

## TANGIMOANA EVACUATION ZONE



- EVACUATION ZONE RED
- EVACUATION ZONE ORANGE
- EVACUATION ZONE YELLOW

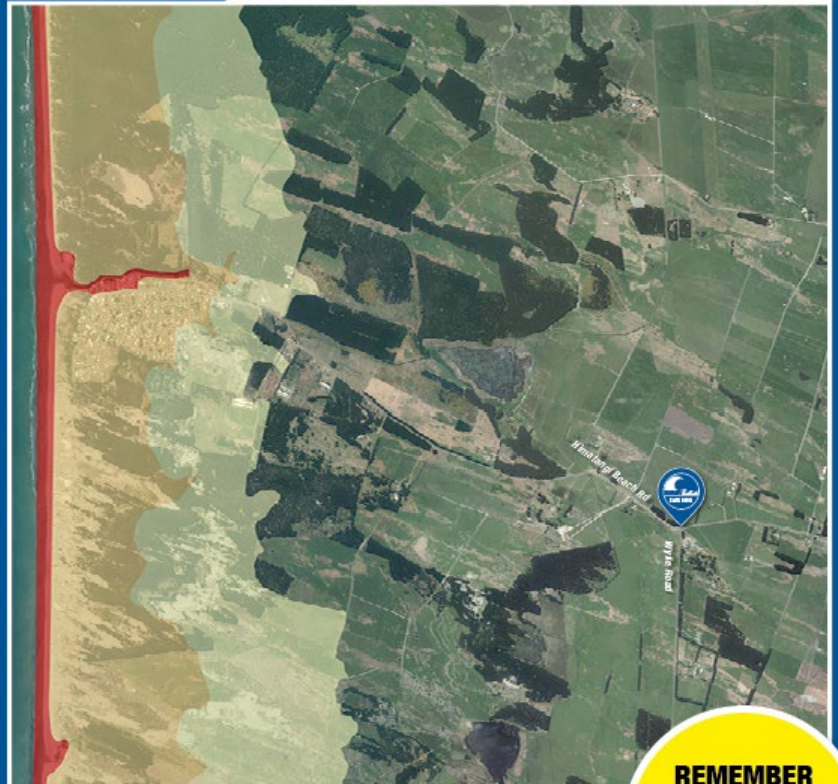
IN A LONG OR STRONG EARTHQUAKE  
(LONGER THAN A MINUTE OR HARD TO STAND UP)  
**IMMEDIATELY EVACUATE ALL ZONES**



## COASTAL REGION 19



## HIMATANGI BEACH EVACUATION ZONE



- EVACUATION ZONE RED
- EVACUATION ZONE ORANGE
- EVACUATION ZONE YELLOW

IN A LONG OR STRONG EARTHQUAKE  
(LONGER THAN A MINUTE OR HARD TO STAND UP)  
**IMMEDIATELY EVACUATE ALL ZONES**

### REMEMBER

New Zealand's entire coast is at risk of tsunami. The absence of tsunami signage does not mean an absence of tsunami risk

# Tsunami Action Plan

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**February 2021**  
**Version 1.3**

<b>Version History</b>		
<b>Version Number and Date</b>	<b>Changed By Name and Title</b>	<b>Reason</b>
1.1 - 12/4/19	Jeff Graham	Update coastal contacts
1.2 – 22/7/19	Jeff Graham	Update coastal contacts
1.3 – 15/2/21	Jeff Graham	Updated coastal contacts
1.4 – 27/4/22	Vicki Wills	Updated coastal contacts & CDC info (remove any reference to The Wines, Himatangi)

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## 1. Foreword

This Action Plan has been developed by Manawatu CDEM to provide guidance to Local Controllers, Incident Management Team (IMT) members and emergency services on key actions in response to a tsunami warning or event. This Action Plan is part of the response framework to be used and includes important actions to be considered and undertaken.

❖ This Action Plan should be read in conjunction with:

1. Manawatu-Wanganui Civil Defence Emergency Management Group Tsunami Action Plan - June 2018
2. Manawatu-Whanganui Civil Defence Emergency Management Group Tsunami Strategy – November 2016
3. Ministry of Civil Defence and Emergency Management Tsunami Advisory and Warning Plan

## 2. Manawatu Coastal Village Threat Levels

### Himatangi Beach

Himatangi has a resident population of around 450 which increases in the summer months. Beach access and the local camping ground are at risk from events up to 1m and evacuation of the area around the stream should be considered for small events. The majority of the community is at risk from tsunami >3m and should be evacuated for these events.

### Tangimoana

Tangimoana has a resident population of around 250 and has a seasonal fluctuation in summer. Although 1/3rd of the community is potentially at risk from tsunami >3m and the remainder at risk for events >5m, it would be appropriate to evacuate the entire settlement for events >3m. Access to Tangimoana may be isolated during events >3m thereby cutting off residents. Tangimoana is another community that has 1:200 year flood protection but requires the deployment of a flood barrier to complete the protection. It is likely that this will be a gap for tsunami events if time does not permit the barrier to be deployed. Horizons Regional Council administers the deployment of the flood barrier system contact to be made with them for deployment of this system.

## 3. Categories of Tsunami and Planning Implications

For emergency management purposes, tsunamis are divided into three categories; distance source, regional source and local source. These categories are based on the shortest time it would take tsunami to travel from source to the closest part of the New Zealand coastline.

Type	Time	Possible Source
Region 3 - Distant	Greater than 3 hours	Solomon Islands, New Guinea, Japan, East Phillipines, Kamchatka / Kuriles / Aleutians, Cascadia, Mexico / Central America, South America
Region 2 - Regional	1 to 3 hours	South West Pacific, including Loyalty Islands, Samoa, Tonga, Kermadec, Auckland Islands, Macquarie Islands
Region 1 - Local	Less than 1 hour	New Zealand, including Hikurangi Trench, Kermadec Trench and Puysegur Trench

*See Figure 1 for approximate times from various locations.*

Different categories of tsunami result in different planning implications. A distance source tsunami will generally allow for a planned response by emergency managers where a large number of actions can be taken to mitigate the impact of tsunami. In contrast, several important constraints must be taken into account when considering a response to a regional source tsunami:

- proximity of earthquake – the tsunami may have little as one hour travel time before reaching the coastline;
- time delay in issuing of the national warning – the warning may take approximately 30 minutes to be issued after the earthquake.

Given these factors for local or regional source tsunami, the Group Controller may need to initiate actions ahead of a National Warning being issued. These actions may include communication with the public even though official tsunami notifications for the whole of New Zealand are the responsibility of the Ministry of Civil Defence & Emergency Management.



It is highly unlikely that any official response can be undertaken to a local tsunami. It is also unlikely that any National Warning can be given or acted upon prior to the first tsunami waves hitting landfall. The only warning people are likely to receive for a local tsunami is the actual ground shaking and the natural phenomena associated with the event.

Natural phenomena include:

- Strong earthquake shaking (ie. it is hard to stand up);
- Weak, rolling earthquake shaking of unusually long duration (ie. a minute or more);
- Out of the ordinary sea behaviour, such as unusual and sudden sea level rise or fall;
- The sea making loud and unusual noises, especially roaring like a jet engine.

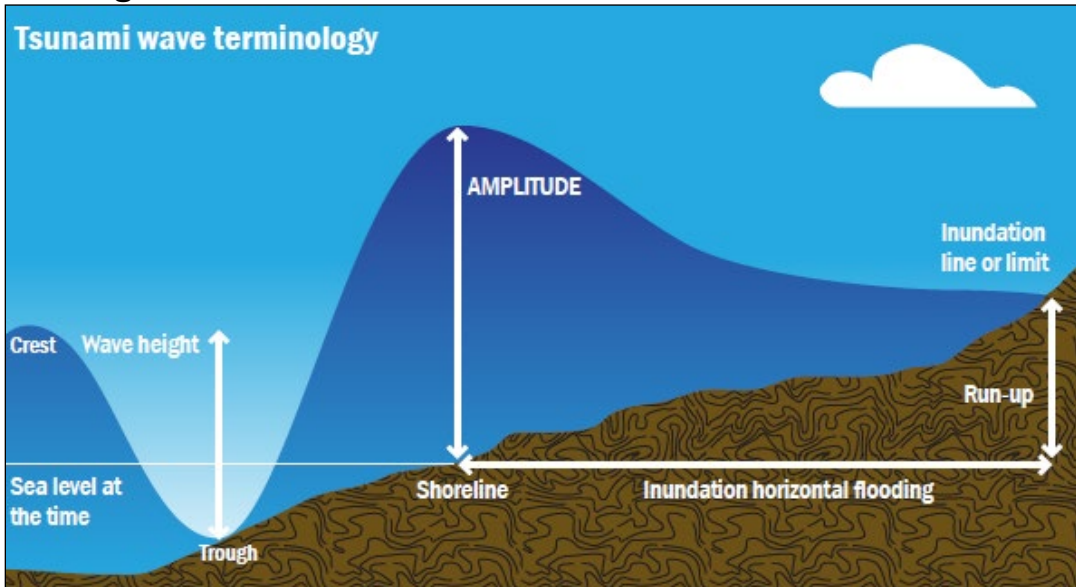
The consistent CDEM message around local source tsunami safety is: If it is long or strong get gone.

Table 1 explains the ‘response indicators’ used by NEMA to initiate National Tsunami Advisories and Warnings. The table details the thresholds for the respective originating locations, and the type of notification issued if the thresholds are met. Figure 4 shows tsunami origin locations (Regions 0-7).

