

Notes to Users

1. This map is designed to accompany the District of Ucluelet Coastal Flood Mapping report (Ebbwater Consulting Inc. and Cascadia Coast Research Ltd., 2020) and is intended for the purposes set out in that report only. See the report for further details on the methodology, results and limitations.
2. Flood depth and velocity layers were determined based on a simulation of a tsunami wave generated by a modelled rupture (Splay faulting rupture A from Gao et al., (2018)).
3. Water levels conservatively assume a tide equal to higher high water large tide (HHWLT, equal to 2 m at Ucluelet), and 1 m of relative sea level rise (RSLR), to provide results for a potential future flood event.
4. Based on guidelines for the management of coastal flood hazard land use (Ausenco Sandwell 2011), 1 m of sea level rise approximately corresponds to the year 2100. However, these time periods are subject to changes in climate projections and are likely to require reassessment in the future.
5. Flood depth colouring and thresholds are based on AIDR Guideline 7-3 Flood Hazard (2017).

Limitations

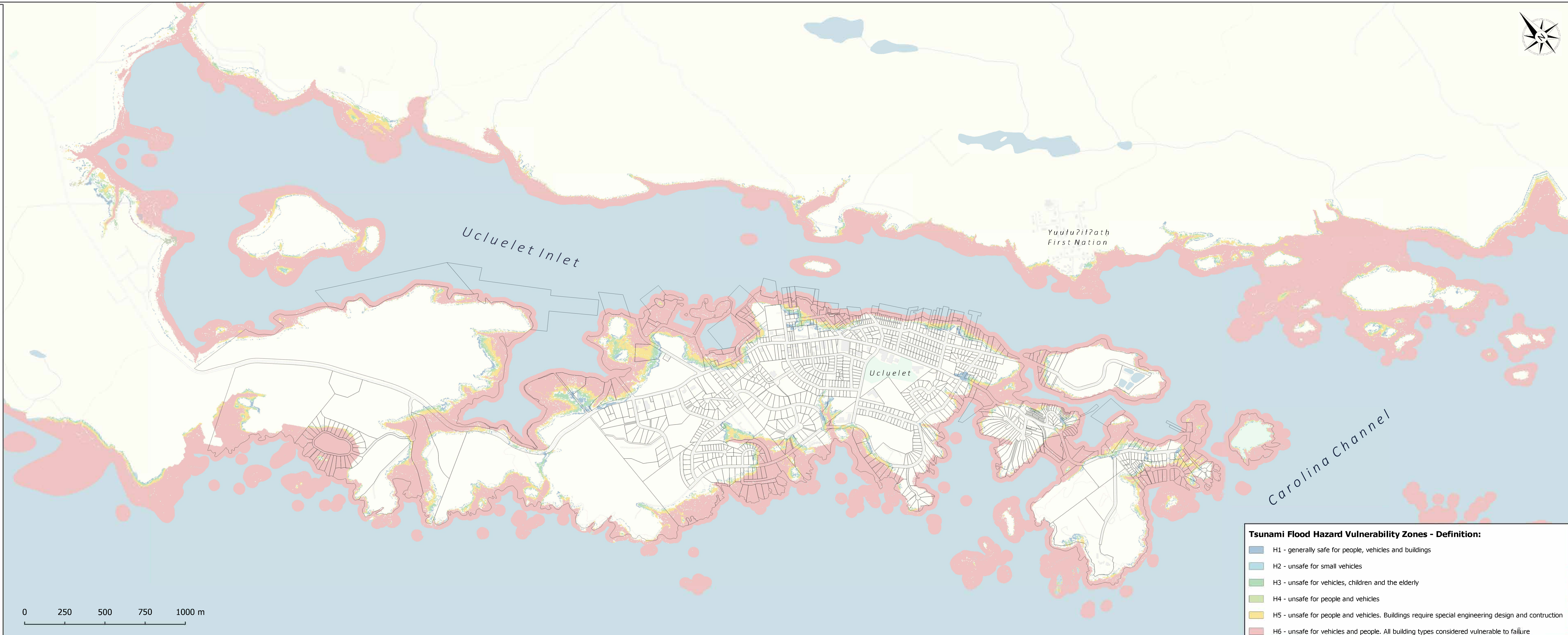
1. The accuracy of the presented tsunami flood hazard vulnerability zones is limited by available data and the modelling approaches used. Please refer to the report for detailed discussion on limitations.
2. This map provides results for one possible tsunami wave (based on one rupture type and source). Flood characteristics and associated responses could vary based on different tsunamis.
3. The accuracy of the tsunami flood hazard vulnerability zones is limited by the accuracy of the base mapping data and DEM. The flood hazard limits were not established on the ground by legal survey.
4. No formal guidelines exist for the province for mapping of tsunamis. This map was produced by Ebbwater Consulting Inc. and Cascadia Coast Research Ltd. using guidance documents and approaches identified from a literature review of other similar studies. Ebbwater Consulting Inc. and Cascadia Coast Research Ltd. do not assume any liability by reason of the failure to delineate flood hazard areas on this map.
5. The tsunami flood hazard vulnerability zones shown on this map are to provide an assessment of current and future flooding to help inform decisions on future land use policy. Under the provisions of the Local Government Act [2004], these flood extents only take effect when adopted by bylaw or implemented via another planning tool (such as a development permit area). They therefore do not currently have any legal or planning standing.
6. Flood depths and extents are presented for all areas landward of the cadastral shoreline layer (as provided by the District of Ucluelet (DOU)), including a small buffer to ensure all exposed areas are captured.
7. Base map and parcel layers were provided by different data owners and are subject to differences.

