



Emergency Flood Plan

Taonui Flood Action Plan

Version 3.0
May 2023

DOCUMENT REVISION HISTORY

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SERVICE CENTRES	Kairanga Cnr Rongotea & Kairanga-Bunnythorpe Rds Palmerston North	REGIONAL HOUSES	DEPOTS	Levin 11 Bruce Road	
	Marton Cnr Hammond & Hair Sts			Palmerston North 11-15 Victoria Avenue	Taihape Torere Road Ohotu
	Taumarunui 34 Maata Street			Whanganui 181 Guyton Street	
	Woodville Cnr Vogel (SH2) & Tay Sts				

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1 Introduction

This Flood Action Plan has been developed as a joint effort between staff of Horizons Regional Council (HRC or Horizons), Manawatū District Council (MDC) and Palmerston North City Council (PNCC) in order to coordinate responses to the potential inundation of flood waters into the Taonui Basin from spillways from the Ōroua River, Manawatū River and/or Mangaone Stream.

1.1 Purpose of the Plan

The inundation of floodwater into the Taonui Basin potentially affects a large amount of properties within that area of land known as the Basin, and could cause the required closure of a number of roads including State Highway 56 (to Opiki) and State Highway 1 (Rangiotu Road). The Plan outlines the actions of staff and contractors at various stages of flooding likely to affect this area. The Plan also provides guidance to Local and Group Controllers for Civil Defence and emergency services.

1.2 Description of Risk

The Taonui Basin is a low-lying area of land situated to the north east of the confluence of the Manawatū and Ōroua Rivers and is part of the Lower Manawatū Scheme (LMS).

When the LMS was designed, it was decided for a number of reasons that the Taonui Basin should be the recipient of water from these spillways. In choosing a ponding area, it was necessary to find a location that would take water from spillways on the Manawatū River, the Ōroua River, and the Mangaone Stream. Topography dictated that the Taonui Basin was the single location that could accept water from all of the spillways.

The Taonui Basin is served by a drainage network whose two main arteries are large stopbanked drains called Burkes Drain and Main Drain. Main Drain flows into Burkes Drain, and Burkes Drain flows into the Manawatū River via a large gated outlet structure called Burkes Drain Gates.

Burkes Drain and Main Drain have extensive rural catchments upstream of the Taonui Basin. Burkes Drain is fed by the Taonui Stream, whose headwaters are in the vicinity of Colyton. The major watercourse feeding Main Drain is Whiskey Creek, whose headwaters are near Bunnythorpe.

A major flood in the Manawatū River system (such as that of February 2004) could be expected to spill tens of millions of cubic metres of water into the Basin, and inundate 2,000 to 3,000 hectares of land.

The Kopane area has in the past been vulnerable to river flooding, although works completed including a new bridge built over the Ōroua River at Kopane, and stopbanks both upstream and downstream, have reduced this risk. This has removed the risk of floodwaters entering the Te Kawau Basin (south-west of Kopane) but now potentially more water will inundate the Taonui Basin (by design) in a 1% Annual Exceedance

Probability (AEP) flood¹. This flood event would occur with widespread flooding also happening elsewhere in the region.

2 Objective

To provide timely advice between Horizons, MDC, PNCC and emergency services, to allow for removal of stock, and in consideration of the evacuation of residents, from the affected areas of the Taonui Basin.

3 Combined Plan of Action and Stage Heights

If there is any doubt as to how the emergency might develop, response actions described in this plan should be initiated.

The following table has been developed in an effort to specify actions for agencies and individuals in relation to modelled flows of the Manawatū River at the Teachers' College and Upper Gorge sites. This Plan should be read in conjunction with the:

- Horizons Emergency Response Manual
- Horizons Emergency Management Duty Officer's Guide
- Manawatū District Council Emergency Operations Centre Procedures
- Palmerston North City Council Emergency Operations Centre Procedures

The MDC facilities are located at:

Emergency Operations Centre
135 Manchester Street
Feilding
06 323 0000

Emergency Operations Centre (Alternate)
Feilding Fire Station
201 Kimbolton Road
Feilding

Civil Defence (Welfare) Centre
Te Kawau Memorial Recreational Centre
Wye Street
Rongotea
06 324 8060

The PNCC and HRC Emergency Operations Centres are located at:

Te Ao Nui
17 Victoria Avenue
Palmerston North
0508 800 800

¹ 1% AEP is equivalent to a 1 in 100 year event

Table 1: Plan of Action

Manawatū District Council		Palmerston North City Council		Horizons Regional Council	
7.55m @ Teacher's College					
Roading Manager	<ul style="list-style-type: none"> Take the lead for MDC and PNCC roading in the affected area. Liaise closely with PNCC Roothing Manager. Liaise with roading contractors to maintain a watching brief on the potential inundation of the Taonui Basin. Ensure affected roads are managed as necessary. Monitor all roading closures and issues as necessary. 	Roothing Manager	<ul style="list-style-type: none"> Liaise with MDC Roothing Manager who has agreed to coordinate local roading issues in the flood area. Monitor all roading closures and issues as necessary. 	River Management Duty Officer (RMDO)	<ul style="list-style-type: none"> Assess the potential for flood waters to begin entering Basin A of the Taonui Basin via the Rangiotu spillway. Confirm with the EMDO the timings of water entering Basin A via the Rangiotu Spillway. Advise the Hydro Duty Officer.
Emergency Management Officer	<ul style="list-style-type: none"> Activate the EOC at a low level to monitor responses and liaise with Horizons, PNCC and emergency services. Advise a Local Controller. Advise Emergency Management Committee. Advise PIM. 	Emergency Management Officer	<ul style="list-style-type: none"> Activate the EOC at a low level to monitor responses and liaise with Horizons, MDC and emergency services. Advise a Local Controller. Advise the Emergency Management Committee. Advise the PIM. 	Emergency Management Duty Officer (EMDO)	<ul style="list-style-type: none"> Initiate a briefing for Ops and Hydro Duty Officers and the HIC. Following the briefing, provide a 'heads-up' to Manawatū District Council EMDO. Identify the first shift for EOC activities. Maintain a watching brief. Advise NEMA REMA of situation.
				Environmental Data Duty Officer (EDDO)	<ul style="list-style-type: none"> Prepare hydro information and weather forecasts for a briefing.
				Incident Controller	<ul style="list-style-type: none"> Initiate level 2 activation of the EOC.
8.55m @ Teacher's College					
Local Controller	<ul style="list-style-type: none"> Fully activate the EOC. Initiate a briefing (including a declarer) for response agencies. Consider whether door-to-door notification is required of residents in higher risk areas. Decide whether a Welfare Centre needs to be activated. Liaise with the Horizons IC and/or Group Controller. Liaise with MDC elected members. 	Local Controller	<ul style="list-style-type: none"> Activate the EOC to a suitable level to support the response. Initiate a briefing (including a declarer) for response agencies. Activate the Longburn Welfare Centre to support evacuees from Manawatū. Liaise with the Horizons IC and Group Controller. Liaise with PNCC elected members. 	Incident Controller	<ul style="list-style-type: none"> Initiate Level 3 activation of the EOC. Approve media releases relating to the Horizons EOC.
EOC Operations Manager	<ul style="list-style-type: none"> Coordinate responses in the field, including door-to-door notifications if necessary. Monitor road conditions and closures as necessary. 		<ul style="list-style-type: none"> Coordinate Welfare Centre operations and liaise with MDC re. registrations. Monitor road conditions and closures as necessary. 	EMDO	<ul style="list-style-type: none"> Advise MDC and PNCC EM staff of the situation. Activate the EOC to the required level. Monitor the situation for potential CDEM Group coordination.
Planning/Intelligence Manager	<ul style="list-style-type: none"> Monitor progress on this Plan. Receive intelligence and provide advice to the Controller. Prepare situation reports and briefings as required. Prepare shift plans. Support Centre operations. Maintain information in the EOC including maps and boards. Liaise with Horizons and PNCC P&I Managers. 	Planning/Intelligence Manager	<ul style="list-style-type: none"> Monitor progress on this Plan. Receive intelligence and provide advice to the Controller. Prepare SITREPs and briefings as required. Prepare shift plans. Support Centre operations. Maintain information in the EOC including maps and boards. Liaise with Horizons and MDC P&I Manager. 	EOC Operations Manager	<ul style="list-style-type: none"> Initiate and report on all field activities. Mobilise resources for flood protection to priority areas as appropriate. Deploy field staff. Deploy Horizons' operations resources and advise the Logistics Manager. Ensure operations are conducted in accordance with health and safety requirements and maintain regular contact with staff in the field, with input from the Health & Safety Officer.