### 3.1 Figure 1



### 3.2 Figure 2



### 3.3 Table 1

Region	Location	Thresholds	Notification Issued
0	NZ local (within $\pm$ 500km from any NZ shore)	$M_w \geq 7.5$ and depth $< 100$ km	National Warning – Tsunami Threat
1	South West Pacific (includes NZ local source)	$M_w \geq 8.0$ and depth $< 100$ km	National Warning – Tsunami Threat
		$M_w > 7.5 - \leq 7.9$ and depth $< 100$ km	National Advisory – Potential Tsunami Threat
2	South America	$M_w \geq 8.0$ and depth $< 100$ km	
3	Central America		Potential Advisory – Potential Tsunami Threat
4	Cascadia		
5	Aleutians Rat Island		
6	Kurile Islands Kamchatka		
7	Japan		
8	Other (any location not inside a circle)		

### 3.4 Group ECC Response Actions to be Undertaken

Aligned to the National Tsunami Advisory and warning Plan (SP 01/17), CDEM Groups will receive one or more of the following notifications:

- *National Advisory – Large Pacific Earthquake Being Assessed*
- *National Advisory – No Tsunami Threat to New Zealand*
- *National Warning – Tsunami Threat (one of three variants – refer to: 3.2.2 Types of Notification from NEMA)*

On receipt of one or more of the notifications listed above, CDEM Groups follow the steps in the table below:

Step	Event and Action	Responsibility
<b>Target Timeframe: Steps 1 to 2 completed within 15-30 minutes*</b>		
1	Follow Group emergency response procedures. If appropriate, issue local warnings and/or decide on evacuations.	Group Controller
2	In the event of a <i>National Warning</i> being issued, inform the appointed MCDEM Regional Emergency Management Advisor about the response taken. Similarly when responding in reaction to any other notification, inform the appointed MCDEM Regional Emergency Management Advisor.	Group Controller
3	Upon activation of the CDEM Group Emergency Coordination Centre, establish contact with the National Crisis Management Centre (NCMC).	Group Controller
4	Update the NCMC and neighbouring CDEM Groups on response taken.	Group Controller

\*The 15-30 minute timeframe represents a target to aim for. It is not a formal performance measure

### 3.5 Types of Notification from NEMA

Depending on the assessment of information received for an earthquake, NEMA may issue one or more of the following official notifications:

#### National Advisories:

- *National Advisory – No Tsunami Threat to New Zealand*
- *National Advisory – Earthquake Being Assessed*
- *National Advisory – Large Pacific Earthquake Being Assessed*
- *National Advisory - Large Pacific Earthquake Still Being Assessed*

#### National Warnings:

- *National Warning – Tsunami Threat – Local-source*
- *National Warning – Tsunami Threat to Beach and Marine Areas*
- *National Warning – Tsunami Threat to Land and marine Areas*

#### Tsunami Cancellation Messages:

- *National Warning – Tsunami Threat – CANCELLED*

#### Requests for Broadcast, or Termination of Broadcast:

- *Request for the Broadcast of a Tsunami Threat*
- *Request for the Termination of an Emergency Announcement*

#### 3.5.1 Table 2 - Threat Levels

Maximum expected amplitude at shore		Threat definition
	<0.2m	No threat
	0.2-1m	Marine and Beach Threat (incl. harbours, estuaries and small boats)
	1-3m	Marine and Land Threat
	3-5m	
	5-8m	
	>8m	

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#### 4. TSUNAMI ACTION PLAN FOR: COSTAL REGION 19 - MANAWATU DISTRICT

Evacuation map zone	Threat – Wave Height				
	0.2-1m	1-3m	3-5m	5-8m	8+m
Tangimoana	Beach area and river mouth up to the first bend	Beach area and river mouth up to the first bend	All of Tangimoana	All of Tangimoana	All of Tangimoana
Himatangi Beach	Beach area and stream mouth	Camping ground and Fire Station	All of Himatangi Beach	All of Himatangi Beach	All of Himatangi Beach

4.1 Table 2

Tsunami Coastal Contacts		Mobile	Personal Landline	Other	
Himatangi Beach Clearance (4wd available – sign storage in garage near bowling club)	Dave Jack	027 251 0878	06 3508969	Jane Dear (Secretary)	Alan Dear
Himatangi Beach Fire Brigade	Wayne Dear	027 232 4518	Comms 04 801 0812	Op Room 06 357 9071	Exec 04 801 0812
Himatangi Beach Camping Ground	Rueben	021 284 0990	06 329 9575		
Himatangi Tsunami Evacuation Centre	Te Kawau Rec Centre, Rongotea				
Tangimoana Tsunami Evacuation Centre (Te Kawau Recreation Centre, Rongotea)	Adrienne Crossland	027 484 1412	06 324 7040	Gina 027 304 2553	Carolynn 06 324 8370
Tangimoana Beach Clearance	Lindsay Brown (Brownie)	027 255 3566	06 3247024		
Tangimoana Fire Officer	Greg Weston	027 833 7078	06 324 8460	Comms 04 801 0812	Exec 04 801 0812
Tangimoana - Annie's Corner Store (sign storage point)	Annie Sowry	027 447 2570	06 324 8922		
Tangimoana School	Trudy Pankhurst		06 324 8465		
Earnslaw One Limited (Major coastal landholder between Tangimoana and Himatangi)	Steve Cooper	027 495 4802		Office 06 322 1558	

#### DISTANT AND REGIONAL SOURCE

Expected Tsunami Size	Time to Landfall	National Warning System Information Given	Manawatu District Council Plan of Action and Critical Elements
0.2-1 meters	1-3 hours or more	National Warning System States: <i>National Warning – Tsunami Threat to Beach and Marine Areas or National Warning – Tsunami Threat to Land and marine Areas</i>	<p>Manawatu EMO upon receiving National Warning System notification will:</p> <ul style="list-style-type: none"> <li>Contact the local Controller, for notification of threat and clarification on intended actions.</li> <li>Contact the Horizons EMDO to find out the groups intended actions. Advise intended actions of the Manawatu DC as listed below.</li> <li>EOC activated to Level 1 and monitoring situation.</li> <li>Notify the Tsunami Coastal community contacts as shown in <b>Table 2</b> ask them to place tsunami signage out (<b>Image 1</b>), tell them that the expected wave will only impact beach and marine areas there is no expected threat to land or the community. <ul style="list-style-type: none"> <li>Himatangi Beach tsunami warning signs are stored at Himatangi Beach Community Patrols Garage. <ul style="list-style-type: none"> <li>Placement of the warning signs is to be at road entrance to beach at end of Koputara Road and at the pedestrian beach access point next to number 36 Hunia Terrace. <b>See Map 2</b></li> </ul> </li> <li>Tangimoana tsunami warning signs are stored at the Tangimoana Store in the shed on the west side of the Store's main building. <ul style="list-style-type: none"> <li>Placement of the warning sign is to be at the flood barrier next to 81 Punga Street to restrict vehicle access to beach and boat ramp. <b>See Map 1</b></li> </ul> </li> </ul> </li> <li>Notify Manawatu DC Emergency Management Committee of intended actions.</li> <li>Seek help with beach clearance from FENZ and NZ Police, Himatangi Beach Clearance, and Tangimoana Beach Clearance contacts.</li> <li>Clarify with Horizons RC River Management if the flood barrier system will be deployed in Tangimoana.</li> <li>Ask for EOC attendance from <b>Operations, Intelligence, Control, Logistics, PIM, FENZ, and Police.</b></li> <li>Customer Contact Centre to place up IVR message provided by PIM due to increased call volumes.</li> </ul>
0.2-1 meters			<ul style="list-style-type: none"> <li>Liaise with Group ECC for their intended actions</li> </ul>
0.2-1 meters			<ul style="list-style-type: none"> <li>Ensure manned road and trail closures are in place at beach entrances, if possible task Police with assistance at sites.</li> <li>Continued reconnaissance of affected / closed areas until .5 hours to landfall.</li> </ul>
0.2-1 meters			<ul style="list-style-type: none"> <li>Provide EOC Administration – Contact Centre an IVR message to be placed on phones.</li> <li>Liaise with Horizons PIM</li> <li>Update MDC website and social media</li> </ul>
0.2-1 meters			<ul style="list-style-type: none"> <li>Acquire any resources needed for the response. Identify Critical Resources with Controller i.e. secure the fuel supply due to panic buying.</li> <li>Contact and provide purchase orders for all external contractors supplying goods and services</li> <li>Set up EOC as needed</li> </ul>
0.2-1 meters			<ul style="list-style-type: none"> <li>Monitor official information sources for updates on the tsunami any changes to be relayed immediately</li> </ul>

