



Flooding Hazard - Wairarapa

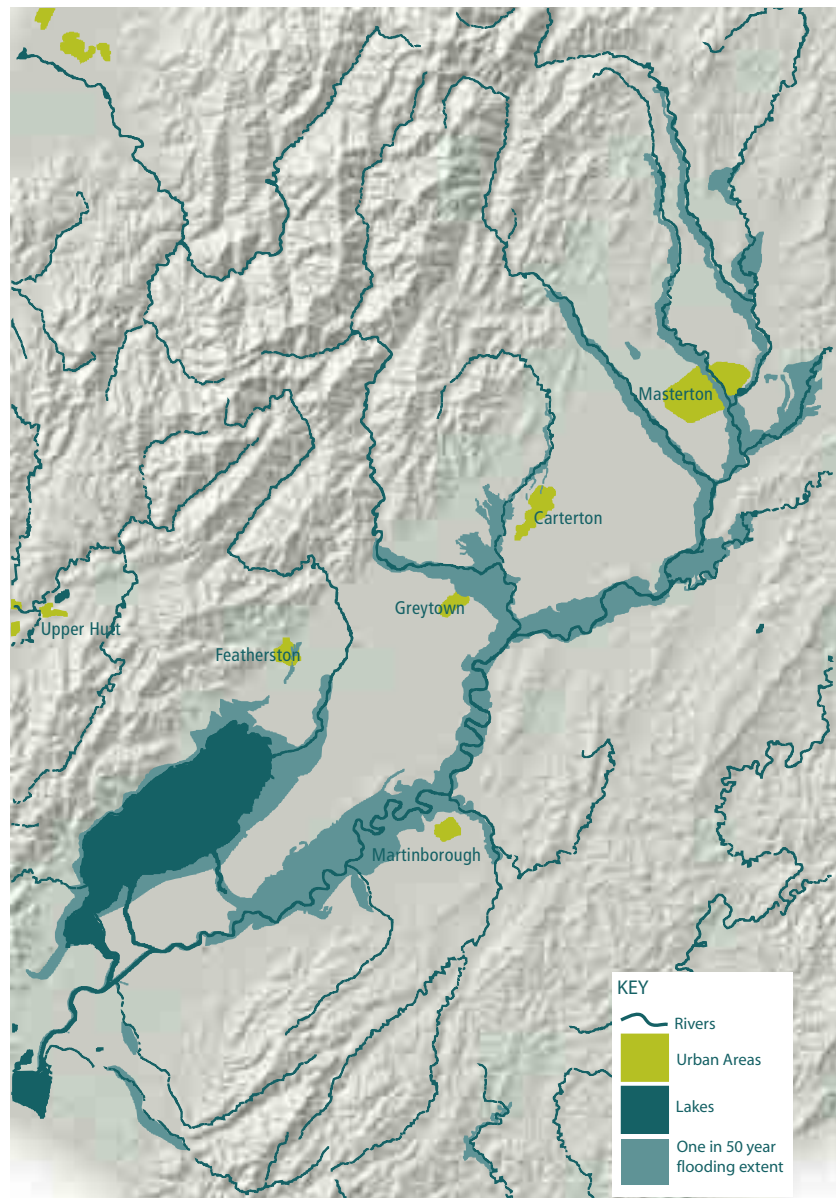
Which places are most at risk of flooding in the Wairarapa?

Towns such as Masterton, Carterton, Greytown, Featherston, Martinborough and Tinui all face a risk of surface and river flooding, or the effects of flooding (e.g. being cut off by road closures) because they are located in low-lying areas.

Flooding in the upper Wairarapa Valley (the area around Masterton, Carterton and Greytown) is usually caused by the rivers that begin in the Tararua Ranges. These rivers are quite short and have steep gradients, especially in their upper reaches. After heavy northwesterly rains in the Tararua Ranges, there is little time to warn people in the upper Wairarapa Valley of the coming floods.

The big flood – what are the chances?

Flooding in the Wairarapa Valley is now partially controlled through an extensive network of stopbanks, pumping stations and other flood control structures. These are designed to help reduce the amount of land flooded during large rainfall events. The map on this sheet shows the extent of floodwaters in a 1 in 50 year flood, with the current flood protection network in place. Without this network, the area of land flooded would be much larger. It is still possible that a very large flood could break through or overtop stopbanks covering large areas in water. There are some areas adjacent to some streams and rivers that have not yet been investigated for flood control structures. These areas could also flood in a 1 in a 50 year event.

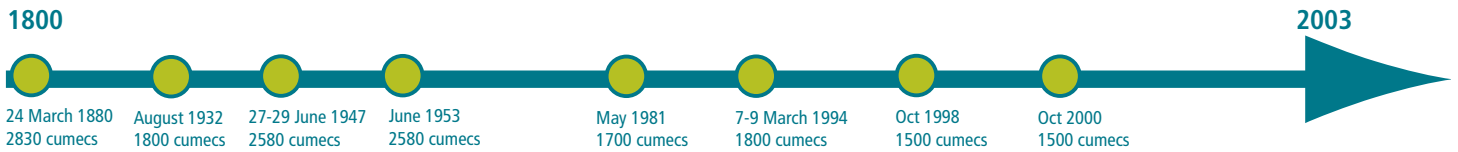


The extent of floodwaters on the Wairarapa Valley floor for a one in 50 year event. Flood protection structures help reduce the amount of land flooded.

Big floods in the Wairarapa

One of the most destructive floods to occur in the Wairarapa Valley happened between 27-29 June, 1947. Floodwaters entered Masterton and many other Wairarapa towns. In Gladstone one person drowned. The flow in the Ruamahanga River measured 2580 cumecs (see box on flood measurement) and was estimated as a 1 in 100 year event. Every stopbank in the upper Lake Wairarapa area was overtopped and 10,000 acres of farm land in the Pukio Basin and Kahutara was flooded. Southern Wairarapa was cut off and both the Martinborough-Featherston Road and the Martinborough - Lake Ferry Roads were closed for some time. Individual stock losses and damage to property were very serious for many farmers - thousands of sheep were killed.

On April 19, 1991, Tinui made national news headlines when floodwaters swept through the town, flooding houses, causing huge stock losses and damaging property. Floodwaters entered five houses, the school, two shops, a church and the hotel. Communications were lost for 12 hours, the electricity substation failed and there was widespread road damage. Damage to the area was estimated at \$2.84 million.



Timeline of large floods on the Ruamahanga River.

“What is a CUMEC?”

Cumec stands for cubic metres per second. A cumec is a measure of how much water flows past a given point every second. A flood measuring 2500 cumecs (similar to the 1947 flood) would fill approximately 150 petrol tankers every second, or fill the Wellington Stadium in about 12 minutes!

Further Reading

Casey, C., 1996. After the rains came – The Tinui flood of April 1991. Masterton District Library, Masterton.

Wairarapa Engineering Lifelines Association, 2003. Wairarapa Engineering Lifelines Project – Risk to lifelines from natural hazards. WELA, Masterton. (Contact: Hazards section of Greater Wellington - Regional Council, Wairarapa Division, Masterton).



Flooding on the Ruamahanga River at Morrisons Bush east of Greytown.

To find out about 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 us for more information.

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