Manawatū District Council		Palmerston North City Council		Horizons Regional Council	
Logistics Manager	<ul style="list-style-type: none"> Contact and provide purchase orders for all external contractors supplying goods and services. Ensure staff welfare is resourced including food and drink, safety equipment, and communications equipment. 	Logistics Manager	<ul style="list-style-type: none"> Contact and provide purchase orders for all external contractors supplying goods and services. Ensure staff welfare is resourced including food and drink, safety equipment, and communications equipment. 	Logistics Manager	<ul style="list-style-type: none"> Contact and provide purchase orders for all external contractors supply goods and services. Ensure staff welfare is resourced including food and drink, safety equipment, and communications equipment.
Public Information Manager	<ul style="list-style-type: none"> Liaise with Horizons and PNCC PIM. Prepare and distribute approved MDC media releases detailing local response—ensuring these are consistent with Horizons and PNCC information. Provide media briefings. Update MDC website and social media. 	Public Information Manager	<ul style="list-style-type: none"> Liaise with Horizons and MDC PIM. Prepare and distribute approved MDC media releases detailing the local response by MDC and emergency services – ensuring these are consistent with Horizons and MDC information. Provide media briefings. Update the PNCC website. 	Planning & Intelligence Manager	<ul style="list-style-type: none"> Monitor, amend and review this Plan as necessary during the response. Prepare and provide situation reports on progress with this Plan.
				Public Information Manager	<ul style="list-style-type: none"> Liaise with the PNCC and MDC PIM regarding messages to the public to ensure consistency of messages between authorities. Prepare and distribute Horizons media releases approved by the Incident Controller.
				Group Controller (if activated)	<ul style="list-style-type: none"> Liaise with the local Controllers and the Horizons Incident Controller regarding wider issues and response coordination. Liaise with the National Controller/REMA.

3.1 Basin Area Road Inundation Lead Times

The following road locations will have water to the road centre line within the specified lead time once the Manawatū River at Teacher’s College site reaches approximately 7.55m stage height. Refer to page 12 for a map of basin area road locations.

Table 2: Basin Area Road Inundation Lead Times

Site	Road	Location	Lead time (hrs)
A	Hoihere Rd	Bridge near intersection with Main Drain Rd	1
B	Lockwood Rd	100m north-west of Burkes Drain	10
C	Highway 56	270m east of Ōroua River bridge	15
D	Lockwood Rd	200m south-east of Burkes Drain	17
E	SH 56 (Rangitane Rd)	600m south of Highway 56 turn off	20
F	Hoihere Rd	400m from Lockwood Rd intersection	20
G	Highway 56	800 north east of Alve Rd	21
H	No. 1 Line / Tiakatahuna Rd	Corner	22
I	Riverbank Rd	300m south of Highway 56	33

3.2 Traffic Management Locations

During this event there will be a number of areas affected by surface flooding. The recommendations of this Plan need to be considered in context with other priorities occurring at the time. Some twenty locations have been identified across three roading authorities that may require some form of traffic management. See the table below.

Table 3: Traffic Management Locations

Site	Road	Comment
1	Ōroua Rd	Near Kopane spillway.
2	Cnr Aranui Rd and McKenzie Settlement Rd	
3	Cnr Kairanga-Bunnythorpe and Gillespies Line	To stop traffic heading further east on Gillespies or south on K-B Rd.
4	Cnr Kairanga-Bunnythorpe and Rangitikei Line (SH3)	To stop traffic heading further east into Palmerston North. Possible earlier diversion signage to go via Bunnythorpe (if able) at Mt Stewart.
5	Cnr Kairanga-Bunnythorpe and Milson Line (SH54)	To stop traffic heading further east into Palmerston North.
6	Cnr Kairanga-Bunnythorpe and Roberts Line	To stop traffic heading further north up K-B Rd ² and east down Roberts Line as required.
7	Cnr Richardsons Line and Roberts Line	To stop traffic heading west up Roberts Line.
8	Cnr Richardsons Line and Milson Line (SH54)	To stop traffic heading west towards Fielding.
9	Flygers Line	To stop traffic heading south towards SH3.

² Kairanga-Bunnythorpe Road

Site	Road	Comment
10	Cnr JFK Drive and Rangitikei Line	To stop traffic heading west on SH3. Note that traffic can still get past the old Mitre 10 building off JFK Drive.
11	Cnr Benmore Ave and Gillispies Line	To stop traffic heading west up Gillispies Line.
12	Cnr No 1 Line and Cloverlea Rd	To stop traffic heading up Cloverlea Rd.
13	Cnr No 1 Line and Longburn-Rongotea Rd	To stop traffic heading towards Kairanga on Rongotea Rd.
14	Cnr No 1 Line and Riddiford Rd	To stop traffic heading up Riddiford Rd.
15	Cnr No 1 Line and Karere Rd	To stop traffic heading west up Karere Rd and further south on No 1 Line.
16	Cnr SH56 and Karere Rd	To stop traffic heading south on SH56.
17	Cnr Poplar Rd and Opiki Rd (SH56)	To stop traffic heading north from Opiki. As per usual floodway operation as appropriate.
18	Cnr Highway 56 and Main Drain Rd	To stop traffic heading east on Highway 56.
19	Cnr Hoihere Rd and Main Drain Rd	To stop traffic heading east on Hoihere Rd.
20	Cnr Lockwood Rd and Rongotea Rd	To stop traffic heading north and south on Lockwood Rd and further east on Rongotea Rd.