1-3 meters	1- 3 hours or more	National Warning System States: <i>National Warning – Tsunami Threat to Land and marine Areas</i>	Manawatu EMO upon receiving National Warning System notification will:	<ul style="list-style-type: none"> <li>• Contact the local Controller, for notification of threat and clarification on intended actions of activation of EOC to Level 3.</li> <li>• Contact the Horizons EMDO to find out the groups intended actions. Advise intended actions of the Manawatu DC as listed below.</li> <li>• MDC EOC activated to Level 3 and responding to situation.</li> <li>• Ask for EOC attendance from all of the MDC Incident Management Team.</li> <li>• Notify Manawatu DC Emergency Management Committee of intended actions, ask for EOC attendance from FENZ and NZ Police.</li> <li>• Seek help from FENZ and NZ Police, Himatangi Beach Clearance, and Tangimoana Beach Clearance contacts for clearance of: <ul style="list-style-type: none"> <li>➢ Tangimoana and Himatangi Beaches</li> <li>➢ Himatangi Beach surf lifesaving building</li> <li>➢ Himatangi Beach Camping Ground</li> <li>➢ Himatangi Community Hall and Library</li> </ul> </li> <li>• Contact Ohakea AFB warn of risk to area.</li> <li>• Phone Himatangi Beach Camping Ground advise of tsunami threat with possibilities of inundation of camping ground ask if there are any guests that need to be evacuated at camp. If there are evacuees inform them to go to Te Kawau Rec Centre, Rongotea and await further instructions.</li> <li>• Phone Te Kawau Rec Centre and advise of any evacuees coming from Himatangi Beach Camping Ground.</li> <li>• Notify the Tsunami Coastal community contacts as shown in <b>Table 2</b> ask them to place tsunami signage out, tell them that the expected wave could impact the Himatangi Camping Ground. <ul style="list-style-type: none"> <li>➢ Himatangi Beach signs are stored at Himatangi Beach Camping Ground in the unlocked garage next to the camp office.</li> <li>➢ Placement of the warning signs is to be at road entrance to beach at end of Koputara Road and at the 2 pedestrian beach access points down Hunia Terrace: 1 next to number 36 Hunia Terrace and the other across the road from 52 Hunia Terrace.</li> <li>➢ Tangimoana signs are stored at the Tangimoana Store in the shed on the west side of the Store's main building.</li> <li>➢ Placement of the warning sign is to be at the flood barrier next to 81 Punga Street to restrict vehicle access to beach and boat ramp.</li> </ul> </li> </ul>
1-3 meters			EOC Controller	<ul style="list-style-type: none"> <li>• Liaise with Group ECC Controller and NEMA REMA.</li> <li>• Check whether or not the Emergency Mobile Alert system is being utilised at Group ECC level.</li> <li>• Set the Controllers Objectives.</li> <li>• Consider a declarers briefing.</li> <li>• Liaise with MDC Councillors</li> <li>• Decide if CDC needs to be activated for evacuees</li> </ul>
1-3 meters			EOC Operations	<ul style="list-style-type: none"> <li>• Ensure closure of Himatangi Beach Road at the Tsunami Safe Zone point near the intersection of Wylie Road.</li> <li>• Clarify with ECC Operations - River Management if the flood barrier system will be deployed in Tangimoana on Punga Street.</li> <li>• If flood barrier system not able to be deployed advise Intelligence and Welfare of possible inundation of homes on Punga, Kina and Kuku Streets</li> <li>• Arrange for Police presence at Road Closures (ensure security of townships from looting) advise evacuees to travel to CDCs for registration.</li> </ul>
1-3 meters			EOC Intelligence	<ul style="list-style-type: none"> <li>• Monitor the Emergency Management Office email: <a href="mailto:eoc@mdc.govt.nz">eoc@mdc.govt.nz</a> or if server down <a href="mailto:eoc.mdc@gmail.com">eoc.mdc@gmail.com</a> email for any National Warning System email updates.</li> <li>• NEMA is responsible for evaluating the danger to New Zealand, and will ensure national or regional warnings are issued, if necessary.</li> <li>• Find out how many evacuees will need accommodating at CDC's.</li> <li>• Liaise with Group ECC Intelligence on tsunami information received from NEMA</li> <li>• Monitor the Pacific Tsunami Warning Centre website <a href="https://ptwc.weather.gov/?region=1">https://ptwc.weather.gov/?region=1</a> See Image 2</li> </ul>
1-3 meters			EOC Logistics	<ul style="list-style-type: none"> <li>• Ensure that Te Kawau, Rongotea and Manfeild Park, Feilding are available and prepared to activate as CDC's find out what resources will be needed.</li> <li>• Arrange for transport of evacuees from affected areas to CDC for registration.</li> <li>• Arrange for provision of catering, bedding and clothing to CDC's</li> <li>• Contact and provide purchase orders for all external contractors supplying goods and services</li> <li>• Prepare the EOC for full activation, prepare shift rosters</li> <li>• Identify Critical Resources with Controller i.e. secure the fuel supply due to panic buying.</li> <li>• Support CD Centre Welfare operations</li> <li>• Provide for staff welfare i.e. food and drink, safety equipment, and CDC communications equipment.</li> </ul>
1-3 meters			EOC Planning	<ul style="list-style-type: none"> <li>• Create initial action plan based on Controllers objectives.</li> </ul>
1-3 meters			EOC Welfare	<ul style="list-style-type: none"> <li>• Contact CDC Team to get them to attend to CDC's as needed. CDC's to provide a minimum of Registration services.</li> <li>• Contact Local Welfare Committee contacts ask for Welfare assistance at Rongotea (Te Kawau) Civil Defence Centre and Manfeild.</li> <li>• As per Welfare plan open Te Kawau, Rongotea and Manfeild, Feilding Civil Defence Centres.</li> </ul>
1-3 meters			EOC Public Information Management	<ul style="list-style-type: none"> <li>• Liaise with Horizons PIM</li> <li>• Prepare and distribute approved MDC media releases detailing the local response by MDC and emergency services – ensuring these are consistent with Horizons information.</li> <li>• Follow the PIM guideline.</li> <li>• Provide media briefings, advise that all evacuees are to proceed to their designated CDC for registration.</li> <li>• Provide EOC Administration – Contact Centre a IVR message to be placed on phones.</li> <li>• Update MDC website and social media</li> <li>• Monitor NEMA media releases for any relevant information to be relayed</li> <li>• If an Emergency Mobile Alert has been issued this will drastically increase social media and customer contact centre needs for information, speak to Logistics if more staff are needed for social media monitoring.</li> </ul>
1-3 meters			EOC Administration	<ul style="list-style-type: none"> <li>• Customer Contact Centre to place up a IVR message provided by PIM as call volumes will drastically increase.</li> </ul>

<b>3 + meters</b> <b>*Total Inundation to both Himatangi Beach and Tangimoana townships</b>	1-3 hours or more	National Warning System States: <i>National Warning – Tsunami Threat to Land and marine Areas</i>	Manawatu EMO upon receiving National Warning System notification will:	<ul style="list-style-type: none"> <li>• Contact the local Controller, for notification of threat and clarification on intended actions of activation of EOC to Level 4 or 5.</li> <li>• Contact the Horizons EMDO to find out the groups intended actions. Advise intended actions of the Manawatu DC as listed below.</li> <li>• MDC EOC activated to Level 4 or 5 depending on National or Group Declaration status.</li> <li>• Ask for EOC attendance from all of the MDC Incident Management Team.</li> <li>• Notify Manawatu DC Emergency Management Committee of intended actions, ask for EOC attendance from all available agencies.</li> <li>• Contact Ohakea AFB warn of risk to area, ask if they have staff on deployment in area that are able to help with evacuations.</li> <li>• Phone All of Tsunami Contacts advise of tsunami threat with possibilities of total village inundation advise evacuation to tsunami safe zone.</li> <li>• Phone Te Kawau Rec Centre, Rongotea and Manfeild, Feidling advise of any evacuees coming from Himatangi Beach Camping Ground.</li> <li>• Notify the Tsunami Coastal community contacts as shown in <b>Table 2</b> ask them to place tsunami signage out more than 1 hour to landfall. <ul style="list-style-type: none"> <li>➢ Himatangi Beach signs are stored at Himatangi Beach Camping Ground in the unlocked garage next to the camp office. <ul style="list-style-type: none"> <li>○ Placement of the warning signs is to be at road entrance to beach at end of Koputara Road and at the pedestrian beach access point next to number 36 Hunia Terrace.</li> </ul> </li> <li>➢ Tangimoana signs are stored at the Tangimoana Store in the shed on the west side of the Store's main building. <ul style="list-style-type: none"> <li>○ Placement of the warning sign is to be at the flood barrier next to 81 Punga Street to restrict vehicle access to beach and boat ramp.</li> </ul> </li> </ul> </li> </ul>
<b>3 + meters</b>			EOC Controller	<ul style="list-style-type: none"> <li>• Liaise with Group ECC Controller.</li> <li>• Check whether or not the Emergency Mobile Alert system has been utilised at Group ECC level.</li> <li>• Set the Controllers Objectives.</li> <li>• Check if there is a National or Group Declaration already in place.</li> <li>• Liaise with MDC Councillors and Mayor</li> <li>• Initiate declaration process</li> </ul>
<b>3 + meters</b>			EOC Operations	<ul style="list-style-type: none"> <li>• Ensure closure of Himatangi Beach Road near the intersection of Wylie Road and Tangimoana Road at Tsunami Safe Zone Points.</li> <li>• Arrange for Police presence at Road Closures (ensure security of townships from looting)</li> </ul>
<b>3 + meters</b>			EOC Intelligence	<ul style="list-style-type: none"> <li>• Monitor the Emergency Management Office email: <a href="mailto:eoc@mdc.govt.nz">eoc@mdc.govt.nz</a> or if server down <a href="mailto:eoc.mdc@gmail.com">eoc.mdc@gmail.com</a> email for any National Warning System email updates.</li> <li>• NEMA is responsible for evaluating the danger to New Zealand, and will ensure national or regional warnings are issued, if necessary.</li> <li>• Find out how many evacuees will need accommodating at CDC's, possible maximum population of each township at that time of year.</li> <li>• Liaise with Group ECC Intelligence on tsunami information received from NEMA</li> <li>• Monitor the Pacific Tsunami Warning Centre website <a href="https://ptwc.weather.gov/?region=1">https://ptwc.weather.gov/?region=1</a> or Twitter Feed <a href="https://twitter.com/nws_ptwc?lang=en">https://twitter.com/nws_ptwc?lang=en</a> for the example of the website correct viewing option selecting Pacific Ocean region, <b>See Image 2</b></li> <li>• Produce a SIT Rep as decided by Controller</li> </ul>
<b>3 + meters</b>			EOC Logistics	<ul style="list-style-type: none"> <li>• Prepare EOC for full Level 4 activation using floor plan.</li> <li>• If extra resources are needed for door knocking evacuation notices, call on relevant pre-designated volunteer organizations.</li> <li>• Ensure that Te Kawau, Rongotea and Manfeild, Feidling are available and prepared to activate as CDC's find out what resources will be needed.</li> <li>• Arrange for transport of evacuees from affected areas.</li> <li>• Arrange for provision of catering, bedding and clothing to CDC's</li> <li>• Contact and provide purchase orders for all external contractors supplying goods and services</li> <li>• Prepare shift rosters for a multiple day event</li> <li>• Identify Critical Resources with Controller i.e. secure the fuel supply due to panic buying.</li> <li>• Support CD Centre operations</li> <li>• Provide for EOC staff welfare i.e. food and drink, safety equipment, and communications equipment.</li> </ul>
<b>3 + meters</b>			EOC Planning	<ul style="list-style-type: none"> <li>• Create Initial Action Plan based on Controllers objectives.</li> <li>• Create an Action Plan for any response needs currently outside of this plan.</li> </ul>
<b>3 + meters</b>			EOC Welfare	<ul style="list-style-type: none"> <li>• Contact CDC Team to get them to attend to CDC's as needed.</li> <li>• Contact Local Welfare Committee contacts ask for Welfare assistance at Rongotea (Te Kawau) and Manfeild, Civil Defence Centres, will need extra staff and equipment to handle registration work load source this from Logistics.</li> <li>• As per Welfare plan open Te Kawau, Rongotea and Manfeild, Feidling Civil Defence Centres</li> <li>• CDC's to provide a minimum of Registration services</li> </ul>
<b>3 + meters</b>			EOC Public Information Management	<ul style="list-style-type: none"> <li>• Liaise with Horizons PIM</li> <li>• Prepare and distribute approved MDC media releases detailing the local response by MDC and emergency services – ensuring these are consistent with Horizons information.</li> <li>• Produce a Public Information Plan to be included in Action Plan</li> <li>• Provide media briefings</li> <li>• Update MDC website and social media</li> <li>• Monitor NEMA media releases for any relevant information to be relayed</li> </ul>
<b>3 + meters</b>			EOC Administration	<ul style="list-style-type: none"> <li>• Customer Contact Centre to place up a IVR message provided by PIM as call volumes will drastically increase.</li> <li>• If afterhours and calls with afterhours service prepare to take the calls back.</li> </ul>



