providers\* (TTWRWG/NRC).
4. Seek detailed proposals (NRC).
5. Evaluate (NRC/TTWRWG) and refine projects (NRC/provider).
6. Allocate and pay grants (NRC).

(\*Excluding projects or components of projects with, or more closely aligned to, other funding eg. Puna Wai Ora (Te Hiku) or Kainga Rua (TPK).)

Years 2-3; 2022-24

Before considering potential projects for grants in years 2 and 3 of the Fund it is proposed to review the above process and advise on and recommend any improvements. The review will include the consideration of the merits of adding a public expressions of interest/application process. It is proposed to seek advice from TTWRWG on improving the process and report to Council for consideration, then proceed to use the revised process to provide recommendations for allocating the grants for years 2 and 3 before the start of year 2 (July 2022).

#### **Water Resilience Fund Grant Allocations for 2021-22.**

Following the above process it is recommended that Water Resilience Fund grants for 2021-22 are made to:

#### **Te Rūnanga o Whaingaroa, Tūtū Te Wai project: up to \$327,600 (ex GST).**

Project summary:

- Improving water resilience to some eight Whaingaroa communities, including 95 homes and two marae and benefitting 350 people.
- Prioritisation based on Te Rūnanga O Whaingaroa and connected social services data and knowledge of community.
- Providing tanks, water treatment and associated plumbing and minor repairs.
- Provider: Te Rūnanga O Whaingaroa, a mandated Iwi organisation, experienced and trusted community services provider with good project management capability and access to contractors.
- Project cost: Total \$327,600 (ex GST), proposed in three tranches.

#### **Te Kotahitanga E Mahi Kaha Trust: Waikotihe Puna and Te Kotahitanga Marae and Community Water Proposal: up to \$150,000 (ex GST).**

Project Summary:

- Improving water resilience to a community immediately SW of Kaikohe, including 15 homes and a marae, church and kohanga reo.
- Prioritisation based on local knowledge of community and participation in the 2019-20 drought response.



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- Providing tanks, water treatment and associated plumbing and minor repairs.
- Provider: Te Kotahitanga E Mahi Kaha Trust, experienced and trusted community services provider with recent water tank project experience and access to contractors.
- Project cost: Estimate \$150,000 (ex GST).

The recommended grants total \$477,600 (95.5%) of the 2021-22 Fund, leaving \$22,400 (4.5%) as yet unallocated. A further recommendation will be made on the allocation of the remaining amount, either for a grant to a small-scale project being investigated, or to put in reserve to be added to the following year grants.

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#### **Attachments/Ngā tapirihanga**

Nil

**TITLE:** Tsunami activity in Northland following Hunga Tonga-Hunga Ha'apai volcanic eruption

**From:** Murray Soljak, Emergency Management Communications Specialist

**Authorised by** Victoria Harwood, Pou Tiaki Hapori - GM Community Resilience, on 22  
**Group Manager/s:** February 2022

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### Whakarāpopototanga / Executive summary

This report focuses primarily on the tsunami advisory of 15 January 2022 following an eruption at Hunga Tonga-Hunga Ha'apai volcano in Tonga, and the impacts at Tutukaka Marina in particular.

To meet council deadlines, it has been compiled while a number of aspects are still being understood, and ahead of the National Emergency Management Agency's (NEMA) review of this event. Other organisations which have been closely involved (e.g. GNS Science, Tutukaka Marina Management Trust) will also have insights and thoughts on future approaches but have not to date taken part in the public debate to the same extent as Northland CDEM Group. Some written information provided/published by these organisations is included in this report.

This report was also provided to Whangarei District Council's Community Development Committee meeting on 17 February 2022.

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### Ngā mahi tūtohutia / Recommendation

That the report 'Tsunami activity in Northland following Hunga Tonga-Hunga Ha'apai volcanic eruption' by Murray Soljak, Emergency Management Communications Specialist and dated 22 February 2022, be received.

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### Background/Tuhinga

New Zealand's procedures to receive, assess and disseminate tsunami notifications at the national level are set out in the National Tsunami Advisory and Warning Plan, which is available on the NEMA website at:

<https://www.civildefence.govt.nz/assets/Uploads/publications-/Supporting-Plans/Tsunami-Advisory-and-Warning-Plan-Supporting-Plan-Update-Jun-2020.pdf>

The diagram below is taken from a NEMA guide produced to help explain the respective roles and responsibilities and processes to the media (please note this is the process for regional and distant-source tsunami – it differs for local-source tsunami [those generated close to New Zealand's coastline]).

Of note is the explanation in Box 4 of the different advisories and warnings that can be issued. The general intent of a National Warning: Land and Marine Threat and a National Advisory: Tsunami Activity are summarised below the diagram (wording also from the same NEMA document):

## OUR PROCESS

### REGIONAL AND DISTANT-SOURCE TSUNAMI



#### ‘NATIONAL WARNING: LAND AND MARINE THREAT

*Land and marine threats are as serious as our warnings get. A land and marine threat means that tsunami waves are coming, and will reach inland. A Land and Marine Threat will usually mean evacuation for at least some areas.*

*Always remember that the first tsunami waves may not be the largest.*

#### ‘NATIONAL ADVISORY: TSUNAMI ACTIVITY

*Beach and marine threats are unlikely to require any evacuations (besides getting people off beaches). Strong and unusual currents and unpredictable surges are obviously dangerous for people in or on beaches and coastal waters, but people on dry land don’t need to worry about waves reaching them.*

*It’s extremely important that we get the strong currents and surges information out there, but generally this type of threat should be positioned as ‘low risk’ for anyone not actually in the water or at the beach.’*

Examples of an Advisory and a Warning are included at the end of this report – the National Advisory for strong and unusual currents and unpredictable surges issued at 8.14pm on 15 January, and as a comparison, the National Warning issued on 5 March 2021 following the third of three earthquakes that day and resulting in evacuations in Northland and other regions.

The majority of the content of these is templated, with details such as locations added as applicable.

Tsunami warnings and advisories issued by NEMA are sent directly to the media (at the same time and via the same mechanism as they are sent to CDEM Groups and other stakeholders) and also posted to NEMA’s social media channels and website.

Nationally and also within Northland, a Warning of a threat to land i.e. an expectation of inundation is the threshold for the use of alerting platforms such as Emergency Mobile Alerts, and tsunami sirens where these are in place.

Advisories for strong and unusual currents and unpredictable surges can be issued relatively frequently – up to four or five times a year in some years and often through the hours of darkness. While some commenters have pointed out their awareness that the siren sound is a signal to ‘seek further information’, past experience has however shown that a significant proportion of the population will start to evacuate as soon as they hear a tsunami siren (or anything that resembles one).

The national process allows for local decision-making – however, this is generally in the implementation of the GNS assessment/NEMA advisory or warning at local level, rather than taking actions that are (or are perceived as) inconsistent. Given that media and the public have full and immediate visibility of the national warnings/advisories (and information is shared between friends in different regions), even variations with a sound logical basis can lead to reduced understanding and/or credibility.