NOTE: State Highway 56 heads south from Palmerston North though Opiki to intersect with SH57 just north of Shannon.

4 Welfare Centre Activation

Activation of Longburn Welfare Centre will assist in registration and accommodation of evacuees from the area. The Welfare Centre Manager will ensure that:

- The Centre is activated (by local volunteers initially) via established contacts.
- The Centre is supported ASAP by members of the PNCC welfare team and partner agencies, with needs analysis completed and sent back to the PNCC EOC.
- Ongoing communications between PNCC and the Centre are established and maintained.
- Ongoing resource requirements are provided to the Centre.
- Liaison occurs between MDC and Horizons regarding the details of people who have registered.

5 IVR Notification

Notification by the Horizons automated flood warning system (IVR) is by subscription. Members of the public can subscribe to this free service that automatically dials out a notification to subscribing telephone numbers when a certain trigger level is reached.

The Horizons IVR has been configured to dial two lists for this Flood Action Plan (7.55 m and 8.55 m stage heights). Residents and land owners in the area have been advised of the IVR system and encouraged to register with this service.

The message provided by the IVR is identical to all other river height information messages.

A further IVR notification of note is the 4.35m Mangaone at Milson Line alarm. It is expected that the spillway operates at 4.30m.

6 Resource Needs

At this time, there are no specific resources that have been identified for this Flood Action Plan.

7 Information Flow

The following agencies and staff will be kept informed about changes and progress on this Plan:

Agency/person	Function performed by agency
Manawatū Local Controller (with EMO support).....	Local response coordination
Manawatū District Council EMO.....	Local warnings and local welfare response
Manawatū Police LO.....	Evacuation
Palmerston North Local Controller.....	Local response coordination
Palmerston North City Council EMO.....	Local warnings and local welfare response
Palmerston North Police LO.....	Evacuation
Horizons Incident Controller.....	Flood management
Horizons Emergency Management Duty Officer (EMDO)	Horizons initial response
Horizons Hydrology Duty Officer.....	Hydrology data
Horizons River Management Duty Officer..	Advice on flood potential & field operations
CDEM Group Controller.....	Response coordination during declared emergencies

8 Communications Plan

The passing of any urgent warning is to be by voice communication. Fax, e-mail, voice message, SMS or any other method may be used as a 'heads-up' to the warning however the message will not be considered to have been passed until actual voice contact is made.

The HRC Manager Emergency Management Office will ensure that an appropriate means of communication is available for the coordination of this Plan. During an activation of the Group ECC, the EOC Operations Manager will ensure that such means, and any other means introduced on the day, operate effectively for their intended purpose.

Liaison with the media will be undertaken in a coordinated manner. Public Information staff from HRC, PNCC and MDC will ensure that messages provided to the public are consistent. Statements to the media will focus on core business of council along the lines described in the following table:

Table 4: Communication Responsibilities by Organisation

Organisation	Communications Responsibilities
Horizons Regional Council	<ul style="list-style-type: none"> ▪ Activities of Horizons EOC and Group ECC (if required) ▪ The height of the rivers ▪ Flood monitoring, modeling and warnings ▪ Flood protection/prevention works ▪ Operation of the diversion ▪ IVR river height warning system
District and City Councils	<ul style="list-style-type: none"> ▪ Coordination of responses (Group Controller) ▪ Activities of the local EOC ▪ Evacuations ▪ Road closures ▪ Local CDEM coordination activities ▪ Public actions to be taken ▪ Emergency welfare arrangements

