



PROBABILISTIC MAPPING OF LANDSLIDE AND TSUNAMI HAZARDS OFF PALOS VERDES, CALIFORNIA

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We show that a landslides off Palos Verdes, California can travel long distances across the San Pedro Basin and generate significant local tsunamis. Most known indicators of potential underwater landslides are present off Palos Verdes Peninsula, California. We use a probabilistic model to determine the distribution of likely landslides. We show that catastrophic failure along the basin slope can provide a reasonable description of potential landslide tsunami hazards. We therefore formulate scenarios to yield concrete numerical simulation results. One of our scenarios forecasts resonant behaviors and strong water pressures within certain regions of the Ports of Los Angeles and Long Beach. In addition, tsunami amplitudes in excess of 3 m may threaten beach front property. We predict the frequency of hazardous landslide and tsunami events.