The National Tsunami Advisory and Warning Plan outlines the thresholds for assessment of earthquakes for tsunami risk. Not all earthquakes are assessed (following the 15 January event, there is an expectation from some within Northland that this will be the case). Since 15 January, there has already been one further earthquake assessed (M6.4 in the Kermadecs region on 29 January), the outcome of which was ‘no tsunami threat to New Zealand’.

#### **Sequence of events on Saturday 15 January:**

##### **GNS assessment process**

GNS Science is the mandated and official scientific assessor of earthquake/volcano/potential tsunami for New Zealand. GNS has published an article which gives an insight into its experience on this occasion, which can be found at the link below (and has since been followed by other articles about the eruption in general). The italicised content below is a compilation from two of these articles:

<https://www.geonet.org.nz/news/3UCRFvxEpqz7zpyeAemiuv>

A GNS Science animation of the event can be found at:

<https://www.gns.cri.nz/static/download/tonga/tonga-tsunami.mp4>

*‘A very large, explosive eruption occurred at Hunga Tonga-Hunga Ha’apai volcano in Tonga on 15 January 2022. The eruption was very energetic, generating a tall eruption cloud, explosions, shockwaves, audible booming and it created tsunami waves that travelled around the Pacific.*

*‘The huge eruption was the largest in the current eruptive episode at Hunga Tonga-Hunga Ha’apai that spans back to 2009. Back then, all you could see of the volcano was two small, elongated islands poking about 100 metres out of the ocean. Hunga Tonga-Hunga Ha’apai volcano is located 65 kilometres north of Tonga’s capital Nuku’alofa.*

*‘During 2014 and 2015 eruptions, a cone built at the volcano, bridging the gap between these two smaller islands to create one larger island.*

*‘An earlier eruption on Friday 14 January destroyed this central cone, flooding the vent with seawater. This added to the instability of the volcano, and the addition of large amounts of water may have contributed to the Saturday 15 January eruption being more explosive. The eruption exploded through the ocean, triggering a tsunami, with waves that headed for coastlines right around the Pacific Ocean. All that remains now of the volcano above water are two much smaller islands again.*

*‘The eruption was much more violent than scientists had expected, given the volcano’s run of smaller eruptions in recent decades. The atmospheric shockwave travelled around the globe several times*

*and was picked up on air pressure sensors as far away as Iceland - it continues to circle the globe. Audible booming could be heard from New Zealand to the south and Alaska to the north. This was due to the low-frequency bass-like booms produced during the eruption that can travel thousands of kilometres away from the source. This eruption now holds the world record for being 'heard' so far from the volcano.*

*'The eruption was rare in that it caused tsunami waves large enough to impact thousands of kilometres away from the volcano. There are several mechanisms scientists believe could have contributed to generating tsunami waves: the huge explosion through the ocean, the shockwave that pushed out as it travelled, the effect of the collapsing eruption column onto the ocean, and a possible caldera collapse of the volcano itself underwater. We haven't seen a volcanic-source tsunami like this since Krakatau, Indonesia in 1883.*

*'As soon as tsunami activity was reported following the eruption, the GNS Science team swung into action to assess the tsunami threat to New Zealand shores. The first sign of unusual activity came when the New Zealand DART buoy closest to Tonga triggered at 5:48pm. Over time, as data was recorded at more of our DART buoys and coastal tsunami gauges, we were able to build a picture of what threat there might be to New Zealand.*

*'Assessing this tsunami was different from assessing earthquake-source tsunamis that occur more frequently. Where our experts usually use tools like modelling and forecasting, for this volcano-source event they relied on real time observations from our DART buoy network. The DART network was invaluable in our ability to make assessments about when and where the tsunami might arrive as well as its amplitude.*

*'Cyclone Cody was also a complicating factor. The storm caused heightened swells around the east coast of the North Island and made our data more difficult to decipher. Storm energy shows up in recordings with a much shorter period than tsunami waves and it can make picking out the signal of the tsunami very difficult.*

*[Conversely, some of the criticism in Northland has centred around the view that the visibility of the eruption from space, the fact that the sonic boom was heard extensively in New Zealand, low atmospheric pressure and sea levels associated with Cyclone Cody, and the phase of the moon made it 'obvious' that a tsunami warning should have been issued].*

*'Based on our assessments, the National Emergency Management Agency (NEMA) issued a National Advisory: Tsunami Activity for the east and north coast of the North Island and the Chatham Islands around 8:30pm on Saturday. This was extended to the West Coast of the South Island around 9:40am on Sunday based on further observations from the network. They warned people to expect strong and unusual currents and unpredictable surges at the shore'. – GNS Science*

### **Northland CDEM Group summary of actions**

Northland CDEM team members had already been monitoring the effects of Cyclone Cody, and were in communication with both NEMA and GNS Science during the assessment process which followed the volcanic eruption.

Shortly after 8pm, an evacuation of three homes at risk from the Waiharara fire was also advised by Fire and Emergency NZ (the potential for this had been comprehensively planned in advance with the residents and communicated to all agencies. The Northland CDEM involvement in this was managed by one of the team's Far North members, so did not reduce the overall capacity of the team).

In accordance with Northland CDEM's SOP, when NEMA issued the advisory of strong and unusual currents and unpredictable surges at 8.14pm, it was emailed directly to stakeholders (e.g. emergency services, councils, port and marina facilities, lifelines utilities and the Welfare Co-ordination Group, as well as Community Response Group co-ordinators around the region) and was posted on the Northland CDEM Group Facebook page, also referencing/reiterating the existing

forecasts of potentially hazardous rip currents, sea surges and coastal inundation created by Cyclone Cody, and the likelihood that the latter would continue beyond the duration of the tsunami advisory.

Having received the advisory forwarded by Northland CDEM, the Tutukaka Marina manager returned from home to the marina and was working through the marina's own protocols for this type of event in the leadup to the most damaging surges.

Some of the media coverage resulting from the NEMA advisory was shared to coastal community Facebook pages. One of the Tutukaka boat owners who has been extensively interviewed by the media has commented that he was aware of the volcanic eruption/tsunami from media reports but was awaiting a siren or cellphone alert.

The option also exists within Northland CDEM's SOP to send notifications via the Hazard app. This has a lower threshold than the Emergency Mobile Alerts platform but also reaches fewer people in Northland (this is simply a reflection of the fact that it requires people to download a free app). This option has been used for tsunami advisories in the past, typically when there has been a concern about large numbers of people out (or heading out) on to the water. Given the time of day (after 8pm), the existing sea conditions and the publicity that had been given to the Cyclone Cody forecasts, the decision was made not to do this.

Progressively from 9.29pm, Northland CDEM team members received reports from campgrounds in the Far North that had been evacuated as a precaution after elevated sea levels/wave heights were observed.

