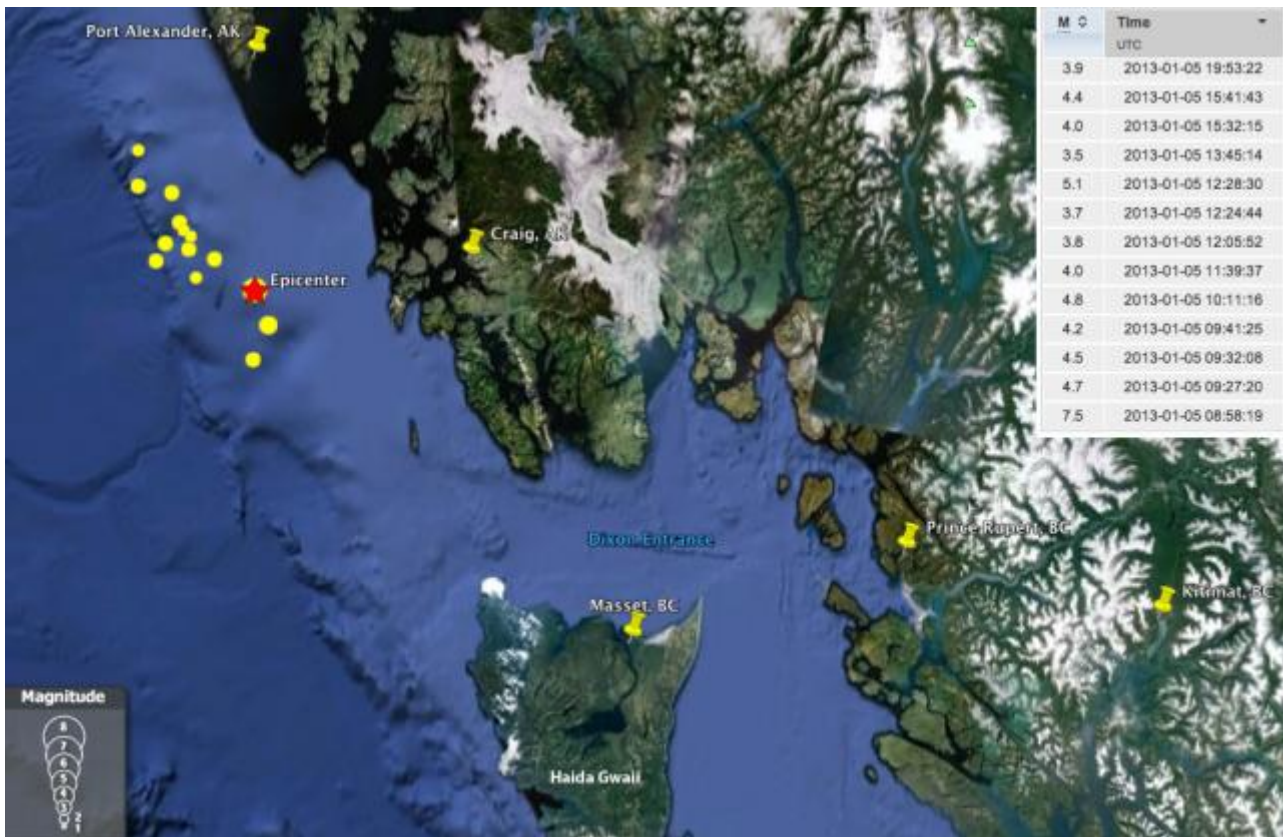


# Negligible Tsunami From Alaska Earthquake <sup>[1]</sup>

Submitted by Dwight Owens Sat, 2013-01-05 00:00

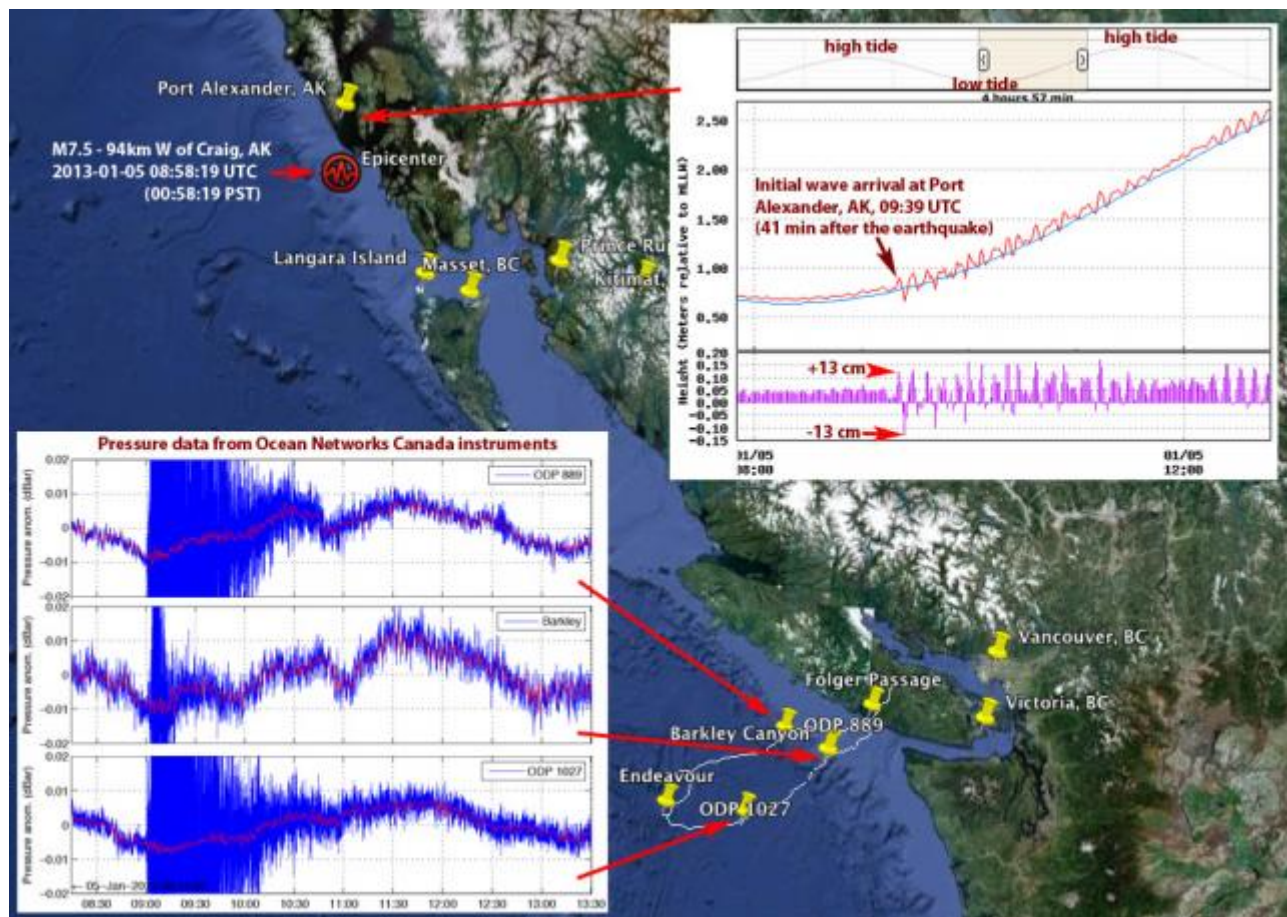
A strong magnitude 7.5 earthquake <sup>[2]</sup> struck west of Craig, Alaska at 12:58AM PST, 5 January 2013. Tsunami warning and alerts were issued for a broad section of the Alaskan and Canadian coastline, but no damaging waves were generated. According to the USGS, this earthquake was likely "related to that Haida Gwaii earthquake three months previously, and is an expression of deformation along the same plate boundary system."



[3]

The following plots show tide data from Port Alexander, AK (upper-right) and pressure data (lower-left) from Ocean Networks Canada CORK and bottom pressure recorder instruments at three stations on our network. Tide data indicate a crest-to-trough wave amplitudes of 20-30 cm at Port Alexander, with the initial waves arriving 41 minutes after the earthquake. The

pressure plots show strong shaking at the seafloor (indicated by the blue areas) at all three instrument locations. The red lines within the blue areas are low-pass filtered versions of the blue lines (only signals with periods longer than about a minute are shown). Therefore, the relatively high frequency ground shaking and microseismic noise generated by ocean swells do not show up on the redline, but tsunami waves with a period of 10-20 minutes, if present, should be indicated by the red line. A tsunami was not detected by Ocean Networks Canada scientists who examined these data.