## LOCAL SOURCE

Expected Tsunami Size	Time to Landfall	National Warning System Information Given or Natural Signs Felt	Manawatu District Council Plan of Action and Critical Elements		
Large Earthquake felt in Manawatu – Local source Tsunami suspected	Less than 1 hour	National Warning System notification: <i>National Warning – Tsunami Threat – Local-source</i>	Manawatu EMO upon feeling the Earthquake (strong enough to knock you to the ground) or receiving notification from the EMDO will attempt to confirm the origin and size of the Earthquake	Manawatu EMO upon earthquake will:	<ul style="list-style-type: none"> <li>Ascertain if a real or perceived threat is likely through GNS epicentre of earthquake information if available.</li> <li>Follow MDC Earthquake Action Plan for use of buildings and response actions.</li> <li>Attempt to phone the Tsunami Coastal Contacts to see if the earthquake was severe in their area and if people are already self-evacuating.</li> <li>Activate either the main or alternate EOC to Level 3 according to MDC Earthquake Action Plan</li> <li>Request EOC attendance of whole IMT</li> <li>If Rapid Threat Map produced find out possible threat to MDC area.</li> <li>Ascertain if an Emergency Mobile Alert has been sent by the Group ECC.</li> <li>Dial 111, speak to Fire. Ask if FENZ can task Himatangi and Tangimoana volunteer fire brigades with evacuations.</li> </ul>
				EOC Controller	<ul style="list-style-type: none"> <li>Contact Group ECC Controller advise of EOC activation to Level 3</li> <li>Pass on any relevant information to Group ECC Controller</li> </ul>
				EOC Operations	<ul style="list-style-type: none"> <li>Police and FENZ to assist with evacuations.</li> <li>Ensure closure of Himatangi Beach Road near the intersection of Wylie Road and Tangimoana Road at the Tsunami Safe Zone Points.</li> <li>Contact Ohakea AFB warn of risk to area, ask if they have staff on deployment in area that are able to help with evacuations.</li> </ul>
				EOC PIM	<ul style="list-style-type: none"> <li>Liaise with Horizons PIM</li> <li>Prepare and distribute approved MDC media releases detailing the local response by MDC and emergency services – ensuring these are consistent with Horizons information.</li> <li>Ascertain when or if an Emergency Mobile Alert will be issued by the ECC.</li> </ul>
				EOC Intelligence	<ul style="list-style-type: none"> <li>Attempt to gain situational awareness of real tsunami threat to MDC coastline if highly likely escalate this to the Controller and EMO immediately</li> <li>Monitor the Emergency Management Office email: <a href="mailto:eoc@mdc.govt.nz">eoc@mdc.govt.nz</a> or if server down <a href="mailto:eoc.mdc@gmail.com">eoc.mdc@gmail.com</a> email for any National Warning System email updates.</li> <li>Find out how many evacuees will need accommodating at CDC's, possible maximum population of each township at that time of year.</li> <li>Liaise with Group ECC Intelligence on tsunami information received from NEMA</li> </ul>
				EOC Logistics	<ul style="list-style-type: none"> <li>Set up EOC to Level 3 and create staff roster</li> <li>Arrange for transport of evacuees from affected areas.</li> <li>Arrange for provision of catering, bedding and clothing to CDC's</li> <li>Ensure that Te Kawau, Rongotea and Manfeild, Feilding are available and prepared to activate as CDC's find out what resources will be needed.</li> <li>Provide for EOC staff welfare i.e. food and drink, safety equipment, and communications equipment.</li> </ul>
				EOC Welfare	<ul style="list-style-type: none"> <li>Contact CDC Team to get them to attend to CDC's as needed.</li> <li>As per Welfare plan open Te Kawau, Rongotea and Manfeild, Feilding Civil Defence Centres</li> <li>CDC's to provide a minimum of Registration services</li> </ul>
				EOC Planning	<ul style="list-style-type: none"> <li>Create Initial Action Plan based on Controllers objectives.</li> <li>Create an Action Plan for any response needs currently outside of this plan.</li> </ul>

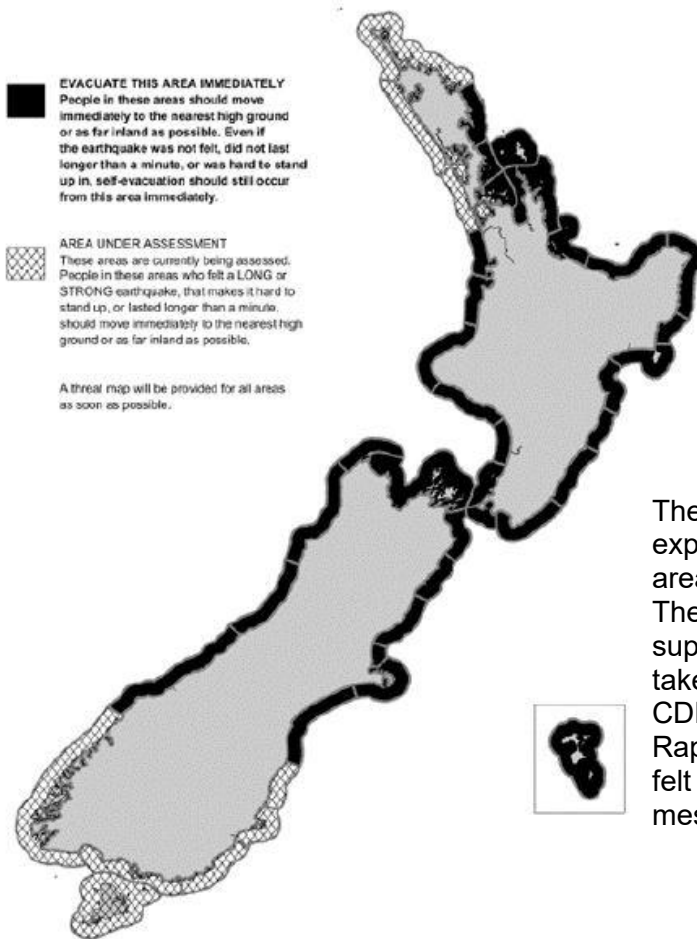
## POTENTIAL THREAT ADVISORIES

Tsunami Advisory – Potential Threat to New Zealand	<ul style="list-style-type: none"> <li><i>National Advisory – Earthquake Being Assessed</i></li> <li><i>National Advisory – Large Pacific Earthquake Being Assessed</i></li> <li><i>National Advisory - Large Pacific Earthquake Still Being Assessed</i></li> </ul>	Manawatu EMO upon receiving notification will:	<ul style="list-style-type: none"> <li>Advise local police Sergeant Nick Lawton on 021 191 4680.</li> <li>Advise St John Shift Supervisor on 027 209 2253.</li> <li>Advise via phone MidCentral Public Health Unit on 06 350 9110.</li> <li>Activate MDC EOC to Level 1</li> <li>Monitor the situation utilising Pacific Tsunami Warning Centre and Australian Bureau of Meteorology websites as GNS and NEMA do not have an active warning websites.</li> <li>Contact the EMDO to discuss actual threat</li> <li>Inform Local Controller of situation and update them as information comes in.</li> <li>Place EOC IMT on standby.</li> <li>Advise EOC Logistics to start preparing a roster with who is available if need be.</li> </ul>
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## 5. Threat Maps