Although some of these subsequently proved to have been less severe than was thought at the time, the collective view of the Northland CDEM team was that a more accurate picture was necessary and the following actions were taken:

- A number of CDEM Community Response Group co-ordinators on the east coast of Northland were contacted to collect information
- The GNS tidal gauges were monitored via the GNS website
- The head of the NRC Hydrology team was contacted to gather hydrographic information at the Whangaroa and Opuia tidal sites and then all other east coast tidal sites. These gauges are not intended for the purpose of tsunami assessment and the readings were affected by both the set reporting intervals and the swells generated by Cyclone Cody (which at that stage were measured at 6m+ at the Ninepin [northern entrance to the Bay of Islands]; however the rise-falls recorded by the tidal gauges at Whangaroa and Opuia were in the order of 0.5m)
- Emergency services (Police and Fire and Emergency) were contacted to gather intelligence
- The Duty NEMA officer was contacted for further GNS updates
- We fed our observations back to NEMA and GNS Science during the evening and updated the following morning.

In the meantime at Tutukaka, surges at a level similar to previous events had been taking place at the entrance to the marina but escalated from 9.34pm, with the damage following very quickly from this point. Northland CDEM was advised of damage from 9.49pm. Surges continued at damaging levels until approximately 11pm and were evident (at gradually-diminishing levels) for a number of days.

The damage to vessels and to the marina structures has been well documented. Emergency services (Fire and Emergency, and Police) worked with the marina manager, community members and local businesses to deal with the immediate priorities (evacuating liveaboards, securing loose boats and damaged parts of the marina as best possible, establishing cordons). Most of these organisations were back again the following day, along with NRC Maritime staff from both Whangarei and Opuia, CDEM staff and contractors engaged by the marina trust.

There were no reported injuries. However, the marina manager pulled a woman out of the water just after the initial surge. She was shaken but uninjured.

No liveaboard boats were sunk and no people were on board any of the boats that went underwater. All liveaboards at Tutukaka Marina have been back living on their respective boats (some in different berths).

The surges did not overtop the breakwater at the outer (harbour) end of the marina, nor the seawall at the inshore (Village Green) end. By the technical definition, it remained a marine event and in that regard, consistent with the GNS assessment.

### **What has subsequently emerged**

The combination of storm surge, high sea levels and a volcanic eruption made the scientific assessment very difficult. Tsunami generated by volcanic eruptions have different characteristics to those generated by earthquakes (which represent 80% of tsunamis), there is a relative scarcity of modelling and this is now acknowledged and being urgently addressed by the international community.

Observed effects on the west coast of both the North and South Islands were greater than anticipated in the original advisory, which was extended to include the west coast of the South Island at 9.40am on Sunday 16 January and cancelled at 7.06pm on the same day.

This event and the impacts at Tutukaka in particular are being studied by experts from a number of organisations. On the very limited number of occasions that media have sought input from parties with a perspective to offer other than Northland CDEM, the views expressed publicly to date have been in alignment with those of GNS Science. One of these experts, Jose Borrero of eCoast Marine Consulting and Research, has previously carried out detailed modelling of Northland ports and harbours (including Tutukaka) in a project co-ordinated through the Northland Regional Harbourmaster and Northland CDEM and funded through the NEMA Resilience Fund. He has commented that wave heights were no higher than in the 5 March 2021 event but the currents were much stronger, and has also suggested that there may be an additional offshore influence at Tutukaka contributing to the surges experienced there.

Around Northland, there were more people camping in low-lying coastal locations or fishing than anticipated, given the Cyclone Cody forecasts and the sea conditions at the time. Additional people took to the surf on Sunday in the hope of experiencing the effects from the tsunami surges. However a significant number have expressed a view that although they knowingly disregarded the Cyclone Cody forecasts and conditions, they would have acted differently had they been aware of the tsunami advisory.

A number of the effects observed elsewhere in the Northland region can be largely attributed to the storm surge generated by Cyclone Cody (see graph at end of this section). However two stand out (in addition to the campgrounds which were evacuated):

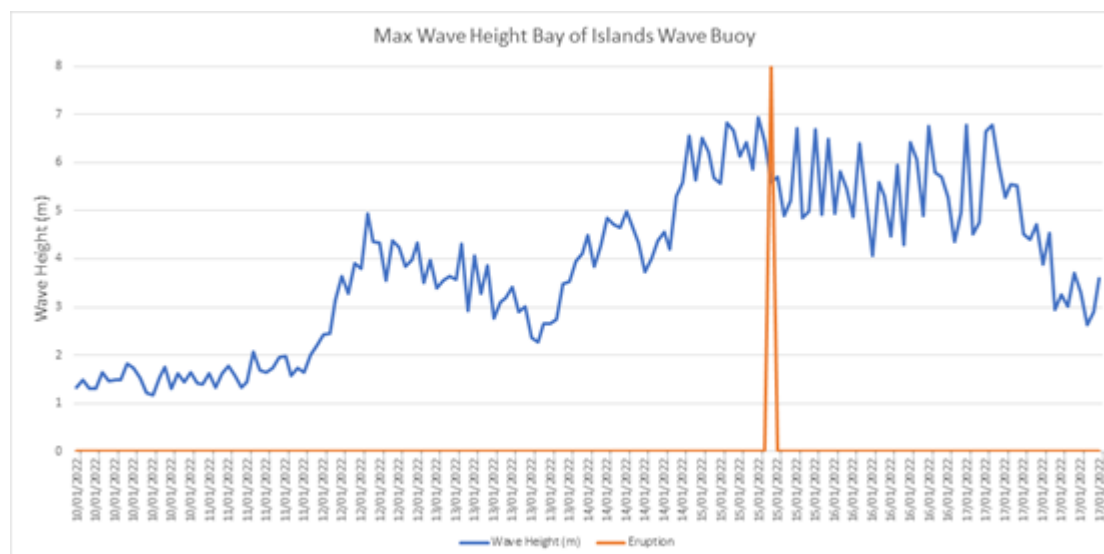
- The flounder fishers on the Hokianga Harbour
- People on board boats in Whangaroa Harbour in particular, which experienced violent swirling and surges to an extent that caused them to be concerned whether their anchor gear would fail under the load. While these effects are broadly covered under 'strong and unusual currents and unpredictable surges' the risk of injury on this occasion exceeds the previous effects associated with such an advisory.

In combination with the Far North campgrounds, some of these locations are (or were, due to conditions on 15 January) outside of cell coverage and the existing tsunami siren network.

A proportion of the public reaction relates to/contains references to COVID and/or Government decisions and is indicative of general frustration at how the past two years have unfolded.

***Maximum wave heights recorded by the NRC wave buoy (located near the Ninepin in the Bay of Islands). Time period is from Monday 10 January to Monday 17 to show the increase in wave***

**heights associated with Cyclone Cody. The 'spike' indicates the approximate time of the Hunga Tonga-Hunga Ha'apai eruption**



### What could have been done differently

Had there been any indication – either in the advice from GNS Science, or from observed activity anywhere in Northland, or from past experience – of what was to ensue within Tutukaka Marina, a pre-emptive, local evacuation of those on board boats could have been undertaken to mitigate the risk of injury. This could have been achieved by similar (but sooner and under less stress) means to those that were ultimately used: the marina manager and others carried out the equivalent of a 'doorknock'. The liveaboard community at Tutukaka is – intentionally - in a relatively compact section of the marina. The use of sirens or Emergency Mobile Alerts would not have been necessary for this to be carried out (even if it was possible to restrict these to the affected area) and could have led to confusion and over-evacuation.

