



**REPORT TO PLANNING AND PROTECTIVE SERVICES COMMITTEE  
MEETING OF WEDNESDAY, APRIL 25, 2018**

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**SUBJECT**     **Tsunami After Action Report and Options for a Regional Emergency Notification System**

**ISSUE**

At the January 24, 2018 Planning and Protective Services Committee meeting, staff were directed to bring back a report as soon as practicable on the recent tsunami incident and resulting debrief, and include information on options for exploring a regional emergency notification system.

**BACKGROUND**

At 01:32 hrs Pacific Standard Time (PST) on Tuesday, January 23, 2018 the National Tsunami Warning Centre (NTWC) registered an 8.0 earthquake in the Gulf of Alaska with enough power to potentially generate a Tsunami. At 01:39 PST the Province of BC activated its Provincial Emergency Notification System (PENS) for local government, prompting activation of local emergency plans and urging immediate evacuation of areas identified at risk. A series of messages ensued, ultimately culminating in a cancellation of the Tsunami warning at 04:13.

As the earthquake occurred approximately 1000 km away this was considered a distant tsunami event with an anticipated potential inundation time in the region of greater than three hours after the initial earthquake. This is different from a localized event from a nearby earthquake, such as a Cascadia fault rupture, which could see a tsunami inundation impacting parts of the region in as little as 20 minutes in the Port Renfrew area.

Local authorities throughout the Capital Regional District (CRD) activated their plans specific to tsunami warning events. While each of the local authorities followed their specific plans there were variations in the planned responses in that some emergency programs had plans specific to distant tsunami warning events while others did not. This variation in plans lead to some municipalities sending out public notifications to evacuate high risk, low lying areas as their plans do not differentiate between local and distant tsunami warnings while other programs had specified notification timings for distant events that were not triggered in this instance prior to cancellation of the warning.

On February 1, 2018, the CRD facilitated a regional after action debrief with representatives of the Local Government Emergency Preparedness Advisory Committee (LGEPAC) as well as from Emergency Management BC (EMBC) to gain a greater understanding of the different jurisdictional responses to this event. This debrief was designed to ascertain what went well, challenges faced, and opportunities for improvement. The resulting After Action Review (AAR) document for this event is attached as Appendix A.

The main opportunities identified in the AAR document recommended for follow-up are:

- Enhance tsunami education and awareness for the public identifying the respective level of risk and actions to take during a tsunami warning.
- Consider the acquisition of a common situational awareness and emergency management operating platform that can be used by all local authorities to improve information sharing and reporting for multi-jurisdictional emergencies.
- Look at developing a more effective public-facing single window access portal for emergency information that can be established as the source of truth for emergency events in the region.
- Establishment of consistent approaches to tsunami warning protocols within each local authority within the region, where feasible and appropriate based on risk, in order to minimize inconsistency of messaging and notification.

- Expansion of public emergency notification system tools to those local authorities that currently do not have that service.
- Work collaboratively with local media to improve messaging and coordination during tsunami warnings and other emergencies.

On April 6, 2018 the provincial government expanded the Alert Ready program developed by the federal government that projected emergency warnings to the public through TV and radio to now include LTE compatible cellular phones. The advent of this program will significantly increase the ability to get notifications out to the public quickly though is still limited to areas with effective cellular coverage and will only activate on compatible phones. Staff met with senior officials from EMBC and were advised that the Province will only be using Alert Ready for tsunami warnings initially and may expand to other types of emergencies in the future. The messaging expected to go out on the provincial Alert Ready notifications will be presented in the form of a high level overview, recommending at-risk populations to move to safer areas, and directing the public to their local authorities for area specific notifications and information. EMBC has indicated that any Alert Ready tsunami warning they issue will trigger a task number for the impacted local authorities. Information on the Alert Ready program from the Province is attached as Appendix B.

## **ALTERNATIVES**

### *Alternative 1:*

That the Planning and Protective Services Committee recommends to the Capital Regional District Board:

- a) That the After Action Report be received for information;
- b) That staff be directed to work with local authority Emergency Program Coordinators to investigate and cost out a joint situational awareness and emergency management software solution for the region for consideration in the 2019 service planning process; and
- c) That the Local Government Emergency Preparedness Advisory Committee work with the Regional Emergency Management Partnership to review local tsunami warning plans to improve consistency and ensure alignment with the regional concept of operations and report back on the outcome.

### *Alternative 2:*

That the After Action Report be received for information.

### *Alternative 3:*

That the After Action Report not be received.

## **IMPLICATIONS**

### **Intergovernmental Implications**

Local authorities are responsible for their own emergency planning consistent with the requirements of the *Emergency Program Act* and Regulations. It is an expectation of the public that each municipality and electoral area will coordinate their planning and response to maximize public safety and to improve effectiveness of response.

