

Report 2017.259
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Committee Environment
Author Mark Hooker, Team Leader - Investigations, Strategy and Planning

Review and audit of flood hazard information

1. Purpose

This report seeks the Committee's endorsement of our approach to peer review and independent audit of flood hazard mapping.

2. Background

In recent years we have had communities raise concerns regarding our flood hazard mapping that have caused us to reflect on our existing procedures for peer review. Independent audits have been carried out on our flood hazard information for Pinehaven Stream, Mangaroa River and Waiohine River. This updated process for peer reviews and independent audits is a response to these issues and formalises the role of the independent audit.

3. Comment

The procedure for peer review and independent audit of our flood hazard mapping is attached to this report (**Attachment 1**). Key features of this process include:

- Peer reviews of both the hydrology and the hydraulic model used to generate the flood hazard mapping
- A wider independent audit of the final outputs and the steps/inputs used to get there (for new mapping or major changes to existing mapping)

This procedure will lead to increased costs and durations for modelling projects. This includes the need for stakeholder engagement on any independent audit, and follow up work required to carry out the auditor's recommendations. These increased costs/durations will need to be built in to current and future projects that involve flood hazard mapping. However, the time and cost saving in a smoother process for finalising models, reaching agreement on flood hazards and implementing outcomes ought to outweigh this.

4. Consideration of Climate Change

The matters addressed in this report have been considered by officers in accordance with the process set out in the GWRC Climate Change Consideration Guide.

4.1 Mitigation assessment

Mitigation assessments are concerned with the effect of the matter on the climate (i.e. the greenhouse gas emissions generated or removed from the atmosphere as a consequence of the matter) and the actions taken to reduce, neutralise or enhance that effect.

Officers recommend that the matters that are subject of this paper have no direct relevance to climate change mitigation.

4.2 Adaptation assessment

Adaptation assessments relate to the impacts of climate change (e.g. sea level rise or an increase in extreme weather events), and the actions taken to address or avoid those impacts.

GWRC plans for climate change in assessing the degree of future flood hazard and in determining an appropriate response. There are only specific, limited situations in which climate change is not relevant (for example, planning for present-day emergency management). In assessing flood hazard and determining appropriate structural and/or non-structural responses in areas subject to flood risk, GWRC will apply the following allowances for climate change predicted to occur over the next 100 years in the design criteria for its flood hazard investigations:

- Increases in rainfall intensity - 20%
- Sea Level Rise - 0.8m

Guidance from the Ministry for the Environment will be updated from time to time and our approach will be revised in line with any updates.

5. The decision-making process and significance

No decision is being sought in this report.

5.1 Engagement

Engagement on this matter is unnecessary.

6. Recommendations

That the Committee

1. **Receives** the report.
2. **Notes** the content of the report.
3. **Endorses** the new procedure for peer review and independent audit of flood hazard information as set out in Attachment 1 to this report..

Report prepared by:

Mark Hooker
Team Leader - Investigations,
Strategy and Planning

Report approved by:

Graeme Campbell
Manager - Flood Protection

Report approved by:

Wayne O'Donnell
General Manager -
Catchment Management

Attachment 1 Flood hazard mapping audit/review procedure