[4]

The tsunami generated by this earthquake was not nearly as large and devastating as those that struck Sri Lanka, Indonesia and Japan in recent years, because it likely occurred on a strike-slip (lateral) fault. Vertical displacement for strike-slip earthquakes is typically much less than may be expected from a major subduction [5] earthquake. The following short video illustrates the distinction between strike-slip and subduction earthquakes.

For scientists like those at the Pacific Geoscience Centre and other institutions studying tsunami propagation in the northeast Pacific, this event will provide valuable insights.

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**Source URL:** <https://www.oceannetworks.ca/negligible-tsunami-alaska-earthquake>

## Links:

[1] <https://www.oceannetworks.ca/negligible-tsunami-alaska-earthquake>

[2] <http://earthquake.usgs.gov/earthquakes/eventpage/usc000ejqv#summary>

[3] [https://www.oceannetworks.ca/sites/default/files/images/pages/data/5jan2013\\_aftershocks\\_0.jpg](https://www.oceannetworks.ca/sites/default/files/images/pages/data/5jan2013_aftershocks_0.jpg)

[4] [https://www.oceannetworks.ca/sites/default/files/images/pages/data/overview\\_map\\_with\\_siesmic\\_and\\_tide\\_data\\_0.jpg](https://www.oceannetworks.ca/sites/default/files/images/pages/data/overview_map_with_siesmic_and_tide_data_0.jpg)

[5] <http://earthquake.usgs.gov/learn/glossary/?term=subduction>

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