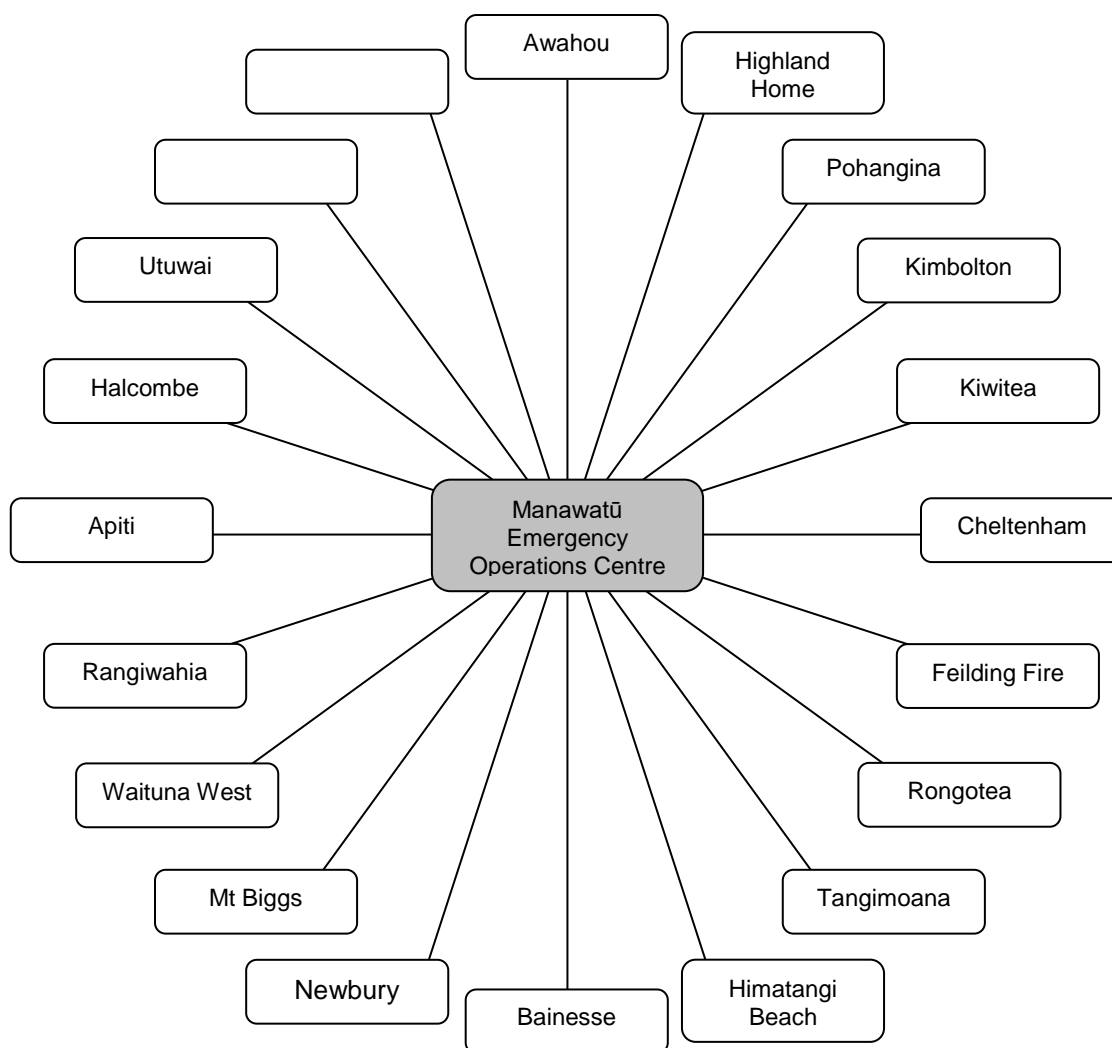


Figure 1: Emergency Management Radio Network – Manawatū District

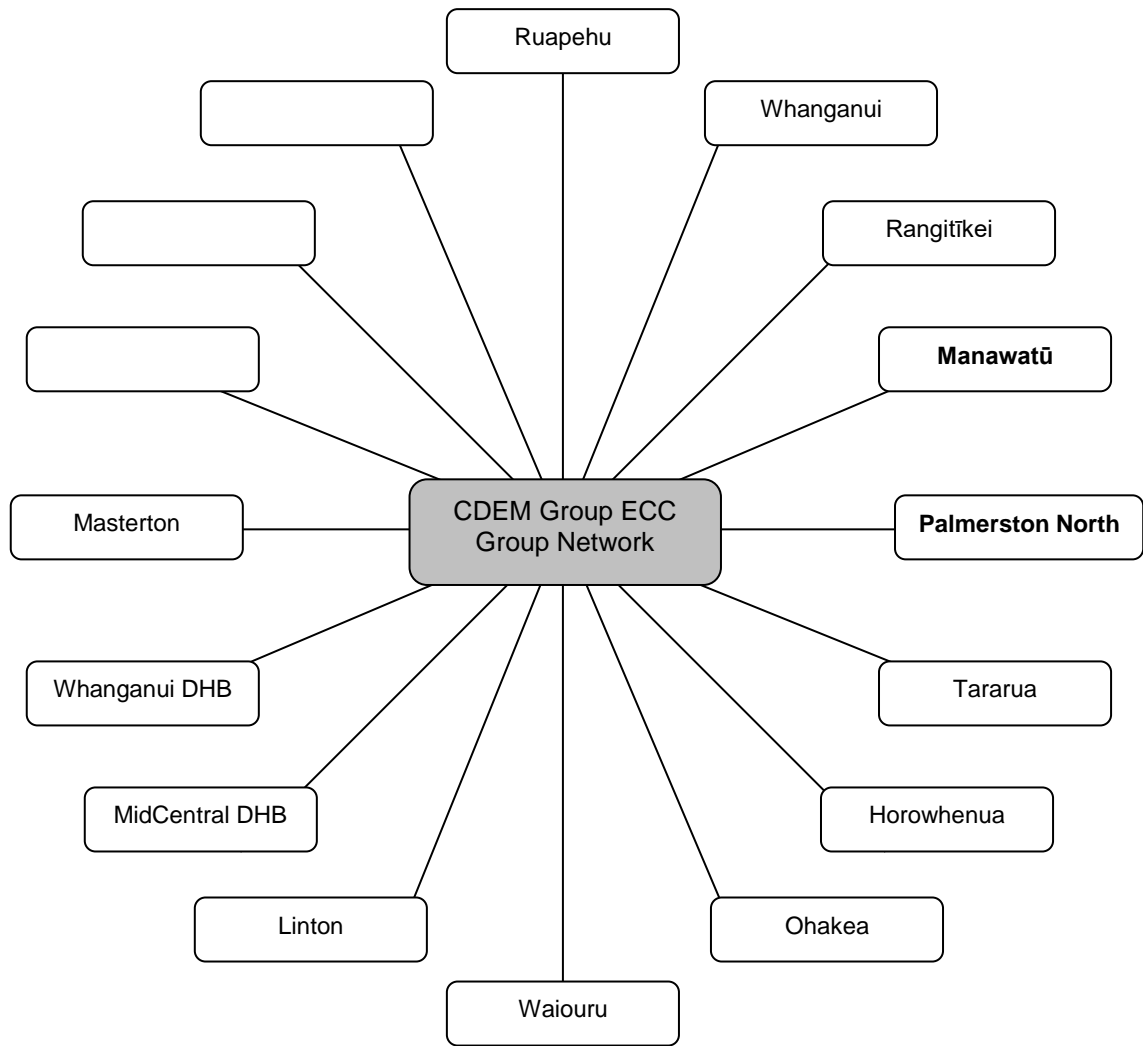


Figure 2: Emergency Management Radio Network – CDEM Group

All Councils also operate radio networks for the continuation of Council business.

9 Health and Safety

Staff deployed to the field face the greatest health and safety risks in this scenario. The council or contractors engaging staff in the field remain responsible for their health and safety. Councils' health and safety documents should address many of the issues staff will face. Communications between the employing EOC and field staff should be undertaken frequently to check the safety of staff. Consider activating the Safety function in the EOC.

10 Distribution

Horizons Response Manual distribution list	2 copies
Manawatū District Council EMO	2 copies
Palmerston North City Council	2 copies
Feilding Police	1 copy
Palmerston North Police	1 copy