Data Sources

1. Tsunami flood depths and velocities were provided by Cascadia Coast Research Ltd.
2. Mapping Templates, Shoreline layer, and Land Parcels were received from the DOU.
3. Base layer is based on CARTO's Positron, created using derivatives of OpenStreetMap data - openstreetmap.org (© OpenStreetMap contributors; cartography license CC BY-SA).

References

1. Ebbwater Consulting Inc. and Cascadia Coast Research Ltd. (2020). District of Ucluelet Coastal Flood Mapping (Final Report).
2. Ausenco Sandwell (2011). Climate Change Adaption Guidelines for Sea Dikes and Coastal Flood Hazard Land Use - Guidelines for Management of Coastal Flood Hazard Land Use. Prepared for the British Columbia Ministry of Environment.
3. AIDR. 2017. "Australian Disaster Resilience Guideline 7-3:Flood Hazard." Australian Institute for Disaster Resilience, Australian Government Attorney-General's Department. <https://doi.org/10.1038/ncomms14796>.
4. Gao et al., (2018). Nat. Haz. (2018) 94:445–469.

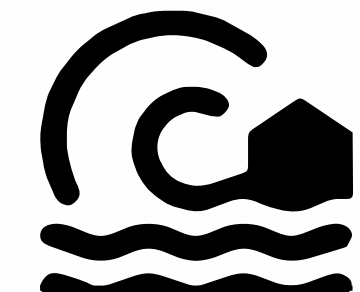


Tsunami Flood Hazard Vulnerability Zones - Definition:

- H1 - generally safe for people, vehicles and buildings
- H2 - unsafe for small vehicles
- H3 - unsafe for vehicles, children and the elderly
- H4 - unsafe for people and vehicles
- H5 - unsafe for people and vehicles. Buildings require special engineering design and construction
- H6 - unsafe for vehicles and people. All building types considered vulnerable to failure



DISTRICT OF
UCLUELET



Tsunami

**Coastal
Flood Mapping**

**Tsunami Flood Planning Support
Map 6/6**

**Tsunami Flood Hazard Vulnerability Zones
– Splay Faulting Rupture (Future)
G2018-S-A model, 1 m RSLR**

Land Parcels

Tsunami Flood Hazard Vulnerability Zones

- H1
- H2
- H3
- H4
- H5
- H6

Official Community Plan

Map 5

Ebbwater Consulting Inc.
Tsunami Flood
Planning Support Map 6/6



Stamp provided
in original
version

Date Created:
June 26, 2020

Map Scale:
1:15,000

Coordinate System:
NAD83, UTM 10N

Vertical Datum:
CGVD 2013