(Of relevance at this point is the comparison with the Far North campgrounds which undertook self-initiated precautionary evacuations at about the same time of the evening).

Components which gave way under load within Tutukaka Marina ranged from deck cleats (attachment points) on boats, lines (ropes), both wood and polystyrene/concrete parts of floating marina fingers, and piles into the seabed. Given this, standard precautions such as securing boats with additional lines would not have altered the outcome in the instances where for example, cleats were torn from the boat, or boats went along with all or part of the structure to which they were attached.

Swell conditions at Tutukaka at the time (estimated by the marina manager as 4m at the entrance to Tutukaka Harbour), the onset of darkness and the relatively short amount of time available meant relocating boats to deep water would have come with significant risks on this occasion.

In the years since 2010, Northland CDEM has carried out three evacuations in response to tsunami warnings using the siren network, for which one (5 March 2021) Emergency Mobile Alerts platform was also available to be used. The platform was launched in 2017 for 'highest-priority alerts for risks that:

- Have occurred, are ongoing or where their probability of occurrence is greater than 50%
- Have a significant threat to life, health and property
- Where response actions should be taken immediately.'



An advisory for strong and unusual currents and unpredictable surges would normally fall below the threshold set by NEMA for use of an EMA. Conversely, the risk to people on boats at Tutukaka from what unfolded would have done so (although as noted elsewhere, evacuation of that number of people from a defined area and with assistance already present or available, would not have necessitated an EMA). However the fact remains that an EMA has become the default expectation from some at least and its absence shaped their view of the risk and their consequent decisions/actions.

From feedback since the event, it has also become clear that people in other locations (including those which experienced minimal or no effects) have come to regard EMA as a source of information even when response actions are not required on their part. This represents a fundamental shift from how Northland CDEM has previously approached public alerting, which can be summarised as: ‘if there’s something you need to do, we’ll let you know but otherwise allow you to continue with life’.

Comparisons have also been drawn with the use of EMAs for COVID-19 Alert Level changes, often accompanied by suggestions that COVID had distracted the focus of the emergency management system from other hazards.

Both NEMA and GNS Science are well aware of the depth of feeling in Northland, with a significant amount of feedback having been posted on NEMA’s social media channels or emailed directly. Comments posted on GNS’ platforms have been fewer and less critical, with a number still focusing blame on NEMA and/or CDEM.

### **What could be done differently in future**

Local arrangements could be put in place that recognise Tutukaka Marina is more vulnerable to potentially-damaging surges than other locations, and that there is a desire on the part of the marina community (and potentially those in the businesses and accommodation providers immediately surrounding the marina) to evacuate at lower thresholds. Any changes proposed by/advice commissioned by the marina trust would need to form a part of this.

Neither of the present options for expected tsunami effects – either an advisory of strong and unusual currents and unpredictable surges, or a threat to land – are a particularly good fit for the risk to those living (either permanently or on shorter overnight/holiday cruises) on the water. One key means of reaching boaties (marine VHF broadcasts) is less effective through the hours of darkness; tsunami sirens are not the answer either, leaving EMAs which will also be received by a larger number of people not subject to the same risk and not intentionally targeted by the warning.

An option is to seek the creation of a new advisory of ‘strong and unusual currents and unpredictable surges **which may in some locations be enough to present a risk of injury to those on boats**’.

Similarly additional means of reaching those locations in the Far Far North in particular where cellphone coverage is not complete and there are significant gaps between tsunami sirens will be explored (communications to iwi via DoC radio having been the key link on the night).

Separately, a parallel may be drawn with the current relationship between CDEM Groups/regional councils and MetService, where the issue of a Severe Weather Warning is normally accompanied by direct communication with the duty forecaster, in which any indications that impacts may exceed the amounts stated in the forecast, specific local concerns or other variables can be conveyed.

### **Conclusions**

A key determinant of the public perception of this event is the severity of the damage that took place within Tutukaka Marina, relative to what was anticipated by the advisory. As an event largely confined to a facility with a previous history of elevated levels of surge activity– albeit not to the extent experienced on this occasion – this indicates that any solutions put in place should also be localised.

Even foreknowledge of the damage that took place within Tutukaka Marina would not have been a trigger for activation of the siren network. However a local evacuation of the marina and surrounding buildings would have mitigated the risk to people, and this option and its implications should be worked through directly with community.

Comments from the public that they would rather receive EMAs and be evacuated on a precautionary basis are at odds with what was expressed following the 5 March 2021 warnings and evacuations, and the relative frequency of advisories for strong and unusual currents and unpredictable surges.

The desire on the part of some members of the public to see Emergency Mobile Alerts used on an 'information and updates' basis (rather than an alert to immediate actions required) will be problematic. Although the advisory on this occasion was issued at a time that would be publicly acceptable, this is often not the case and even continuing to use EMAs as this event unfolded would have brought a reaction from the public. The sound associated with the alerts was designed to be intrusive and does have an effect on recipients. In most situations, it is extremely difficult to confine the alert to those directly impacted (because it will deliver to all users of compatible phones within the coverage area of selected cell towers).

Northland CDEM will pursue the possibility of a new advisory for strong and unusual currents and unpredictable surges with additional risks through the national Tsunami Working Group, and will also explore potential localised approaches with the Tutukaka Marina and surrounding community once the marina trust has had the opportunity to arrive at some conclusions on its own future plans.

A residual risk remains of further activity at Hunga Tonga-Hunga Ha'apai (both eruptions and landslides of parts of the remaining volcano into the sea).



Message No: 1

Issued 20:14 15 January 2022

This message is current and replaces all/any previous messages for this event.

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**NATIONAL ADVISORY: TSUNAMI ACTIVITY – EXPECT STRONG AND UNUSUAL CURRENTS AND UNPREDICTABLE SURGES AT THE SHORE**

We expect New Zealand coastal areas on the north and east coast of the North Island and the Chatham Islands to experience strong and unusual currents and unpredictable surges at the shore following a large volcanic eruption at Hunga-Tonga-Hunga-Ha'pai in Tonga.

Strong currents and surges can injure and drown people. There is a danger to swimmers, surfers, people fishing, small boats and anyone in or near the water close to shore.

People in or near the sea should move out of the water, off beaches and shore areas and away from harbours, rivers and estuaries until at least 04:00am NZDT Sunday 16 January 2022.

**STAY OFF THE BEACHES AND SHORE AREAS**

**There is no need to evacuate other areas unless directly advised by local civil defence authorities.** Coastal inundation (flooding of land areas near the shore) is not expected as a result of this event. We are advising people to:

- Move out of the water, off beaches and shore areas and away from harbours, rivers and estuaries.
- Do not go to the coast to watch the unusual wave activity as there may be dangerous and unpredictable surges.
- Listen to local civil defence authorities and follow any instructions.
- Share this information with family, neighbours and friends.

