



Flooding Hazard - Kapiti

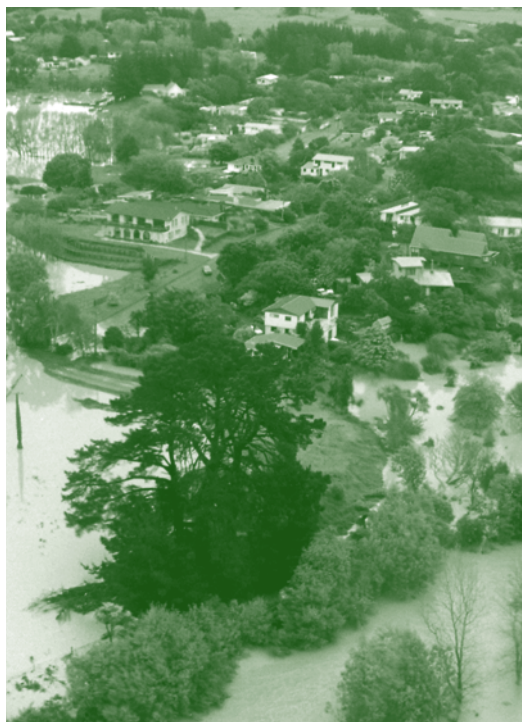
This fact sheet is about the flooding hazard on the Kapiti coast. It covers the rivers and small streams that can cause flooding, big floods that have happened in the past and the ways the flooding hazard is being managed today.

Flooding Hazard – Kapiti is part of a series of fact sheets on natural hazards in the Wellington Region. For more general information about floods, take a look at the general **Flooding Hazard** fact sheet. In it you will find out why floods happen, how floods are measured and how you can prepare yourself and your family.

What areas are at risk from flooding on the Kapiti Coast?

Most low-lying areas on the Kapiti coast are at risk from flooding. While most flooding is caused by rivers overtopping their banks, floods can also be caused by small streams, storm water drains and even the sea.

The two main rivers on the Kapiti coast are the Otaki and Waikanae rivers (see below). There are also many small streams on the Kapiti coast that can flood because of heavy rain or blocked or overloaded stormwater drains. All of the townships on the coast have streams nearby that can flood. Our most recent example of small stream flooding was the event in Paekakariki in October 2003.



Waikanae River flooding at Otaihanga, 28th October 1998

River Facts

Otaki River

The Otaki River drains a large catchment of about 365km². A catchment is the area of land where streams and tributaries flow, gradually combining to make one bigger river downstream. The Otaki River catchment is made up of two main 'sub-catchments' that converge at Otaki Forks. These are the Waioatauru River and the Waitatapia Stream catchments.

The Otaki River system begins high up on the steeply-sided and sharply-peaked western side of the Tararua Ranges. Because of the steep terrain, the river flows swiftly down the foothills, cutting deep valleys and gorges. The river eventually flows out onto flatter land, called the floodplain.

Because the floodplain is flat and had fertile soils, many farms and market gardens are located here, as well as homes and businesses. This means that people's properties, livelihoods and belongings are at risk in a flood.

Waikanae River

The Waikanae River drains the western foothills of the Tararuas and has more of a lowland catchment than the steeper, more rugged Otaki River. The Waikanae River catchment is also smaller than the Otaki catchment, covering 125 km² of land. Some of the rivers, streams and tributaries that join together to make the Waikanae River are Saddle Creek, Reikorangi and Maungakotukutuku streams, Rangiora and Ngatiawa rivers.

When the Waikanae River reaches the floodplain, it is kept to its course by stopbanks. The stopbanks are designed to hold back floodwater and protect the nearby houses and businesses.

Even small streams can cause floods!

On Friday October 3rd 2003, an intense but narrow rain band, measuring just 10km wide, sat directly over the Paekakariki township and the hills above. It dumped about 100mm of rain in 24 hours – with over 82mm in just 4 hours. This ‘rogue’ storm caused a landslide and a debris flood to race down the ‘Fly by Wire’ and Paekakariki Hill gullies. This unexpected and extreme storm was of a size that is expected one in every 125 years (a 1-in-125 year event), and caused extensive damage in Paekakariki. Many homes and businesses in low-lying areas were flooded.

Big floods in Kapiti

There have been at least 13 events in recent recorded history where the Otaki and Waikanae rivers have flooded. The biggest floods in both rivers were in 1955 and 1998.

1955: The Otaki River flooded once and the Waikanae River twice during this year. The floods caused major damage to the riverbanks and many homes were flooded, especially in Waikanae. One year later, Waikanae had another similar damaging flood. We don’t have accurate figures on how big the floods were, but we do know that they are the biggest the Kapiti coast has experienced in living memory. We estimate that they were probably the kind of flooding expected once in 50 years.

1998: The Otaki and Waikanae rivers flooded again in 1998. This flood event was of a size that is expected once in 30 years. The 1998 floods cost over \$2 million for repairs to bank edge protection and houses.

Further reading

Waikanae Floodplain Management Plan - The community’s plan for the Waikanae River and its environment. Wellington Regional Council, October 1997.

Waikanae River Environmental Strategy. Opportunities to enhance the Waikanae River Environment. Wellington Regional Council and Kapiti Coast District Council, March 1999.

Otaki Floodplain Management Plan – for the Otaki River and its environment. Wellington Regional Council, June 1998.

Otaki River Environmental Strategy. Opportunities to enhance the Otaki River Environment. Wellington Regional Council and Kapiti Coast District Council, March 1999.

What are we doing about the flood hazard?

Both the Otaki and Waikanae rivers have flood plain management plans. These plans outline the communities’ preferred options for dealing with the flood problem in their area. Greater Wellington, Kapiti Coast District Council, local iwi and the Otaki and Waikanae communities have worked together to develop each plan.

The ‘Friends of the Otaki River’ and ‘Friends of the Waikanae River’ groups were set up to work with Greater Wellington to help put the flood plain management plans into practice, and to monitor the day-to-day activities in the river. These groups are active in planting thousands of native plants along the river corridor every year.

The types of flood protection measures used for the Otaki and Waikanae rivers are:

- Structural methods such as building stopbanks and floodgates, gravel extraction and making bridges higher.
- Other methods such as providing information to the public and schools about what to do in a flood, managing the river day to day, having a flood warning system, developing a family plan for evacuation or having rules about where people can build houses.

To find out why flooding is a hazard, what you can do in a flood and how you can prepare yourself, your family, home and business – please look at the general **Flooding Hazard** fact sheet, or contact staff at Greater Wellington.

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