Appendix 1 - Maps

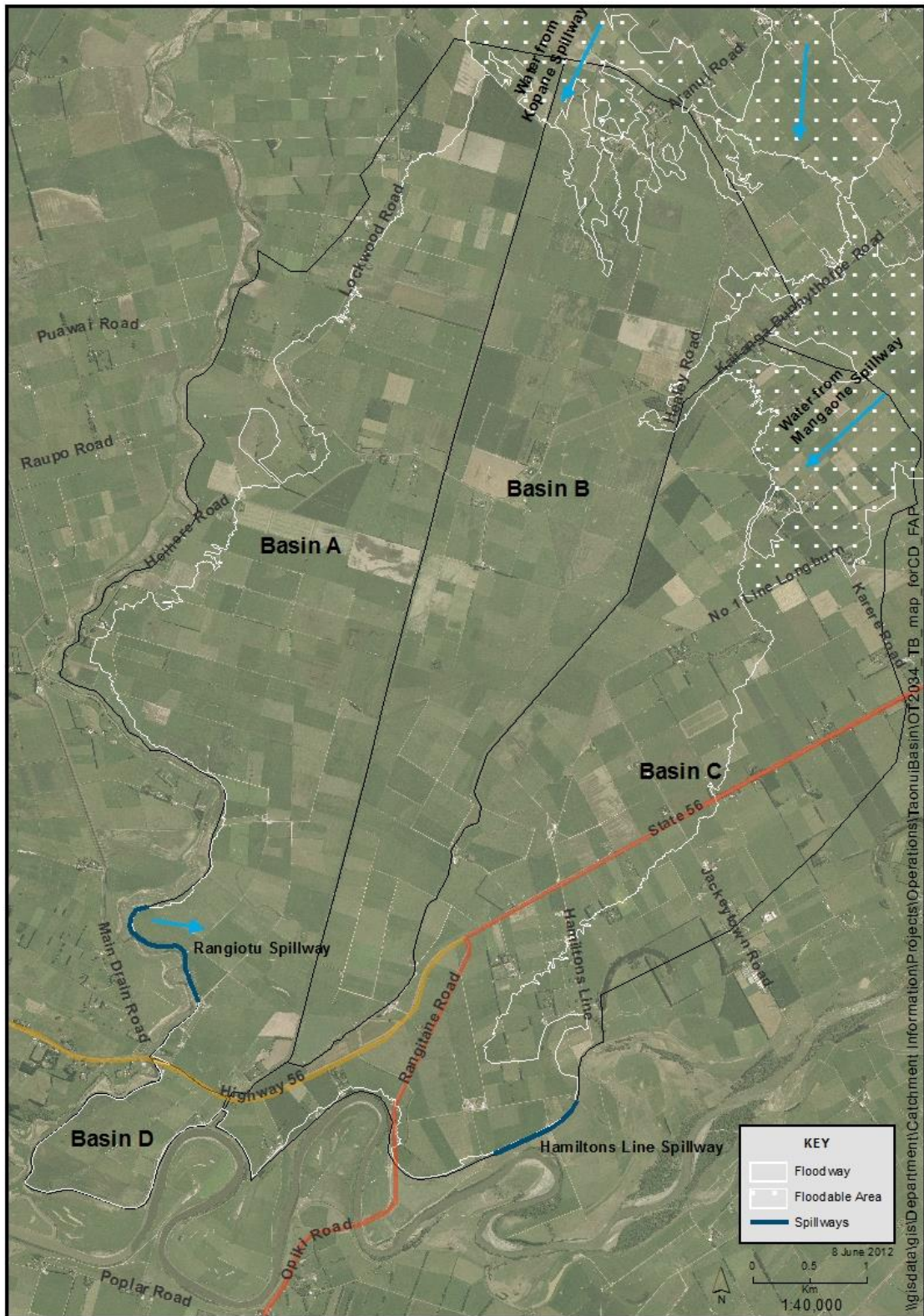


Figure 3: Taonui Flood Basins

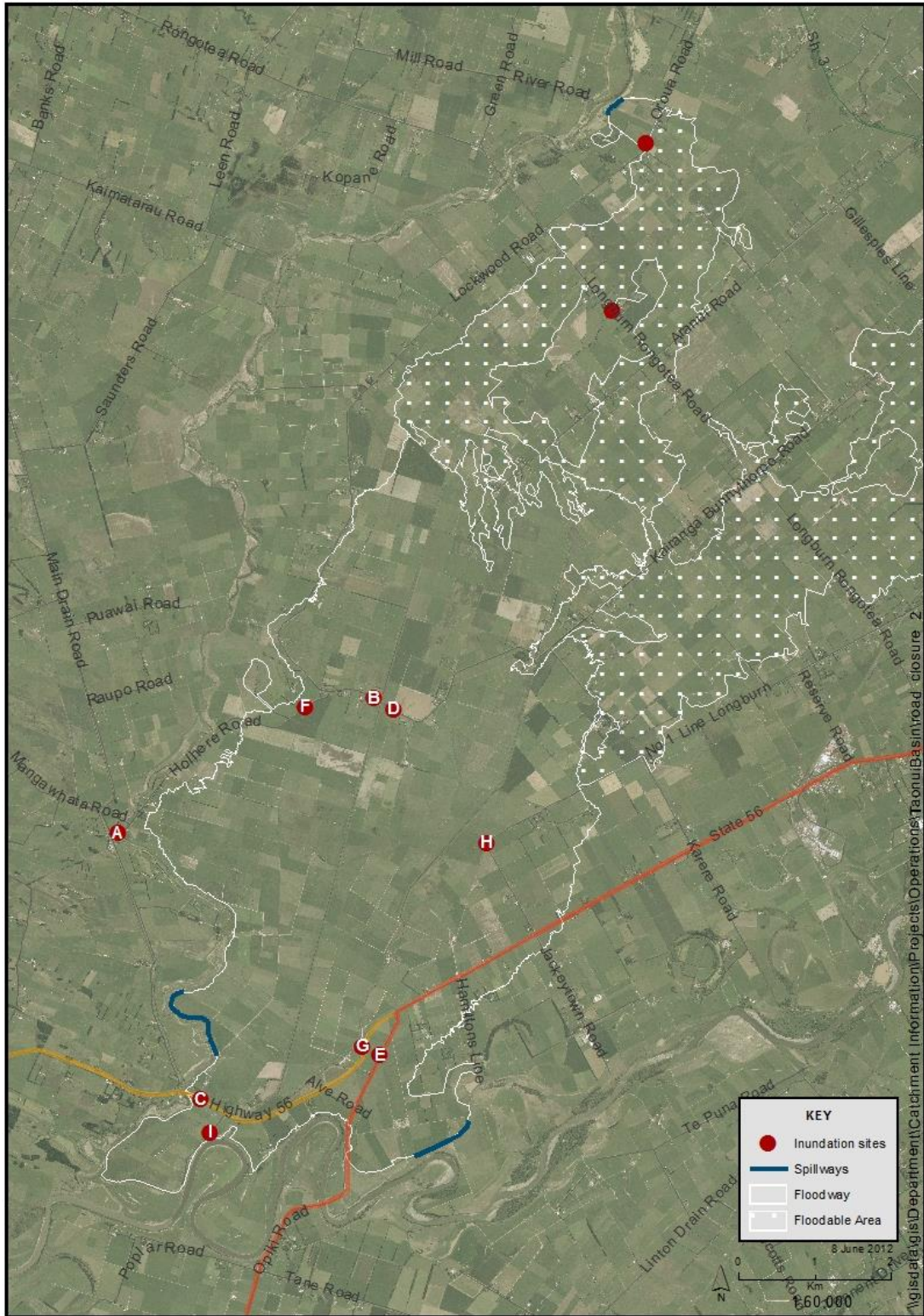


Figure 4: Basin Area Road Inundation Locations