Strong and unusual currents and unpredictable surges will continue for several hours and the threat must be regarded as real until this Advisory is cancelled.

This National Advisory has been issued following advice from GNS Science. This is the largest eruption from Hunga-Tonga-Hunga-Ha'pai Volcano so far, and the eruption is ongoing. The situation may change as new information becomes available. Listen to the radio or TV for updates, or check [www.civildefence.govt.nz](http://www.civildefence.govt.nz)

**END OF MESSAGE**

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**Additional Information**

**Note:** Only messages issued by the National Emergency Management Agency represent the official warning status for New Zealand. Local civil defence authorities may also provide supplementary messages for their local area.

Pacific Tsunami Warning Center (PTWC) messages do not represent the official warning status for New Zealand.

**Media:**

1. Please share the information in this advisory immediately.
2. Please highlight the areas under threat and the advice for people in those areas.
3. Continue sharing the information in this advisory until it is updated or cancelled.

**Civil Defence Emergency Management Groups:**

1. Activate appropriate response coordination arrangements and communication processes.
2. Alert potentially at-risk communities as appropriate.
3. Stand by for further information.
4. Local CDEM to act in accordance with CDEM Group arrangements.

All updates will be communicated by NEMA via the National Warning System.

**Useful websites:**

[www.civildefence.govt.nz](http://www.civildefence.govt.nz)

Twitter @NZCivilDefence

**Issued by:**

Message authorised by the National Controller.

**Note:**

The National Emergency Management Agency was established on 1 December 2019, replacing the Ministry of Civil Defence & Emergency Management.



**National Warning: Tsunami Threat**

Message No: 1

Issued 08:45 05 March 2021

**\*\*\* THIS IS THE THIRD EARTHQUAKE THIS MORNING \*\*\***

**This is a Tsunami Warning for coastal areas following the magnitude 8.0 earthquake north-east of New Zealand near KERMADEC ISLANDS REGION.**

**AREAS UNDER THREAT:** People near the coast in the following areas must **MOVE IMMEDIATELY** to the nearest high ground, out of all tsunami evacuation zones, or as far inland as possible. **DO NOT STAY AT HOME**

The **East Coast of the North Island** from the **BAY OF ISLANDS** to **WHANGAREI**, from **MATATA** to **TOLAGA BAY** including Whakatane and Opotiki,

And **GREAT BARRIER ISLAND**.

These areas are indicated in the **enclosed map**. The earthquake may not have been felt in some of these areas, but evacuation should be immediate as a damaging tsunami is possible.

**PEOPLE IN ALL OTHER AREAS** who felt a **LONG OR STRONG** earthquake that made it hard to stand up, or lasted longer than a minute, should **MOVE IMMEDIATELY** to the nearest high ground, out of all tsunami evacuation zones, or as far inland as possible.

**Evacuation advice overrides the current COVID-19 Alert Level requirements. Listen to local Civil Defence authorities and follow any instructions regarding evacuation of your area. If you are told to evacuate do not stay at home. Stay 2 metres away from others if you can and if it is safe to do so.**

Do not return until an official all-clear message is given by Civil Defence.

Walk, run or cycle if at all possible to reduce the chances of getting stuck in traffic congestion.

The first wave may not be the largest. Tsunami activity will continue for several hours and the threat is real until this warning is cancelled.

The National Emergency Management Agency and GNS Science will continue to assess the threat and provide an update within an hour.

An Emergency Mobile Alert will be issued to all capable phones in the areas under threat. People who are near the coast in the **AREAS UNDER THREAT** listed above or near the coast and felt the earthquake **LONG OR STRONG**, should **MOVE NOW. DO NOT WAIT** for an Emergency Mobile Alert to your mobile phone, or local warnings.

**People in all New Zealand coastal areas should:**

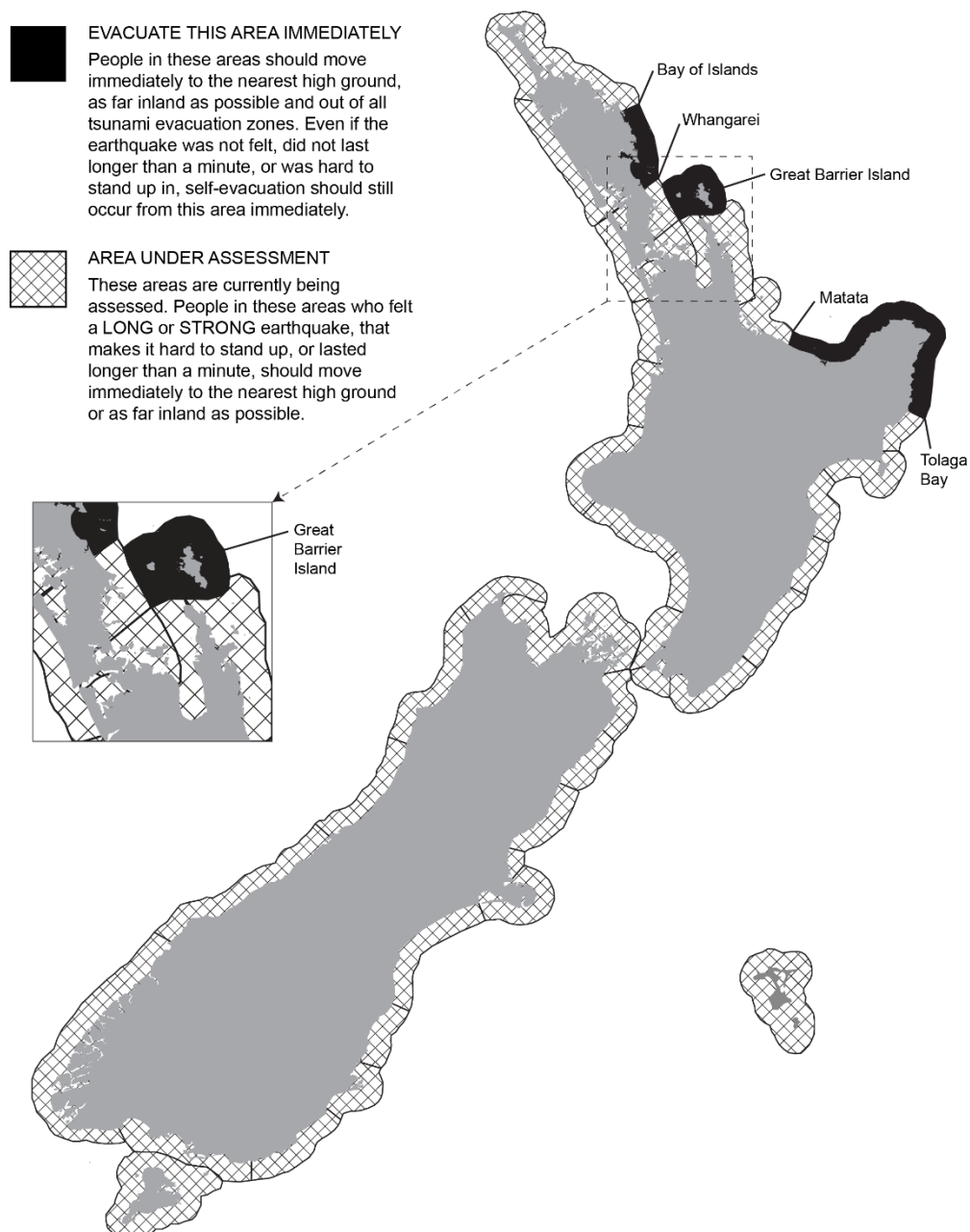
1. **Listen to the radio and/or TV for updates, and NZCivilDefence Twitter**
2. **Listen to local Civil Defence authorities**
3. **Stay out of the water (sea, rivers and estuaries, this includes boats)**
4. **Stay off beaches and shore areas**
5. **Do not go sightseeing**
6. **Share this information with family, neighbours and friends**

