

## **Executive Summary**

The Powell River Regional District is not at significant risk from a devastating tsunami wave or series of waves. Four mechanisms that could generate tsunami waves in the Strait of Georgia have been identified but do not appear to generate wave heights that would cause significant physical damage to most Regional District beach areas, foreshore, protective sea walls or marinas. Maximum tsunami wave heights in the upper Strait of Georgia and Malaspina Strait appear not to exceed 1.0 meters and may be more likely 0.5 m for the presently identified events that could cause tsunami generation. A combination of extreme high tides, onshore winds and a concurrent tsunami wave would cause localized flooding in low-lying areas along some island and mainland foreshores. To the extent to which this would occur requires detailed survey of immediate foreshore areas.

However, in some narrow island and mainland bays, their placement and relatively shallow water depths does not preclude significant increases in water levels and possible consequential damage in these locations.

Recreational use of beach areas during summer months coupled with very low tides has the remote potential for a concurrent tsunami wave to impact shallow water, beach and sand bar users. The impact would be greatest amongst those unable to withstand an unexpected or rapid increase in water depth associated with incoming wave action.

Other west coast jurisdictions have utilized foreshore signage to inform the public about this tsunami hazard. Typically these jurisdictions have a much higher tsunami exposure and the Regional District will wish to give careful consideration to whether or not tsunami signage is necessary in some low-lying areas. A number of supporting recommendations regarding emergency management planning and the need for more definitive information on inundation potential particularly around the periphery of the Regional District are made in this study.