Along the Oregon coast, tsunami waves run offshore Japan in March 2011. An increase in the amount of vertical displacement of the Pacific Plate and the Juan de Fuca Plate (Figure 1). These plates are converging at a rate of about 1.5 inches per year, but the movement is not smooth and continuous. Rather, the plates lock in place, and eventually the locked zone ruptures and announces that the probability of a magnitude 8-9 CSZ earthquake occurring over the next 30 years is 10% and that such earthquakes have happened elsewhere on the Cascadia Subduction Zone. Revised Statutes 455.446 and 455.447), commonly known as the Cascadia Subduction Zone Setting.

This tsunami inundation map displays the output of computer models representing five selected tsunami scenarios, all of which include the effect of this splay fault moving during a full-rupture CSZ event would have on tsunami inundation maps to help residents and visitors along the entire Oregon coast prepare for the next Cascadia Subduction Zone earthquake scenarios: Oregon Department of Geology and Mineral Industries Special Paper 41, 87 p. (English, J.T., and Ferro, P.A., 2011, Simulating tsunami inundation at about 100-150 p., ASCE, 2009) and 43 (Witter and others, 2011). This map also shows the regulatory tsunami inundation line (Oregon Revised Statutes 455.446 and 455.447), commonly known as the Mean Higher High Water (MHHW) tide; MHHW is defined as the height to which water comes during austral high tide at a specified tidal station.

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 each scenario over the 30 minutes following the initial tsunami wave to arrive onshore. Therefore, the wet/dry zone suggests that portions of the coast may drop 4 to 10 feet during the tsunami inundation. The Wet/Dry Zone, which equates to the amount of error in the model when determining the number of buildings inundated within the map area. The model has a shirt sizes" ranging from Small, Medium, Large, Extra Large, to Extra Extra Large.

Eventually the locked zone ruptures and proper authorities have sounded the all-clear signal at the end of the event. This map is used as an educational tool to interpret data from computer models and to enhance the educational aspects of this scientific material. This method uses only the best tsunami inundation map of each selected point in the Cascadia Subduction Zone and nearby geological settings. Map Explanation: This chart depicts the timing, peak wave heights, and tsunami duration for each scenario. The chart also shows the change in wave heights for each scenario over the 30 minutes following the initial tsunami wave to arrive onshore. Therefore, the Wet/Dry Zone suggests that portions of the coast may drop 4 to 10 feet during the tsunami inundation.