Only messages issued by the National Emergency Management Agency represent the official warning status for New Zealand. Pacific Tsunami Warning Center (PTWC) messages do not represent the official warning status for New Zealand.

This warning will remain in effect until a cancellation message is issued by the National Emergency Management Agency.

This map indicates the immediate evacuation areas:

## Initial Advice Land Threat Map



### Broadcasters party to the Memorandum of Understanding with the National Emergency Management Agency:

1. This National Warning is an **official request** for the broadcast of an Emergency Announcement, in accordance with the Memoranda of Understanding between the National Emergency Management Agency and radio and television broadcasters.

2. **Information for emergency announcement:** Broadcast the information included in the warning above. Please also include a message to audiences to stay tuned to your station.
3. Please highlight the AREAS UNDER THREAT advised to EVACUATE IMMEDIATELY and LONG OR STRONG, GET GONE advice for all areas.
4. **Broadcast Priority 1:** This is an event of life-threatening or national significance. Broadcast at least every 15 minutes.
5. **Verification:** Before broadcast, this message must be verified by the National Emergency Management Agency Duty Public Information Manager on 04 494 6951.

**Other media:**

1. Please share the information in this warning immediately.
2. Please highlight the AREAS UNDER THREAT advised to EVACUATE IMMEDIATELY.
3. Please highlight LONG OR STRONG, GET GONE advice for all areas.
4. Continue sharing the information in this warning until it is updated or cancelled.

**Civil Defence Emergency Management Groups:**

1. Activate appropriate response coordination arrangements.
2. Alert at-risk communities.
3. Stand by for further information.
4. Contact details for the National Crisis Management Centre will follow once activated.
5. Local CDEM to act in accordance with CDEM Group arrangements.

**Emergency Services:**

1. Local emergency services must establish and maintain response coordination with their respective Civil Defence Emergency Management Groups.
2. Contact details for the National Crisis Management Centre will follow once activated.

**Further information:**

A further update with more information will follow within the next hour.

**Useful websites:**

[www.civildefence.govt.nz](http://www.civildefence.govt.nz)  
[www.facebook.com/NZCivilDefence/](https://www.facebook.com/NZCivilDefence/)  
Twitter @NZCivilDefence

**Issued by:**

Message authorised by the National Controller.

**Note:**

The National Emergency Management Agency was established on 1 December 2019, replacing the Ministry of Civil Defence & Emergency Management.

End of Message

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**Attachments/Ngā tapirihanga**

Nil



**TITLE: Kaimaumau Fire Response**

**From:** Sarah Boniface, Emergency Management Specialist; Bill Hutchinson, Emergency Management Specialist and Wipari Henwood, FENZ - Northland District Manager

**Authorised by** Victoria Harwood, Pou Tiaki Hapori - GM Community Resilience, on 22  
**Group Manager/s:** February 2022

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**Whakarāpopototanga / Executive summary**

The purpose of this report is to provide an overview of the Kaimaumau Fire Response.

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**Ngā mahi tūtohutia / Recommendation**

That the report 'Kaimaumau Fire Response' by Sarah Boniface, Emergency Management Specialist; Bill Hutchinson, Emergency Management Specialist and Wipari Henwood, FENZ - Northland District Manager and dated 22 February 2022, be received.

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**Background/Tuhinga**

**Report from Northland Civil Defence – Bill Hutchinson & Sarah Boniface, Emergency Management Specialists - Far North**

The Northland CDEM Group were requested to support Fire Emergency New Zealand (FENZ) at a wildfire at Kaimaumau on 19 December 2021. An urgent call was received by the CDEM on-call duty officer on Sunday 19 December at 2000hrs advising an immediate need to evacuate the village due to a change in fire behaviour. The out-of-control wildfire was threatening the entire village. The Kaimaumau Community Response Plan was activated which allowed the community to follow their predetermined emergency response to evacuate the impacted area.



Far North Emergency Management (EM) Specialists responded directly to the village to establish a temporary shelter facility at the Waiharara School and provide an initial briefing for the evacuees on behalf of FENZ. As of 20 December 2021, FENZ Incident Controllers and Operations Managers provided twice-daily community briefings for the period of the evacuation. Regular community briefings were also provided for the duration of the firefighting operation. These were led by FENZ and supported by CDEM members.

Far North EM Specialists provided initial support to the Kaimaumau community addressing their immediate welfare needs for those displaced during the 4 days of the initial evacuation. Civil Defence Specialists also provided ongoing support to the FENZ tactical response as the situation developed.

On 26 December 2021 residents at the Northern end (Pukenui/Houhora) of the fire were advised they were likely to need to evacuate at very short notice due to the fire breaching a containment line and jumping across SH1. The fire was subsequently contained, and evacuations did not need to occur.

On 1 January 2022 an evacuation was required of the Kaimaumu village residents due to a breach of a fire containment line. Evacuees again took shelter at the Waiharara School. They were able to return to their homes that evening.

On 15 January 2022 a further evacuation was ordered as the fire reached pre-determined trigger points at the Northern end of the fireground threatening homes, including 400 campers at the Houhora Heads Holiday Park. Families and affected parties from the identified “at-threat” properties were hosted for three days at the Houhora Gamefish Club.

While the fire continues to burn in deep-seated areas, firefighters have consolidated a blacked-out area around a 30-50 metre containment line surrounding the Kaimaumu village and no significant growth of fire has been recorded since 18 January 2022. Regular helicopter and drone work has been used to map the perimeter and identify any hotspots. On 6 February 2022, the operational delivery by FENZ transitioned to a monitoring and recovery phase.

**Kaimaumu Fire Stats – as of date of report:**

Land Status: The land involved is public conservation land – jointly managed between local Iwi Ngai Takoto and Department of Conservation. Also involved is private property including Iwi owned land, commercial orchards, and grassland farms.