For large scale events that affect multiple jurisdictions it is appropriate for all municipalities and the Region to collaborate on a consistent approach for mitigation of the emergency. The Regional Emergency Management Partnership (REMP) is focused on this initiative as part of their 2018 priorities to establish a regional concept of operations that will guide the collaborative regional response to multijurisdictional events. A collaboration on tsunami warning plans to align the local authorities within the region will lead to improved coordination and response between local authorities.

There are opportunities to approach certain components of emergency planning at a regional level to take advantage of economies of scale and cost efficiencies such as emergency notification systems and emergency management software platforms. The ability for all authorities within the Region to maintain collaborative situational awareness and share emergency management response, resources, and information will be critical to an effective regional response and recovery from a large scale emergency.

## **Operations Implications**

### Public Alert Notification Systems

With the introduction of the Alert Ready program, there is a need to have a clear and consistent approach to tsunami warning notifications and response amongst all jurisdictions to avoid conflicting messaging and disparate response. The Alert Ready messaging will direct the public to their respective local authority for further information and response direction. This messaging will likely go out very quickly and may coincide with the local governments receiving the same initial notification. This in turn will force local emergency programs to work very quickly to gain situational awareness, activate their emergency programs/plans and begin preparations to evacuate and receive at risk populations, and begin messaging to the public. Depending on the proximity of the tsunami generating event this can have lead times of as little as 20 minutes to eight hours or more.

The systems used by the different jurisdictions do not have to be the same product and can be designed to meet the needs of each area as required and still benefit from collaborative messaging and consistency. As these public alert notification systems rely on voluntary subscriptions by the public, there are significant challenges with ensuring total effective coverage and emergency teams will still need to rely on other notification delivery modalities, such as door to door, in the event of a life safety threat scenario. Municipalities that do not currently have a public alert notification system in place are encouraged to acquire a system to ensure that they are able to get area specific messaging out to their residents.

### Tsunami Warning Planning

A collaboration on tsunami warning plans within the region would be a relatively simple action for local authorities that can be pursued readily with minimal cost. This would be best accomplished by the LGEPAC in conjunction with REMP to align with the upcoming concept of operations for regional emergencies currently underway.

The ability for local authorities to act quickly during events to follow-up with pertinent information will rely on their ability to gather factual information and coordinate responses with other local authorities and response agencies at all levels. An effective shared situational awareness and emergency management software platform would enhance the ability for local authorities to share information, coordinate, and respond effectively to a large scale emergency while collaborating with other pertinent response agencies.

A common emergency management and situational awareness software platform should be considered for coordinating the sharing of information, resources and response, and command and control of crisis situations. A shared platform integrates, correlates and analyzes operational information to create a dynamic, geospatial, and common operating picture. Along with analytic-based real-time insights to help speed the decision making process and dissemination of information for normal and off-normal incident management. This type of software solution will significantly enhance the capacity for regional coordination and collaboration during emergency events to support a regional concept of operations approach through the REMP.

### **Financial Implications**

Public alert notification systems costs are dependent on the product chosen, number of public subscriptions, and features required by the purchasing municipality. The CRD has an agreement with RMS to extend the service rate agreement negotiated in 2016 to additional municipalities in the region if requested.

Consideration of a regional emergency management and situational awareness software platform will require the assessment and review of available products. This type of platform would include single window access to emergency information for the public as well as a common operating platform that other emergency response agencies from outside local government can use to collaborate on the response. A report on potential candidate platforms and associated costing will be brought back to this committee.

### **CONCLUSION**

While overall, the local authorities were effective in the implementation of their individual tsunami warning emergency plans, the variations in emergency plans and public notifications led to indications of concern from the public that the response in the region was disparate and not well coordinated amongst the jurisdictions. The introduction of the new Alert Ready system will help to get the message out widely during any future tsunami warnings and would be supported locally by municipal and regional public alert systems where in place. The development of a regional concept of operations by the REMP along with planning collaboration between jurisdictions will improve consistency of the regional response. Additionally, it is clear that an enhancement of tsunami warning education to the public in conjunction with collaboration with the media would be beneficial to future tsunami warning events. Most of the recommendations in the AAR can be managed through the LGEPAC and REMP.

### **RECOMMENDATION**

That the Planning and Protective Services Committee recommends to the Capital Regional District Board:

- a) That the After Action Report be received for information;
- b) That staff be directed to work with local authority Emergency Program Coordinators to investigate and cost out a joint situational awareness and emergency management software solution for the region for consideration in the 2019 service planning process; and
- c) That the Local Government Emergency Preparedness Advisory Committee work with the Regional Emergency Management Partnership to review local tsunami warning plans to improve consistency and ensure alignment with the regional concept of operations and report back on the outcome.

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Attachments: Appendix A – Tsunami Warning After Action Review  
Appendix B – Alert Ready FAQs