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. The tsunami runup elevation was developed based on the highest value of the simulated tsunami (runup) elevations (splay faulting rupture from Gao et al., (2018)) for 1 m relative sea level rise (RSLR). The extents of the tsunami planning level of 18 m (without safety factor) are shown on this map.
3. Water levels conservatively assume a 2 m subsidence, 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, this time period is subject to changes in climate projections and is likely to require reassessment in the future.

Limitations

1. The accuracy of the presented tsunami flood planning level 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 planning level extent 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.
5. The tsunami flood planning level extents shown on this map are to help inform decisions on future land use policy. Under the provisions of the Local Government Act [2004], these 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.
5. 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.
6. Base map and parcel layers were provided by different data owners and are subject to differences.

Data Sources

1. Tsunami flood extents 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. Gao et al., (2018). Nat. Haz. (2018) 94:445–469.

Ucluelet Inlet
Ucluelet
Carolina Channel
LIMITS OF PROJECT AREA
0
250
500
750
1000 m

DISTRICT OF
UCLUELET

Tsunami

Coastal Flood Mapping

Tsunami Flood Planning Support Map 2/6

Tsunami Flood Planning Level – Splay Faulting Rupture (No Safety Factor)

G2018-S-A model, 1 m RSLR

☐ Land Parcels

Tsunami Flood Planning Level:

🟦 Areas below 18 m CGVD 2013

🟩 Areas at or above 18 m CGVD 2013

Official Community Plan

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

DISTRICT OF UCLUELET

Stamp provided in original version

Date Created:
June 26, 2020

Map Scale:
1:10,000

Coordinate System:
NAD83, UTM 10N

Vertical Datum:
CGVD 2013

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