Fire Coverage area: 2828ha

Fire Perimeter: 38 Km

Number of on the ground firefighters: x 75

Incident Management Team: x 70

Helicopters: x 11

Heavy Machinery: x 9 (Bulldozers and Excavators)

Participating Agencies and Stakeholders included: Fire Emergency New Zealand, NZ Police, Northland Civil Defence, Department of Conservation, New Zealand Defence Force, NZ Urban Search and Rescue, Far North District Council, Kaimaumu Community, Waiharara School, Wharemaru hapu o Kaimaumu, Te Iwi o Ngai Takoto, Whakawhiti Ora Pai, Top Energy, Waka Kotahi.

**The Community Response Plan** for Kaimaumu was reviewed by residents, supported by the Far North Civil Defence Specialists in July 2021. Amendments and updates to the plan were made after the community’s response to the 5 March 2021, Kermadec tsunami warning and the lessons they learnt from that event. One of the benefits of this type of planning has been the enabling of the Kaimaumu /Waiharara Community as a collective. Iwi and Hapu play an integral part in their supporting roles to FENZ in the management and ongoing effort to suppress and ultimately extinguish the Kaimaumu fire.

Community/Iwi/Hapu roles and responsibilities have included:

- Providing advice to local services to support the Incident Management Team
- Community Patrols in restricted active fire areas
- Providing cultural advice and expertise to the Incident Management Team
- Assistance with accommodation options
- Catering Support
- Welfare Support

Overall whilst FENZ has been the lead agency for the fire, locally it has been community and Iwi/Hapu led, supported by CDEM and other agencies groups. It is likely that this model of involving community in tactical and logistical planning will be adopted by FENZ at future large-scale fires across New Zealand. As the transition from response to recovery progresses, the community and Iwi/Hapu will also be involved in the long-term recovery management plan.

The urgent and immediate response required by emergency services to evacuate the entire Kaimaumau village due to the threat to life and property by fire on 19 December 2021 has again highlighted the value of Community Response Plans, particularly when an unplanned and rapidly developing event occurs.

#### **Kaimaumau Fire Recovery – Jenny Calder, Recovery Specialist**

Recovery advice from CDEM is being provided for agencies involved in the recovery phase as the Recovery Governance Group and Recovery Working Groups are established. This includes guidance on a Response Transition Report, Terms of Reference, and a Recovery Plan.

#### **Report from Fire and Emergency New Zealand – Northland District Manager, Wipari Henwood**

The Kaimaumau fire is the 3rd biggest vegetation fire and one of the most complex to extinguish in New Zealand history. It occurred 4 days before Christmas and is still currently burning. The response to this fire has been at national level with the deployment of National Incident Management Teams encompassing an across agency approach and firefighters from across the country.

The evacuation of the Kaimaumau village and the co-operation of the residents, Northland Civil Defence Emergency Management Group, and supporting stakeholders has assisted in the success of the event and ultimately contributed to the preservation of homes and lives. Having worked on many wildfire deployments both nationally and internationally the emergency preparedness of the Kaimaumau community was well established and this was certainly evident on the two occasions that the village needed to be evacuated.

The greater area involved in the Kaimaumau fire is in peat. Peat builds up as an organic material such as grasses, leaves, fallen trees and root systems which have been built up over decades or centuries. Peat burns actively underground and can work its way into the ground sublayers burning several hundred metres below the ground before surfacing and venting in an unburnt area and igniting surrounding vegetation. This peat land mass involved at Kaimaumau is believed to have been formed approximately 42000 years ago as a result of a tsunami event impacting a natural forest.

Peat fires are very difficult to extinguish. Contributing factors that created challenges in the extinguishment of this fire included combined available fuels, weather conditions, heavy toxic smoke, old gum holes, wet lands and access.

Several tactics were used to contain and ultimately control the fire. Included was the use of helicopters and aerial attack, fire suppressants, heavy machinery including bulldozers and excavators, containment lines more than 40 metres wide, contained controlled burns, ground crews with hose lines and hand tools, and peat probes injecting water into sublayers. Whilst the fire is contained there are several areas covering many hectares containing peat that continue to burn and are too dangerous and inaccessible to deploy ground crews and machinery.

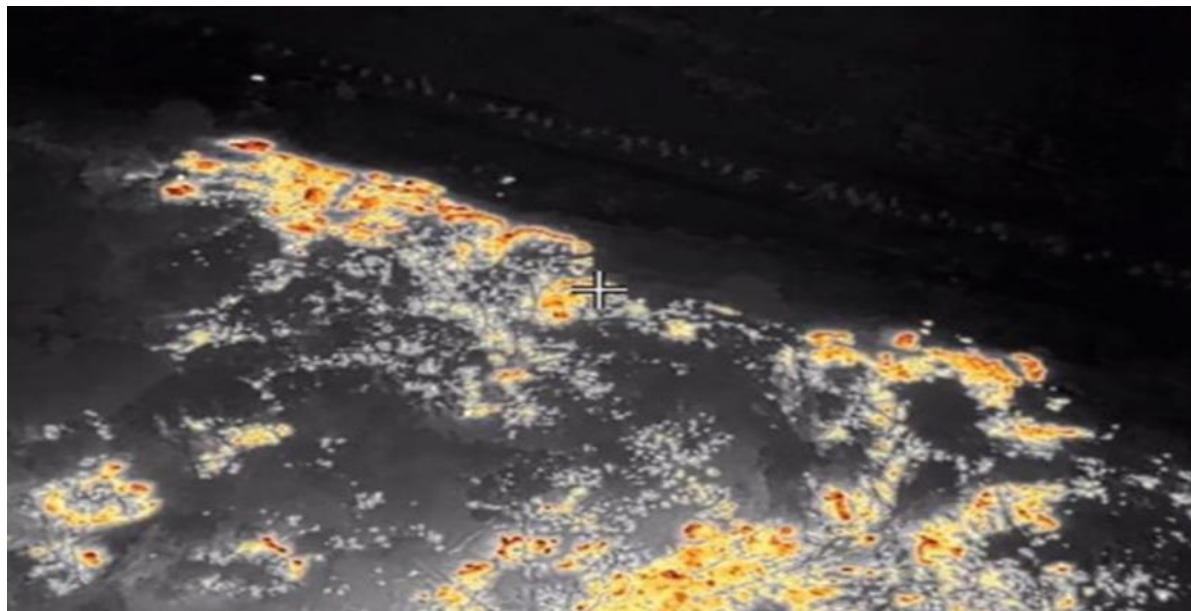


Photo: The above photo shows hot spots over a fire sector identified from a drone equipped with thermal imaging camera. This imaging is plotted and used for forward planning to allow firefighting operations to target specific areas particularly around the perimeters of the Kaimaumau village.

This was a long duration fire by New Zealand standards and while a planned withdrawal of firefighting resources and transition from response to recovery is underway, the fire is expected to continue to burn until the water table rises over the winter months.

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#### **Attachments/Ngā tapirihanga**

Nil

**TITLE:** Northland Multi-Agency Coordination Centre update

**From:** Graeme MacDonald, Emergency Manager

**Authorised by** Victoria Harwood, Pou Tiaki Hapori - GM Community Resilience, on 22  
**Group Manager/s:** February 2022

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### Whakarāpopototanga / Executive summary

The purpose of this report is to provide an update on the progress of the Multi-Agency Coordination Centre.

