

Key Information Sheet: Coastal inundation maps

This factsheet explains what the coastal inundation maps contain, how they were developed and what they might mean for you.

What is coastal inundation?

Coastal inundation is the flooding of low-lying coastal land with seawater. This can happen when extreme weather events lead to elevated sea levels. Coastal inundation can pose risks in the form of damage to property and dwellings, infrastructure and transport networks, risk to life, environmental degradation or threats to other things valued.

What about Coastal Erosion?

Our work on coastal erosion mapping is continuing and we expect it to be available in 2021.

Why have coastal inundation maps been produced?

The New Zealand Coastal Policy Statement 2010 requires Councils to identify areas that are potentially affected by coastal hazards giving priority to identifying areas at high risk of being affected and to assess hazard risks over at least 100 years.

Council is required to better prepare our communities for the impacts of climate change, including ongoing changes to weather patterns and rising sea levels. The conversation about climate change and coastal inundation (as well as coastal erosion) is not unique to Nelson and is occurring in coastal communities across New Zealand and around the world.

Councils are required to manage natural hazard risks under a number of different pieces of legislation,

including the Resource Management Act (RMA), Building Act, Local Government Act, and Civil Defence and Emergency Management Act.

Nelson City Council is currently reviewing its resource management plans and developing a new unitary plan – the 'Whakamahere Whakatū Nelson Plan'.

What do the coastal inundation maps show?

The **present day** coastal inundation maps show areas that might be affected by flooding now and in the future in an extreme flood event (a 1-in-100-year event also known as a 1% annual exceedance probability – 1% AEP event).

The **future** maps show how coastal flooding is expected to change for a range of sea level rise scenarios (0.5m, 1.0m, 1.5m and 2.0m). We know that sea levels will rise, but we don't know yet by how much and by when. Predicting the amount of future sea level rise is a complex issue, and a component of this is the amount of greenhouse gas emissions we continue to emit globally, now and in the future as well as the steps we take to offset for previous and new emissions. The Ministry for the Environment recommends a risk-based approach be taken, including assessing a range of future sea level rise scenarios for the assessment of coastal hazards. These scenarios are based on the most recent IPCC modelling of climate change and consider varying future emissions scenarios called 'Representative Concentration Pathways (RCPs)', ranging from low to very high emissions. The RCP table which provides projected sea levels and dates for each emissions



Key Information Sheet: Coastal inundation maps

scenario can be viewed at shape.nelson.govt.nz or via the map viewer.

How were the maps developed?

The maps are based on technical assessments undertaken by NIWA and the engineering consultancy Tonkin and Taylor Ltd, who do this kind of assessment for councils around the country.

Bathtub model (region wide), on the coastal inundation map viewer at shape.nelson.govt.nz

Tonkin and Taylor calculated extreme coastal water levels for different coastal areas across the whole Nelson coastline in a 1-in-100-year storm tide event for present sea level and for different future sea level rise scenarios. These extreme coastal water levels were then mapped against land elevation. This is called a 'bathtub approach' – imagine a bathtub that fills to equal levels with water across the tub. The method for developing the model can be found at shape.nelson.govt.nz or via the map viewer.

Council is also undertaking more detailed modelling using a 'hydrodynamic' model of future coastal flooding to capture the specific geographic situation for selected Nelson sites. It is anticipated that the mapping will be available in 2021. These maps will allow us to have further conversations about the potential options to manage this natural hazard and will be consulted on with the community. Following that, provisions will be developed and included in a later version of the Draft Nelson Plan.

Why are you seeking my input?

We are seeking your input as you hold important local knowledge on coastal inundation and erosion that will

help us refine the maps. There are many ways to provide your feedback:

- Go to shape.nelson.govt.nz/coastal-hazards to view the maps, answer our short survey, share your observations and photos of coastal hazards and provide any comments on the *coastal inundation map viewer*
- Attend a drop-in session (see details on shape.nelson.govt.nz)
- View the maps and pick up a survey form from Civic House, 110 Trafalgar Street or at the Elma Turner Library.

We welcome your feedback until 18 December 2020. Further engagement is planned for 2021 on this issue.

How can I access the coastal inundation maps?

You can see the results of the bathtub model through the online map viewer at shape.nelson.govt.nz/coastal-hazards. The map viewer gives you information on current and future extreme coastal water levels across the region and allows you to see which areas would be flooded under each scenario.

The map viewer is also accessible at the libraries and the Customer Service Centre at Civic House.

How do the maps affect what I can do on my land now?

The existing Nelson Resource Management Plan (NRMP) was adopted in 2004 and does not include the new coastal inundation maps, so they do not affect the existing use of land.



Key Information Sheet: Coastal inundation maps

Will the maps affect what I can do on my land in the future?

The NRMP will continue to manage use and development of areas potentially affected by coastal hazards until the new Whakamahere Whakatū Nelson Plan is finalised. Once it is notified, the Nelson Plan will manage areas at risk from coastal inundation and any coastal inundation provisions will begin to affect what owners in the mapped areas can do on their property. We will be talking with our communities about the management options before we officially notify the Nelson Plan.

We are also in the process of developing a longer term coastal hazards adaptation approach as part of a wider adaptation work programme using the recommended best practice from central government. To find out where we are in the process, visit shape.nelson.govt.nz.

The maps are likely to continue to be updated periodically as new significant information becomes available such as new land elevation data, or updated hazard assessments.

Will this information go onto my property file?

Council has an obligation to make hazard information it holds available under the Local Government and Official Information and Meetings Act 1987. In the future, it will be made clear on any Land Information Memorandum (LIM) requested for a property potentially affected by coastal inundation that Council holds further information with regard to this. This statement will direct any reader to the Council website for more information.

Will this information affect my property value or insurance?

We cannot advise you about any effect this information may have on your property values or insurance. We recommend you seek professional advice from a property valuation or insurance expert about any concerns you may have regarding these matters.

Will I be covered by the EQC if my property is affected by coastal flooding?

The Earthquake Commission advises that the EQC covers:

- homes, contents and land for landslip damage.
- land only for flood and storm damage.

Your own insurer will cover house and contents damage for flood and storm damage, according to the terms of your policy.

How can I find out more?

To find out more about Council's work on coastal hazards, you can:

- Visit shape.nelson.govt.nz/coastal-hazards
- Come to one of our drop in sessions (see shape.nelson.govt.nz for dates and locations)
- Get in contact with us directly via phone (546 0200) or e-mail (ourcoast@ncc.govt.nz)

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Key Information Sheet: Coastal inundation maps

