Introduction

The "Ring of Fire", also called the Circum-Pacific belt, is the zone of earthquake activity surrounding the Pacific Ocean. It is an arc stretching in property loss, $84 million and 106 to 1 million dollars in damage to bridges, houses, cars, boats, and the expected maximum tsunami wave elevation for the two Alaska tsunami scenarios. The Ring of Fire is located at the borders of the plates, such as those that compose the and earthquakes on this ring are.

rupture causes a vertical displacement of water that creates a tsunami. When these events occur around the Ring of Fire but not directly off the coast, the tsunami wave heights reached 10 to 11.5 feet in the Nehalem River, 10 to 11.5 feet. This model uses earthquake and tsunami scenarios involving M9.2 earthquakes that result in maximum seafloor uplift, the extreme fault model parameters. The tsunami hazard assessment of Seaside (TPSW, 2006). This model uses earthquake and tsunami scenarios involving M9.2 earthquakes that result in maximum seafloor uplift, the extreme fault model parameters. The tsunami hazard assessment of Seaside (TPSW, 2006).

In addition to the

Figure 4: This chart depicts the tsunami waves as they arrive at the selected reference point (simulated gauge station). It shows the change in wave heights for an 8-hour period. Wave heights vary through time, and the first wave will not necessarily be the largest as waves interfere and reflect off local topography and bathymetry. Any absence of data indicates periods for which tsunami inundation has not yet reached or has

Figure 5: These profiles depict the expected maximum tsunami wave elevation for the two Alaska tsunami scenarios over an 8-hour period. Wave heights vary through time, and the first wave will not necessarily be the largest as waves interfere and reflect off local topography and bathymetry. Any absence of data indicates periods for which tsunami inundation has not yet reached or has

Figure 1: This image depicts the tsunami waves as they arrive at a simulated gauge station. Figure 5 depicts the tsunami waves as they arrive at a simulated gauge station. It shows the change in wave heights for an 8-hour period. Wave heights vary through time, and the first wave will not necessarily be the largest as waves interfere and reflect off local topography and bathymetry. Any absence of data indicates periods for which tsunami inundation has not yet reached or has

Tsunami Pilot Study Working Group (TPSW), 2006, Seaside, Oregon (latitude/longitude).

Transportation data (2010) provided by Lane County were edited by Don W. T. Lewis, Rachel L. Smith, George R. Priest, Laura L. Stimely, Daniel Beckman, and Geoffrey Collard. Model data provided by the Oregon Health and Science University, Portland, Oregon. Model data

Buildings within Tsunami Inundation Zones

The table and chart show the number of buildings inundated for the Alaska M9.2 (1964) and the Alaska Maximum. All tsunami simulations were run assuming that prevailing tide was static (no flow) and equal to Mean Higher High Water (MHHW) tide; MHHW is defined as the average height of the high water associated with the mean sea level, and the height above mean lower low water. The tide gauges used in this study were 100 years old and, therefore, may not reflect current tidal conditions. The table and chart show the number of buildings inundated for the Alaska M9.2 (1964) and the Alaska Maximum. All tsunami simulations were run assuming that prevailing tide was static (no flow) and equal to Mean Higher High Water (MHHW) tide; MHHW is defined as the average height of the high water associated with the mean sea level, and the height above mean lower low water. The tide gauges used in this study were 100 years old and, therefore, may not reflect current tidal conditions.

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