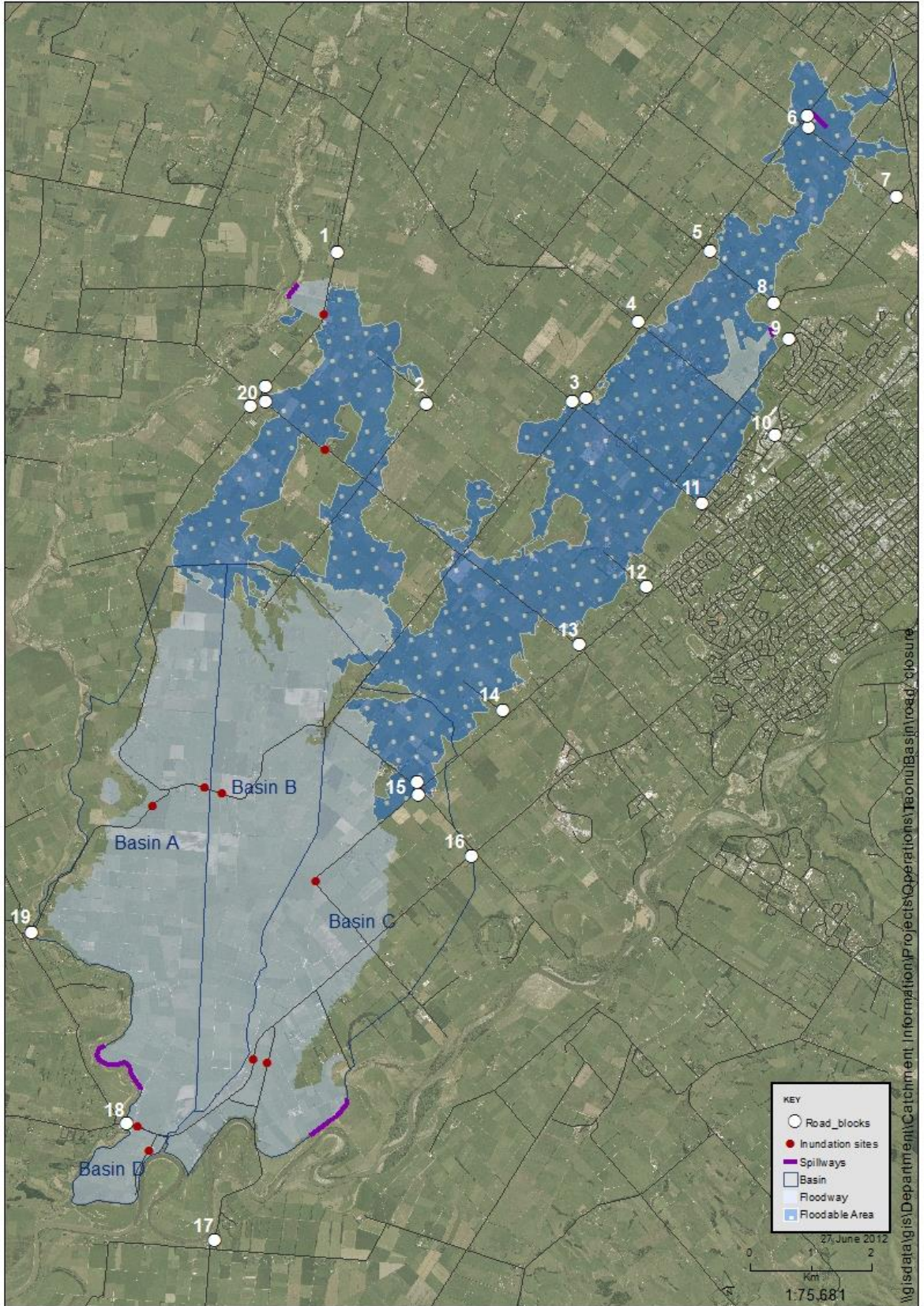


Figure 5: Traffic Management Sites



horizons
REGIONAL COUNCIL



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