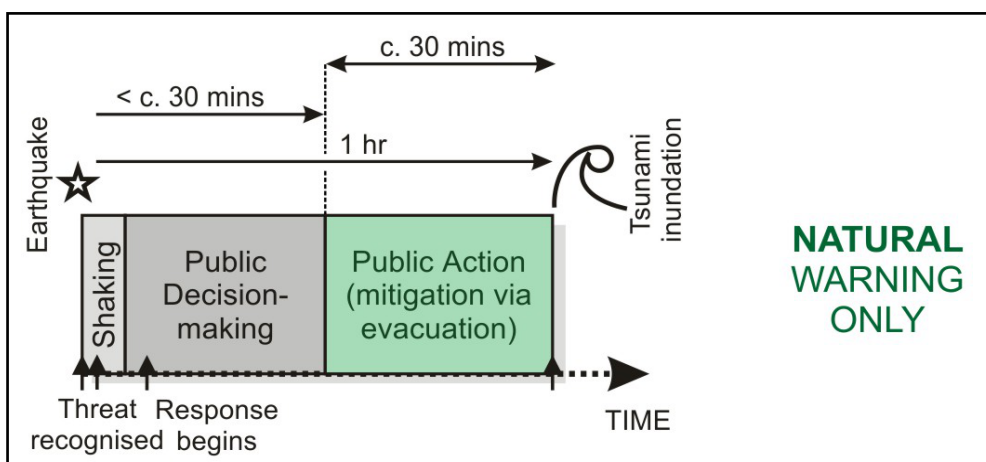
If available, NEMA may issue two types of threat maps, these being Rapid Threat Evacuation Maps and Threat Forecast Maps they do take time to produce as shown in graph below:

### 5.1 Rapid Threat Evacuation Map Example:



These maps show the coastal regions that are expected to experience land inundation in black and areas still under assessment in grey (crosshatch). These maps are only used for local source events to support fast and consistent evacuation advice. They take around fifteen minutes to produce therefore CDEM Groups and the public **should not wait** for a Rapid Threat Evacuation Map; instead the natural felt warning signs and 'Long or Strong, Get Gone' message should always apply in the first instance.

Shading	Threat definition
	Land threat expected: Evacuate immediately
Crosshash 	'Long or Strong, Get Gone'; under assessment



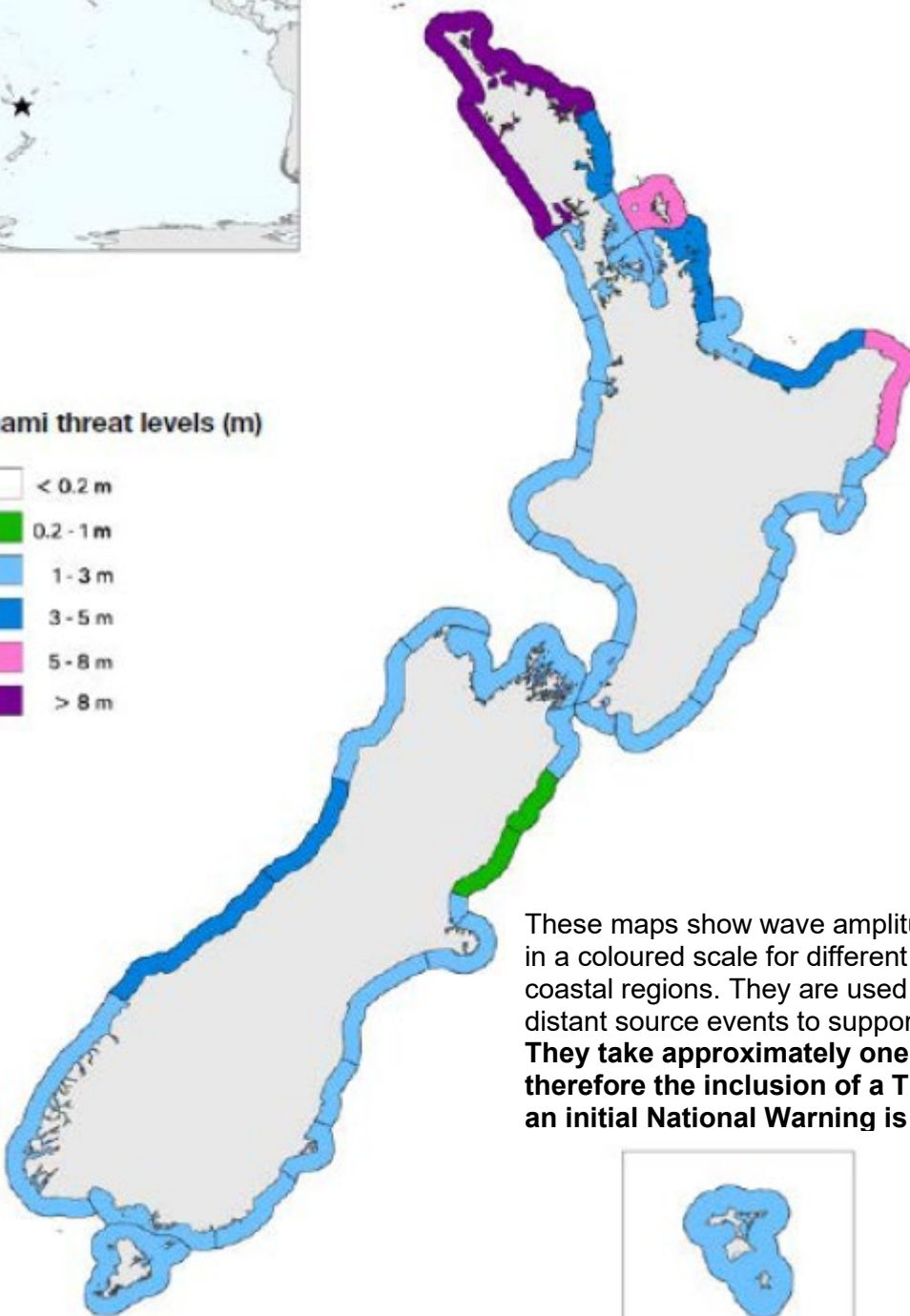
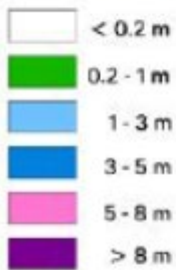


## 5.2 Threat Forecast Map Example:

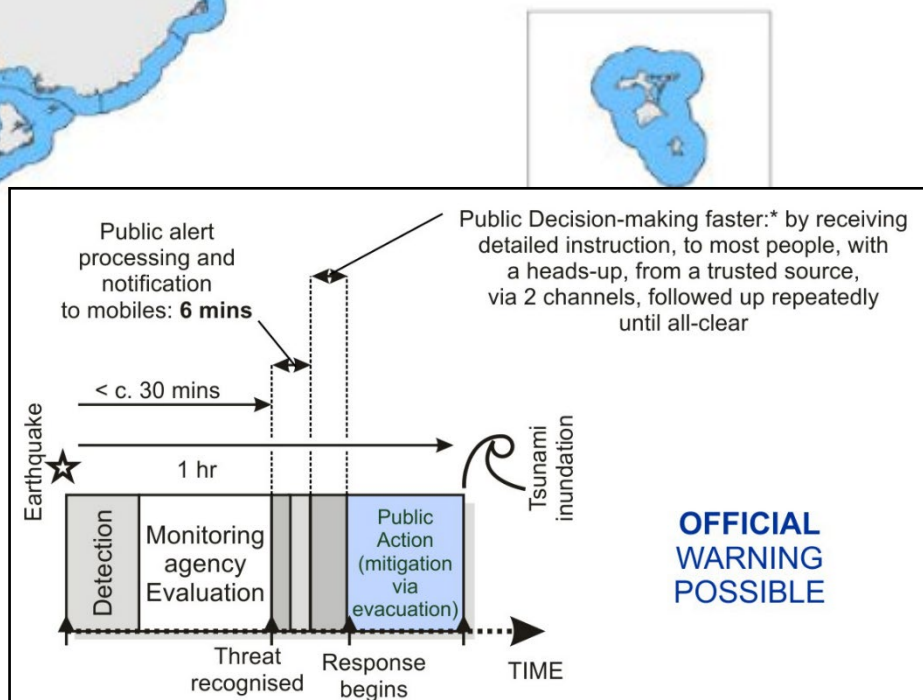
NH\_mw87\_10 Mw 8.7 Loc: 173.1E 22.6S



Tsunami threat levels (m)



These maps show wave amplitude forecasts, illustrated in a coloured scale for different threat levels for the coastal regions. They are used for local, regional and distant source events to support local level assessments. **They take approximately one hour to produce; therefore the inclusion of a Threat Forecast Map in an initial National Warning is unlikely.**



## 6. Evacuation Zone Maps

Specific tsunami evacuation zone maps have been prepared for each coastal community in the region and are contained within respective Territorial Authority Tsunami Action Plans.

The maps contain three specific zones, standard across the country.

- ❖ The zone maps shown below in references **6.3, 6.4, 6.5, 6.7, 6.8, 6.9, 6.10** are also available in MDC Intramaps system under the Emergency Management Map system; Layer - Tsunami Evacuation Zones.

### **Red Zone**

➤ The Red Zone is intended as a marine and beach exclusion zone (including harbours, rivers and estuaries) that can be designated off limits in the event of any expected tsunami. This represents the highest risk zone and is the first place that people should evacuate from in all types of tsunami warnings.

