

Flood Risk

Management Programme

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Recent flooding events in Hawke's Bay, and closer to home in Plimmerton, have once again highlighted the importance of a coordinated approach to flood risk management. At the Wellington Regional Emergency Management Office (WREMO), our approach is to look at all hazards through the lens of the '4Rs' of comprehensive emergency management (Reduction, Readiness, Response and Recovery) to determine how we can reduce their impacts.

While attention is often drawn to response when flooding actually occurs, the reality is that we can do a lot of work before a flooding event happens to reduce its potential impact. For this reason we are very pleased to be partnering with Greater Wellington Regional Council on the Flood Risk Management Programme. While its workstreams focus primarily on the areas of Readiness and Response, it is important that we also consider Reduction in our approach. We know that there are parts of our region that are prone to flooding. Effective disaster risk reduction relies on determining an acceptable level of risk and, if it is exceeded, preventing development in those areas from happening in the first place. Alternatively, we can reduce the risk to an acceptable level by taking mitigation measures such as building infrastructure like stop banks to protect our communities or building in a way that allows nature to take its course.

We accept that at times there will be extra-ordinary events and that such events are only likely to increase in frequency as the impacts of climate change are felt. We also know that there are increasing calls for housing intensification in urban centres to allow



for population growth. That is why our Reduction approach cannot rely on a handful of hazard and emergency management specialists alone. Effective disaster risk reduction relies on planners, policy experts, elected members and the wider community all understanding the level of risk posed by flooding and making sound decisions that will effectively protect our communities from the worst impacts of flooding in the first place. This will require a significant coordinated effort with public education being a key component.

Therefore, while the Flood Risk Management Programme provides an excellent starting point to improve our level of preparedness across two of the 4Rs (Readiness and Response), we must not forget the first R: Reduction. After all, the most effective way to reduce risk is by it not being there in the first place.



The Problem

The risk of flooding is expected to increase over time due to the effects of climate change and sea-level rise. Flooding will remain one of the biggest hazards in New Zealand with the potential to cause widespread damage to property and risk to life.

Last November torrential downpour coupled with a king tide made more than a dozen homes inhabitable in Plimmerton and displaced two families. The area and its neighbourhoods received more than half its monthly rainfall in 12 hours resulting in the area swamped by mud and silt.

Flood Response

Greater Wellington has embarked on a project to update their flood response procedures partnered with local emergency management experts WREMO, NZ consultancy Tonkin + Taylor and international flood risk experts RAB. In the next phase, we will review and improve all our catchment-specific information including travel times, alarm, trigger levels, emergency contacts, communication protocols and asset condition that will ensure duty officers are able to respond rapidly and at scale.

Our next step is to develop a training programme for our duty officer unit with the new procedures. The target to go live is Friday 1 October 2021. WREMO will be engaging with Wellington Water on flood response procedure and we're supporting the initiative so that the procedure is aligned regionally.

Flood Awareness

Community awareness is a key component of emergency response. An engagement strategy is needed to raise the level of awareness about flooding risks. We have received the key messages for flood risk awareness that in turn will lead us into messages for the public to be used before, during and after a major flood event. These key messages have been shared with Wellington Water, and we aim to start the conversation with them and other partners on consistent messaging for the public.

Flood Warning

Tonkin + Taylor will be recommending a flood forecasting strategy for us to build into our work programmes.

We have commenced two projects led by our department's engineering students to look at text-based warning systems and the accuracy of real-time river level and flow measurements on the Waitohu stream, which are critical for flood warning. Already, some sites have been investigated for relocating and improving the Waitohu gauging site.

"We are currently engaging support from a project manager to develop improvements programme and deliver it for the hydrometric network," says Andy Brown, Team Leader of Investigations, Strategy & Planning in the Flood Protection Department.

Ahead of engaging with the ICT to deliver a programme to improve our flood forecasting capability, we are in the process of reviewing the flood forecasting assessment and approach report.

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