National Emergency Management Agency
Te Rākau Whakamarumaru

25 August 2025

[redacted]

Reference: OIA-2025/26-0085

Dear [redacted]

Official Information Act request relating to impact analysis and fatigue on emergency alerts

Thank you for your Official Information Act 1982 (the Act) request received on 2 August 2025. You requested:

> *"Under the Official Information Act, I request the information below regarding the emergency alerts sent on 30–31 July 2025.*
>
> *1. Reach/impact metrics: Any reports/estimates held by NEMA or provided by others Eg vendors/telcos on reach, duplicate-delivery rates, and delivery failure rates for the two EMAs.*
>
> *2. Complaints and feedback data: The count and thematic summary of complaints/feedback received by NEMA (directly or via DPMC) about the EMAs on 30–31 July (e.g., duplicate alerts, non-receipt, early-morning disruption). This should include a breakdown of complaints/feedback from MPs and government ministers, as distinct from members of the public. If a running tally is not yet final, please provide the latest interim summary.*
>
> *3. Policy/analysis on alert fatigue: Any policy, research, or advice NEMA holds (or commissioned) on alert fatigue / public trust impacts from repeated or low-novelty EMAs — and how that guidance was applied (or not) on 30–31 July."*

For clarity, I have numbered the parts of your request.

I am refusing parts 1 and 2 of your request under section 18(e) of the Act, as the information requested does not exist. The National Emergency Management Agency (NEMA) received a range of communications following the alerts, predominantly from members of the public. No count or thematic analysis has been completed at this time.

Regarding the frequency of the alerts, we acknowledge that some people's phones sounded multiple alerts in the middle of the night, even though NEMA had only issued two alerts. NEMA never issues duplicate alerts – any subsequent alerts need to have new information or advice, as was the case here. Further information on the duplication of alerts can be found on the following website: NEMA identifies what caused emergency alert issues during Kamchatka tsunami event » National Emergency Management Agency

Information being released
I have decided to release, as an excerpt, the relevant parts of an internal advice document titled "*HRM Briefing Note – Early Warning Best Practice May 2025*" which relates to alert fatigue:

There are several key factors to consider when determining how, and when to issue warnings. One of these is the risk of warning fatigue, often called the 'cry-wolf effect'. Warning fatigue is the loss in credibility of a warning system and subsequently, the warning agency, due to false alarms. The risk of warning fatigue may need to be considered alongside the consequences of perceived 'missed alerts', which occur when the public believe they should have been warned for an event and did not receive a warning. Recommended mitigation techniques for decreasing the risk of warning fatigue include raising the trigger level for issuing warnings to decrease the number issued, transparent communication of any uncertainty relating to the event and, if required, communicating clearly why a false alarm occurred[1].

Position

Aotearoa New Zealand is continuously working to improve its early warning systems, and public education arrangements that maximise the effectiveness of warnings. NEMA encourages cautious and considered approaches to improving early warning systems that will help to protect communities during events when there is a risk to life, property or infrastructure. Aotearoa New Zealand supports international principles for EWS and NEMA has identified areas where we can improve our EWS, such as increasing our focus on multi-hazard warning systems and ensuring that both the messaging and dissemination methods are useable for everyone.

NEMA's connections with the technology sector enable us to stay informed of, and advocate for, technological innovations that could improve our ability to disseminate warnings for events. Additionally, NEMA's networks with the science and research communities provide opportunities to inform, and maintain awareness of, the projects and research programmes that will underpin advancements in monitoring, forecasting and warning for hazard risks.

*Regarding the use of EMAs, NEMA maintains the position that the EMA system should only be used to issue **High-Priority Alerts**. In accordance with the New Zealand Common Alerting Protocol (CAP-NZ), High-Priority Alerts are at level (a) or (b) within **each** of the following three criterion:*

1. *Certainty*
    a. *Observed: Determined to have occurred or to be ongoing*
    b. *Likely: Probability of its occurrence greater than 50%*
2. *Severity*
    a. *Extreme: Extraordinary threat to life, health or property*
    b. *Severe: Significant threat to life, health or property*
3. *Urgency*
    a. *Immediate: Responsive action should be taken immediately*
    b. *Expected: Responsive action should be taken soon.*

The criteria is set at a high threshold because of the risk of warning fatigue, as noted in Background, resulting in a lower likelihood of public response, and a reduction in level of trust in warning agencies. This risk presents a serious concern for emergency managers, as trust in both the warning agency and the technology is an important factor in ensuring any warning is effective[2][3]. In the case of an imminent, high impact threat where EMA is the only effective warning mechanism available, a low response rate poses an increased risk to life. If agencies are looking to implement significant changes to their warning systems, often prompted by a major event and subsequent reviews, it is recommended that the warning agency first assesses the risks associated with changing the system. Key risks include increasing warning fatigue if the warning threshold is lowered, causing public confusion if

[1] Canary Innovation (2025). What do we know about warning fatigue?

[2] Tan, Vinnell, Valentin et al. (2023). The public's perception of an earthquake early warning system: A study on factors influencing continuance intention.

[3] McBride, Bostrom, Sutton et al. (2020). Developing post-alert messaging for ShakeAlert, the earthquake early warning system for the West Coast of the United States of America. Retrieved from https://doi.org/10.1016/j.ijdrr.2020.101713

education on the new system is insufficient, or misaligning with national standards and consistent approaches. Alternative solutions should be considered, such as enhancing public awareness and preparedness by increasing hazard risk and impact messaging on communication channels, as widely and early as possible, or investigating possible alternative alerting methods, to complement existing systems.

You may also be interested in the following publicly available material:

Information on the M8.8 Kamchatka Russia earthquake and tsunami prepared by GeoNet is available on the following website:
https://www.geonet.org.nz/news/4O1zMlf5rXqq8mFCJOfcEq

More information on civil defence emergency management alerts and warnings are available on the following website:
Civil Defence Emergency Management Alerts and Warnings » National Emergency Management Agency

You have the right to ask the Ombudsman to investigate and review my decision under section 28(3) of the Act.

This response will be published on the Department of the Prime Minister and Cabinet's website during our regular publication cycle. Typically, information is released monthly, or as otherwise determined. Your personal information including name and contact details will be removed for publication.

Yours sincerely

Sarah Holland
Chief Advisor to the Chief Executive