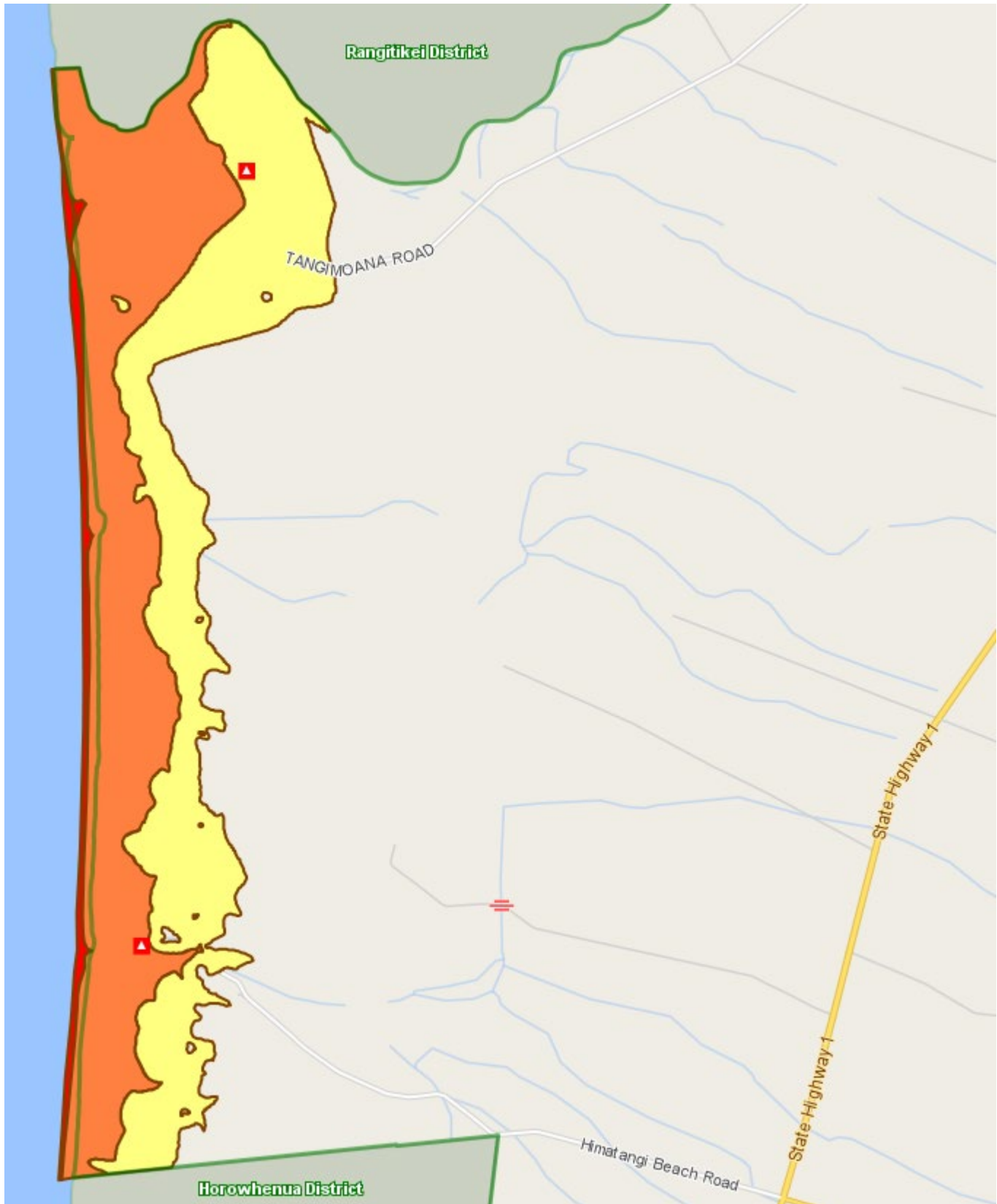
### **Orange Zone**

➤ The Orange Zone is intended to be the area evacuated in most if not all distant and regional source official tsunami warnings (ie. warnings that extend beyond the Red Zone, for tsunami from sources more than one hour travel time away from the mapped location).

### **Yellow Zone**

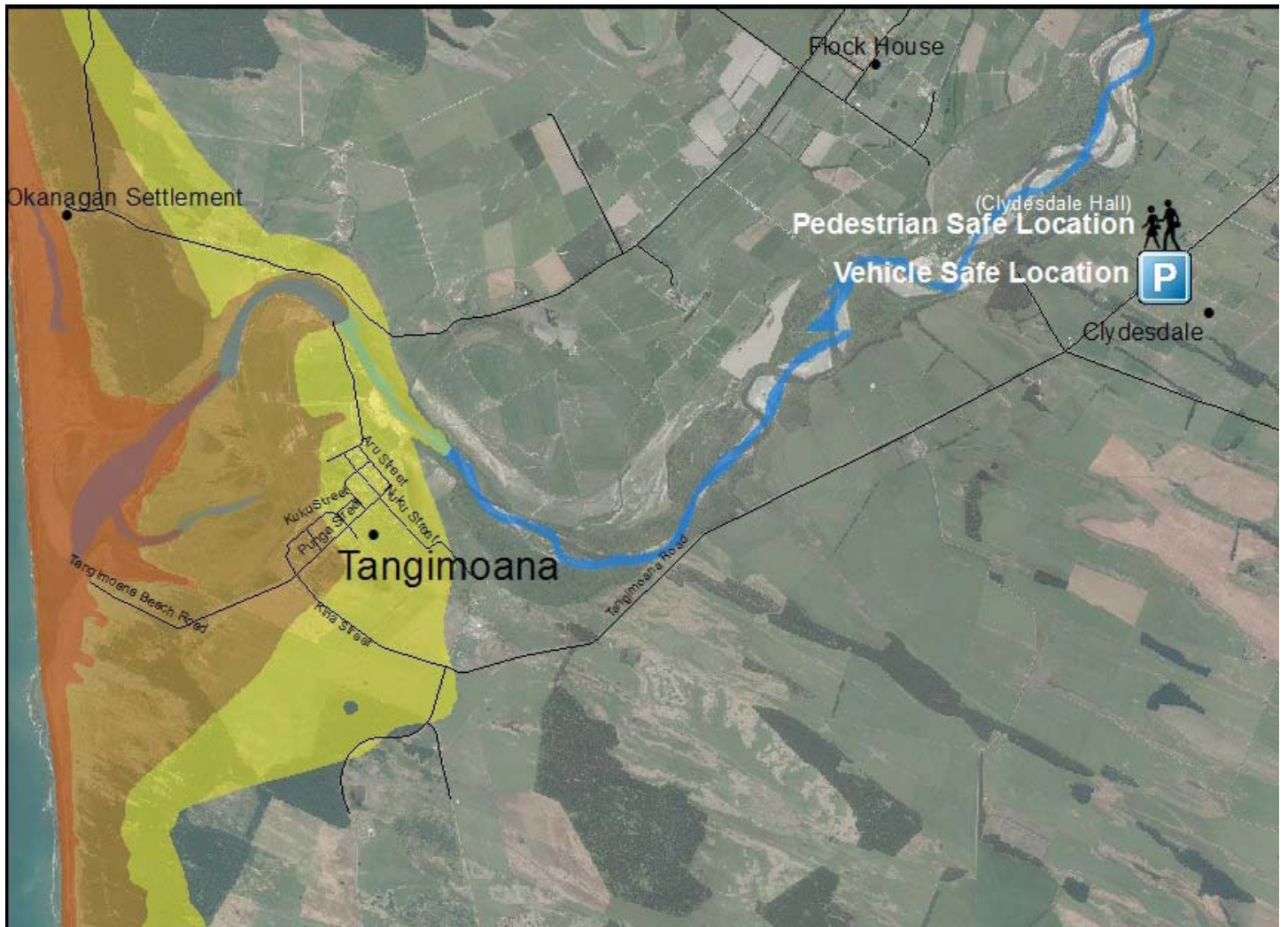
➤ The Yellow Zone covers all maximum credible tsunami events. The intention is that the Yellow Zone provides for local source credible events, based upon locally determined risk. People should evacuate this zone in natural or informal warning from a local source event, and when instructed via formal warnings.

## 6.1 Manawatu District Council Coastal Risk Zone Inundation Map



- Red area**  
Shoreline risk zone
- Orange area**  
1:500 year Threat Level 3
- Yellow area**  
1:2500 year Threat Level 5

## 6.2 Tangimoana Evacuation Route and Safe Locations



- **Red area**  
Shoreline risk zone
- **Orange area**  
1:500 year Threat Level 3
- **Yellow area**  
1:2500 year Threat Level 5
- **Blue line**  
Evacuation Route



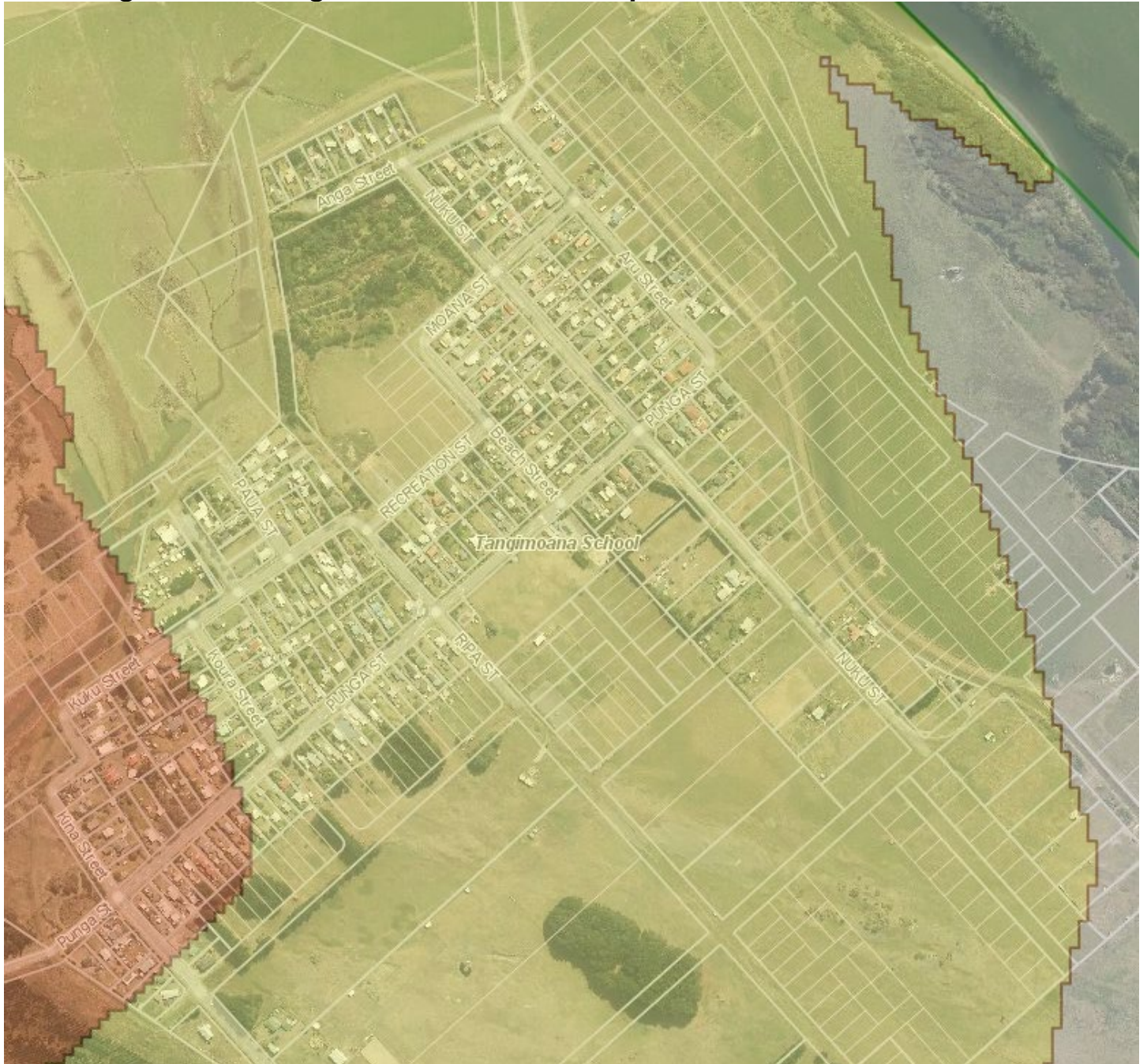
### 6.3 Tangimoana Village Inundation Zone Map 1