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### Ngā mahi tūtohutia / Recommendation

That the report 'Northland Multi-Agency Coordination Centre update' by Graeme MacDonald, Emergency Manager and dated 22 February 2022, be received.

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### Background/Tuhinga

#### Current Site and Station Layout

The overall site comprises 10 allotments located on the corner of Bank Street and Mansfield Terrace in Whangārei. These allotments contain the buildings associated with and currently used by the FENZ Whangārei District Office, National Regional Property Team, Regional Trainers, two-crew operational fire station and the Whangārei-Kaipara Operational Support Unit Volunteer Fire Brigade (as presented at the CDEM and WDC meeting on 19 November 2021).

#### Proposed Site Description

The proposed site comprises of two allotments to the rear and accessed through Mansfield Terrace. The land area is estimated at 3,150m<sup>2</sup> and has two 2-storey office blocks and an ablutions/locker block with gross floor area of 758.8m<sup>2</sup>. Valuation of the property has been completed by Northland Valuers (as presented at the CDEM and WDC meeting on 19 November 2021).

#### Stakeholders Scope Requirements

A design spatial survey has been prepared and allocated to the stakeholders for their needs and requirements for the purpose of developing a concept design. FENZ require office facilities for 25 personnel. NRC Emergency Management have indicated facilities for 15 including a factor for growth. New Zealand Police have provided preliminary personnel numbers and we are awaiting clarification. Whangārei District Council spatial requirements are for 25 people in the EOC and 3 in the call centre. WDC occupancy will be intermittent for trainings, extra council meeting space, and during an event. The EOC will be fully equipped and open-plan EOC with 9 tables (space for at least 3 people at each).

#### Bulk and Location

A Concept Site Plan has been prepared for discussion purposes and consists of a building footprint of 500m<sup>2</sup> on two storeys, gross 1000m<sup>2</sup>. Access to the facility is through Mansfield Terrace from Bank Street and or Hunt Street Lane. Emergency response access and egress is unencumbered. The site is in an elevated location at approximately 20.5m above mean high tide level and therefore considered above Tsunami Inundation Level. Review of WDC GIS hazard maps indicates that the site is not subject to flooding. A concept Bulk and Form for the building is underway following receipt of the stakeholders spatial and we anticipate issue and discussion on 23 February.

### **District Plan – Planning Requirements/Restrictions**

Planning review has been completed by The Property Group, as of June 2021. The Resource Consent process for the subdivision and land-use proposal requires a comprehensive Assessment of Environmental Effects to be submitted to the Council for consideration. Subject to confirmation from the Council and pre-application meeting, it is considered that both the subdivision and the land-use proposal are likely to be feasible.

### **Traffic Access & Car Parking**

Access to and from the site via Mansfield Terrace will be adversely affected requiring the preparation of a Road Traffic Management plan. The concept site plan demonstrates adequate provision for BAU on-site parking and manoeuvring to accommodate the centre. Additional surge parking for during emergency events will require on-street and Hunt Street Lane Carpark. Access and Egress for Emergency Response is unencumbered.

### **Infrastructure and Utilities – Resilience/Storage**

Power, communications and reticulation are on site and located in Mansfield Terrace. Discussion with Northpower has also been undertaken regarding an upgrade to the existing power supply. A new supply can be thrust from Bank Street to the site and a new transformer installed. An estimated cost for the new power supply is estimated at \$115,000.

### **Geotechnical Investigation and Land Stability**

Land Development and Engineering (LDE) have been appointed to complete a detailed Geotechnical Investigation of the site. The work scope includes:

1. Undertake a desktop study of the site based on existing information.
2. Lodge before-u-dig and request and collate service plans from council and site contacts.
3. Undertake a walkover assessment of the site and prepare job site hazard assessment.
4. Undertake inspection of surrounding slopes to assess the geomorphology and any outcrops of the underlying geology, and inspect existing structures to characterise existing foundation performance.
5. Put down approximately 8 hand augered boreholes to 3m depth or refusal, to characterise the shallow soil profile and rock depth. Take measurements of undrained shear strength taken every 0.2m. If granular soils are encountered, put down scala penetrometer tests at each borehole location.
6. Arrange for two machine boreholes taken to 20-30m depth across the proposed building. Undertake SPT tests at regular intervals through any weak strata. Install standpipe piezometer in one borehole and undertake monitoring to establish stable groundwater level.
7. Arrange for HVSR geophysical testing to characterise seismic subsoil profile between and away from boreholes.
8. Prepare an engineering geological model of the site at the critical section, based on deep and shallow investigation data.
9. Determine the seismic subsoil site class based on deep investigation data and NZS1170 classification methods.
10. Undertake qualitative stability assessment based on site geomorphology and subsurface investigations. Undertake numerical stability analysis if warranted by credible instability hazard.

11. Determine suitable foundation options for the site and proposed building and provide geotechnical recommendations for foundation design.
12. Prepare investigation and site plans.
13. Summarise the findings in a report with geotechnical recommendations for submission to council.

Geophysical investigation and hand testing on the site was completed late December with a preliminary positive report from LDE. Machine bore testing will be completed by 18 February and the full report and recommendations will be received in the second week of March.

### **Building Scope Considerations**

Additional requirements and recommendations have been added to the Feasibility Report for the MAECC building. This includes considerations towards the NRC Climate Change Strategy (Ngā Taumata o te Moana): carbon emissions reduction, using other 'easy' low-carbon drivers in new builds, investigating further options for reducing embodied carbon in new buildings such as using structural timber, continuing to invest in renewable energy infrastructure, investigating efficiencies of alignment with EV charging, aligning emissions reporting and forecasting methodology with UN Race to Zero criteria.

According to NRC's CC Strategy implementation plan, all NRC-owned office buildings include low-carbon options (LED lighting, solar power inclusion and/or expansion planned, vehicle fleet charging, etc).

FENZ Strategic Sustainability Management requirements are also incorporated in the building design and construction requirements.

### **The Structural Requirements of Emergency Operations Centres for Earthquake**

The post-earthquake structural design requirements for Emergency Operations Centres are outlined in the NZSEE :2006 Paper 41, and framed by both the Civil Defence Emergency Management (CDEM) Act and the loading standards AS/NZS 1170 Part 0 (general) and NZS 1170 Part 5 (earthquake). Table 3.2 of AS/NZS 1170 Part 0 requires that the building shall meet full Importance Level 4 resilience requirements. Findings of the Geotechnical Survey will be added to this section on completion.

### **Financial Expenditure/Financial Agreement**

A Memorandum of Understanding regarding ongoing fees to be discussed and consolidated by all agreed stakeholders.

With the final delivery of the Bulk and Form Concept Floor Plans and Geotechnical report, presentation of the completed Feasibility Report is anticipated to be in the second to last week in March 2022.

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### **Attachments/Ngā tapirihanga**

Nil