Introduction

The Pacific Ocean contains three subduction zones along its periphery. The northern one is the Alaska-Aleutian Subduction Zone and the southern one is the South America- Nazca Subduction Zone. Oregon's coast is located along the northern zone, and it is a prime area for potential tsunamis. Evidence of tsunami inundation has been found from these zones as well as many more sources. For example, in 1964 a magnitude 9.2 earthquake created an unrealistically damaging tsunami. This scenario was idealized and repeated in the new tsunami hazard model. These types of scenarios are included in the Oregon coastal tsunami hazard model.

The National Oceanic and Atmospheric Administration (NOAA) has conducted tsunami hazard assessments that include tsunami inundation maps for specific coastal cities, such as Tillamook County and Seaside. The Tillamook County work was completed in 1995. The new state model was implemented in 2006 for Seaside and the results are supported by a regional model for the entire Oregon coast.

The Tillamook County Work

Tsunami inundation calculations for Tillamook County were produced in 1994. The calculations were based on data and computer models that are no longer current. In fact, Sercel and Knightobe (1996) provided an alternative source for a tsunami generated by an Alaska earthquake that would result in a greater tsunami.

The new Oregon coastal tsunami hazard model was developed by the Oregon Department of Geology and Mineral Industries (DOGAMI) and is supported by a regional model for all of Oregon's coastline. This model is based on new data and computer models that are state-of-the-art. The new model used an extreme fault model to determine if there was a possibility that a tsunami可能导致的要

The new tsunami hazard assessment for Seaside was completed in 2006. This model uses a different computer simulation model than the Tillamook model. The computer simulation model output was used by DOGAMI to develop the new generation tsunami inundation maps for Tillamook County. The new generation tsunami inundation maps were produced for Tillamook County in 2012.