- Orange area**  
1:500 year Threat Level 3
- Yellow area**  
1:2500 year Threat Level 5



## 6.4 Tangimoana Village Inundation Zone Map 2



**Orange area**  
1:500 year Threat Level 3

**Yellow area**  
1:2500 year Threat Level 5



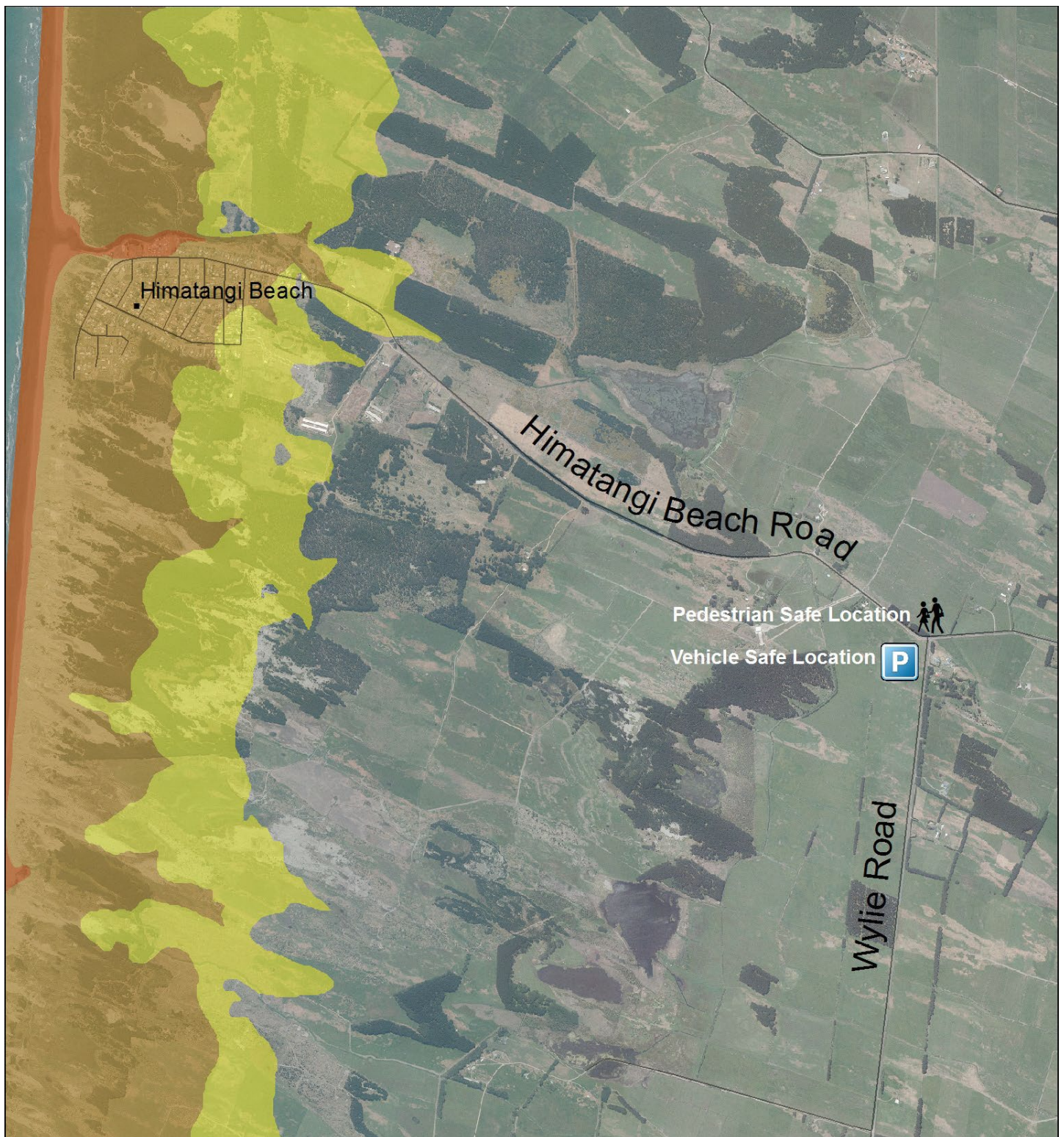
## 6.5 Tangimoana Village Inundation Zone Map 3



- Orange area**  
1:500 year Threat Level 3
- Yellow area**  
1:2500 year Threat Level 5



## 6.6 Himatangi Beach Evacuation Route and Safe Locations



- **Red area**  
Shoreline risk zone
- **Orange area**  
1:500 year Threat Level 3
- **Yellow area**  
1:2500 year Threat Level 5
- **Blue line**  
Evacuation Route



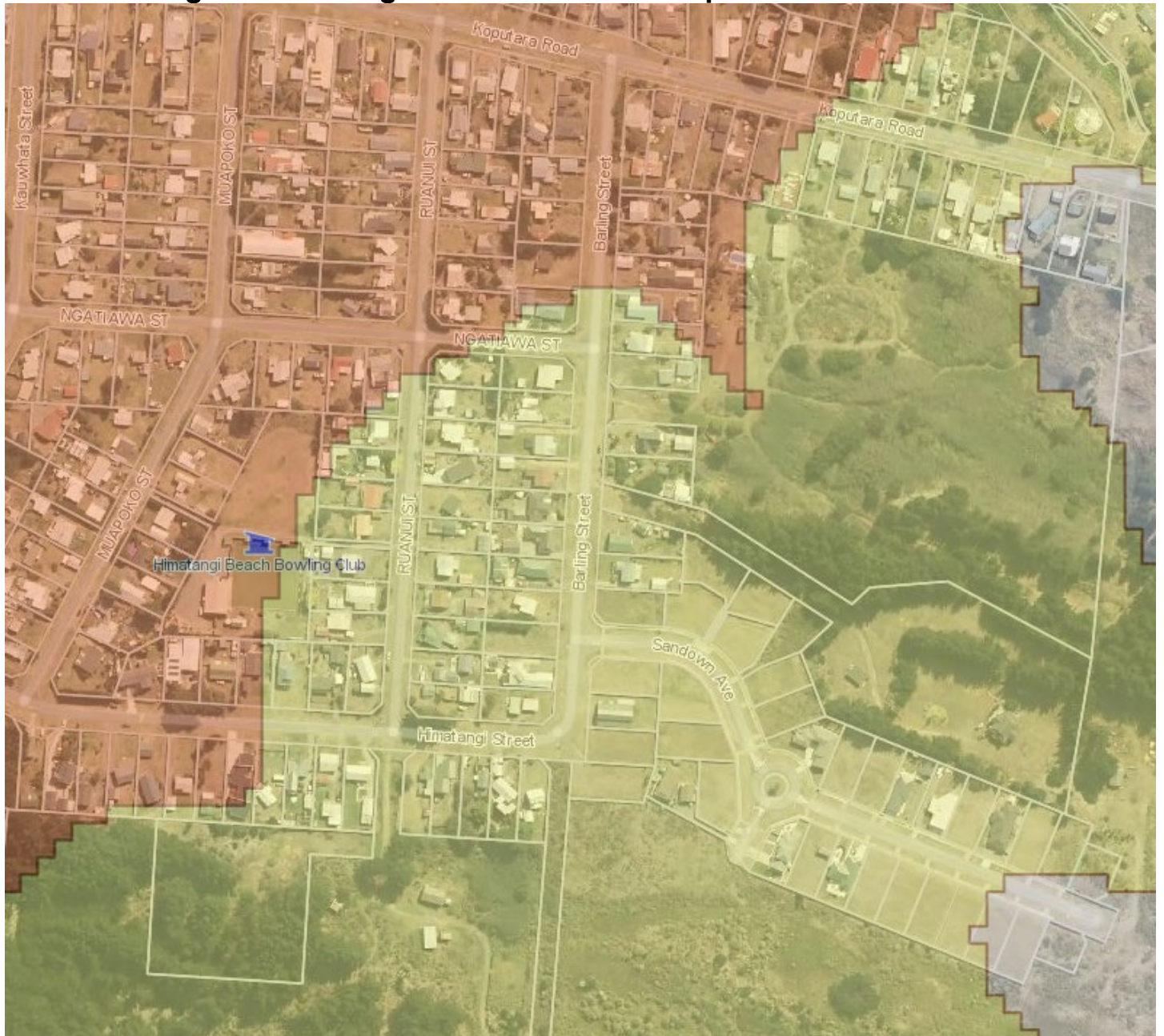
## 6.7 Himatangi Beach Village Inundation Zone Map 1



- Orange area**  
1:500 year Threat Level 3
- Yellow area**  
1:2500 year Threat Level 5



## 6.8 Himatangi Beach Village Inundation Zone Map 2



**Orange area**  
1:500 year Threat Level 3

**Yellow area**  
1:2500 year Threat Level 5



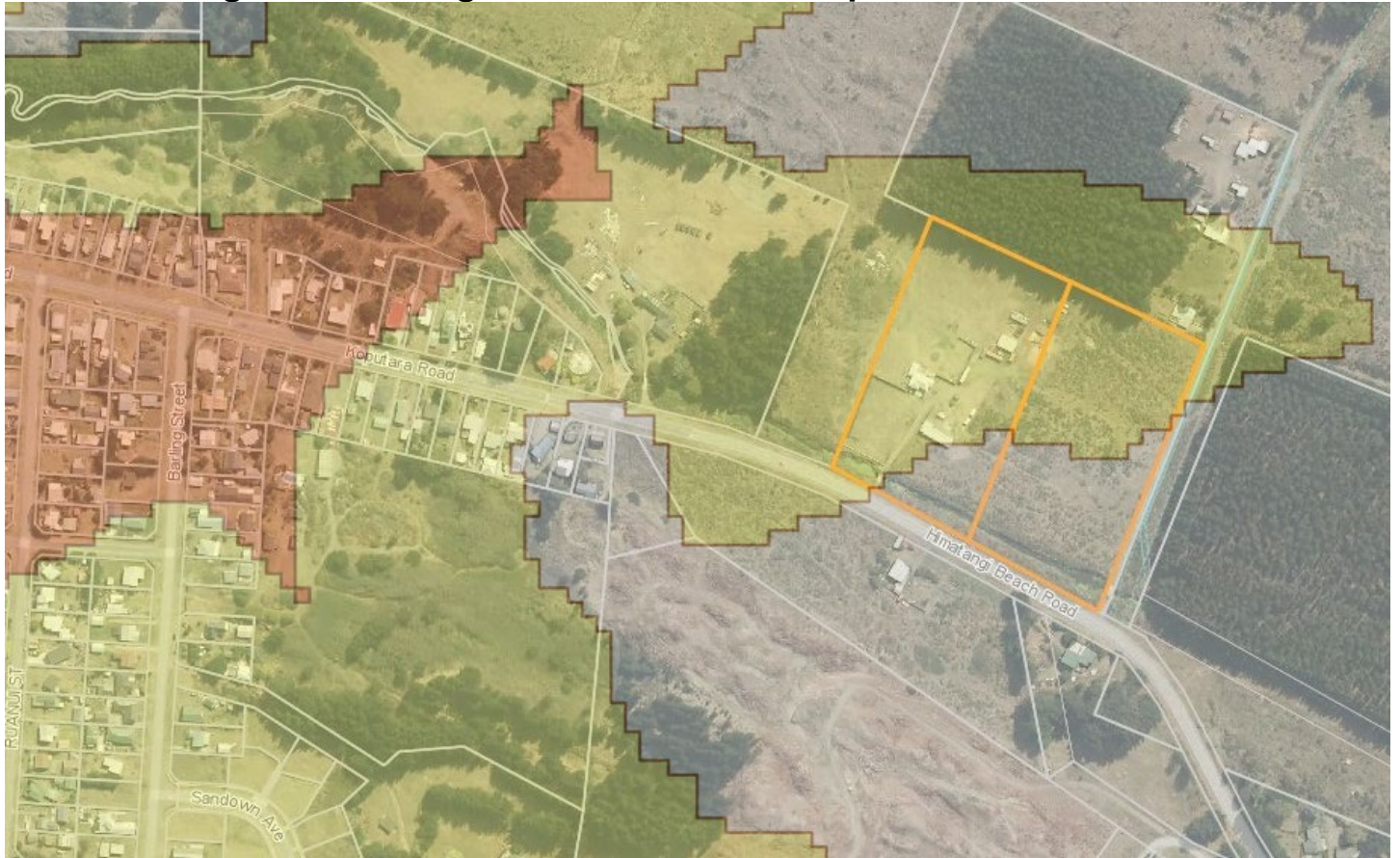
## 6.9 Himatangi Beach Village Inundation Zone Map 3



- Orange area**  
1:500 year Threat Level 3
- Yellow area**  
1:2500 year Threat Level 5



## 6.10 Himatangi Beach Village Inundation Zone Map 4



- Orange area**  
1:500 year Threat Level 3
- Yellow area**  
1:2500 year Threat Level 5



## 7. Image 1: Tsunami Sign Example






## 7.1 Image 2: Pacific Tsunami Warning Centre Website

[All Regions](#)
[Pacific Ocean](#)
[Hawai'i](#)
[Caribbean Sea](#)
[Indian Ocean \(discontinued\)](#)

Page last loaded at: Wed, 18 Jul 2018 02:05:33 UTC.



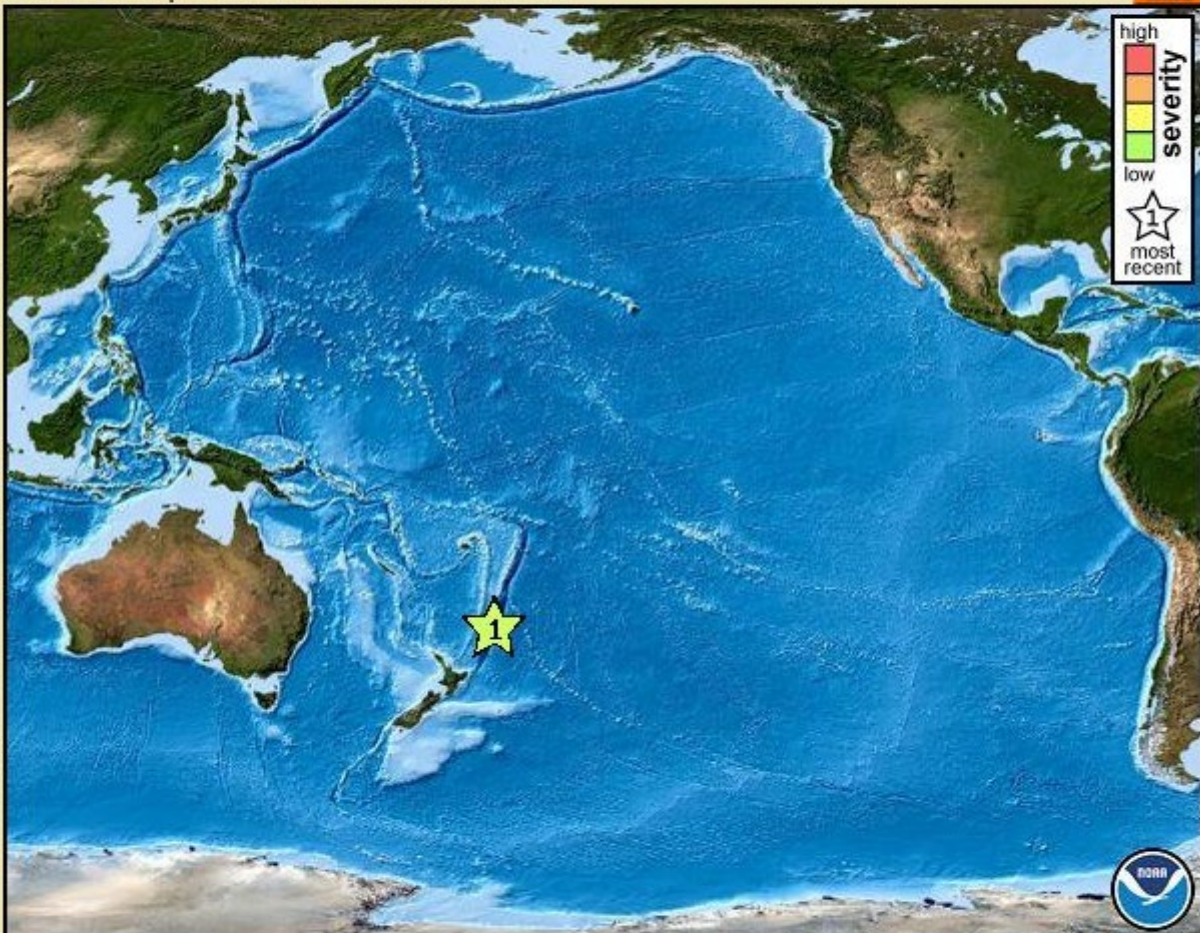
**No Current Warning, Watch, or Advisory in Effect**

low

[Click here to read the latest tsunami message.](#)

**Tsunami Messages for the Pacific Ocean (Past 30 days)**

Click on the map or table below for more information.



**XML**

high  
severity  
low

1  
most recent




Image last created on Wed, 18 Jul 2018 02:05:18 UTC.

Time (UTC)	Region	Type	Details
<b>1</b> 07 Jul 2018 21:44		Ptwc Information Statement	<a href="#">html</a> , <a href="#">text</a>

"UTC" = Coordinated Universal Time (aka: GMT or Zulu).



## 8. Map 1: Tangimoana Sign Placement



## 9. Map 2: Himatangi Beach Sign Placement

