



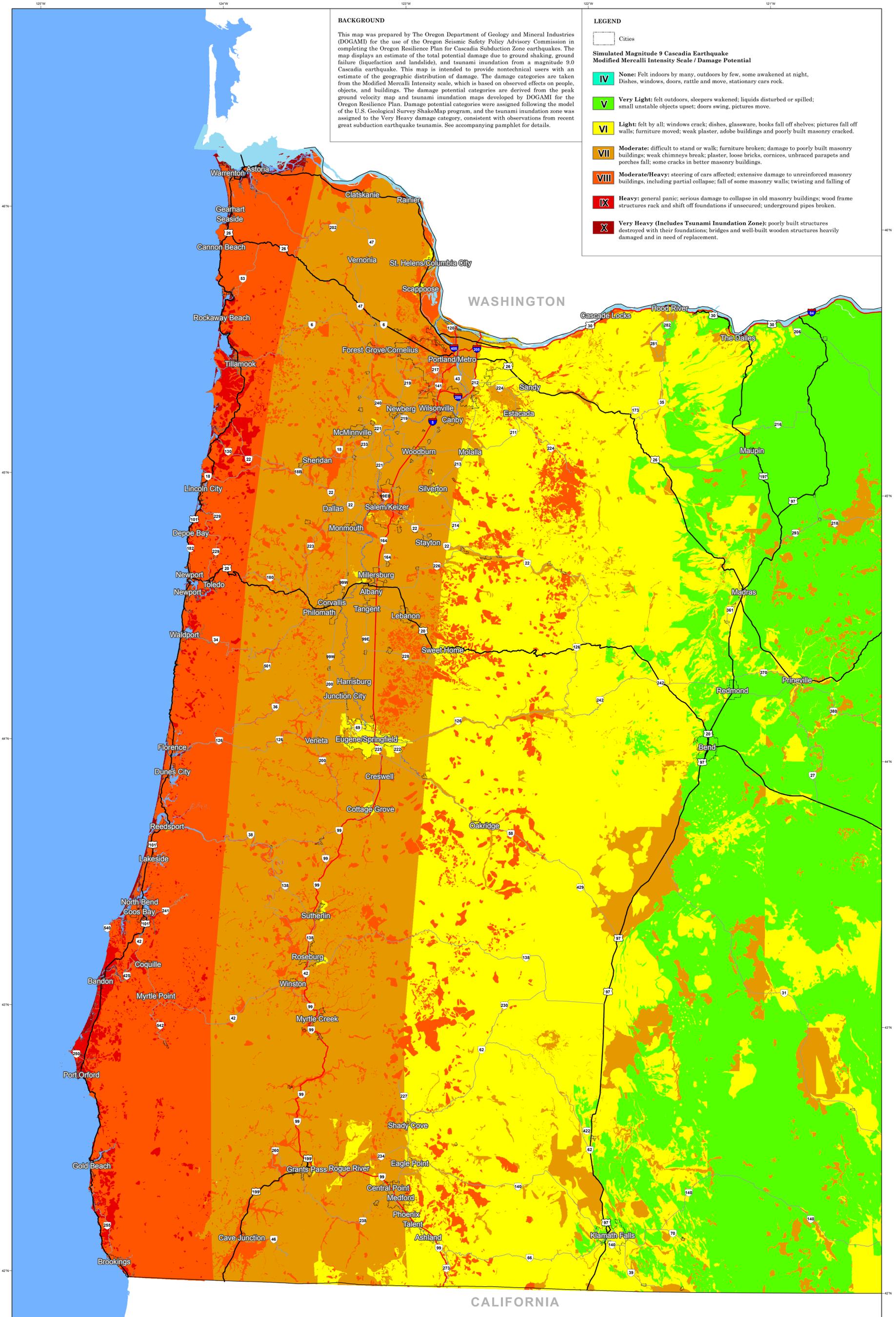
Map of Earthquake and Tsunami Damage Potential for a Simulated Magnitude 9 Cascadia Earthquake

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Ground Motion and Ground Deformation Data and Maps for the 2012 Oregon Resilience Plan for Cascadia Subduction Zone Earthquakes
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PLATE 7



BACKGROUND

This map was prepared by The Oregon Department of Geology and Mineral Industries (DOGAMI) for the use of the Oregon Seismic Safety Policy Advisory Commission in completing the Oregon Resilience Plan for Cascadia Subduction Zone earthquakes. The map displays an estimate of the total potential damage due to ground shaking, ground failure (liquefaction and landslide), and tsunami inundation from a magnitude 9.0 Cascadia earthquake. This map is intended to provide nontechnical users with an estimate of the geographic distribution of damage. The damage categories are taken from the Modified Mercalli Intensity scale, which is based on observed effects on people, objects, and buildings. The damage potential categories are derived from the peak ground velocity map and tsunami inundation maps developed by DOGAMI for the Oregon Resilience Plan. Damage potential categories were assigned following the model of the U.S. Geological Survey ShakeMap program, and the tsunami inundation zone was assigned to the Very Heavy damage category, consistent with observations from recent great subduction earthquake tsunamis. See accompanying pamphlet for details.

- LEGEND**
- Cities
 - Simulated Magnitude 9 Cascadia Earthquake Modified Mercalli Intensity Scale / Damage Potential**
 - IV** None: Felt indoors by many, outdoors by few, some awakened at night. Dishes, windows, doors, rattle and move, stationary cars rock.
 - V** Very Light: felt outdoors, sleepers awakened; liquids disturbed or spilled; small unstable objects upset; doors swing, pictures move.
 - VI** Light: felt by all; windows crack; dishes, glassware, books fall off shelves; pictures fall off walls; furniture moved; weak plaster, adobe buildings and poorly built masonry cracked.
 - VII** Moderate: difficult to stand or walk; furniture broken; damage to poorly built masonry buildings; weak chimneys break; plaster, loose bricks, cornices, unbraced parapets and porches fall; some cracks in better masonry buildings.
 - VIII** Moderate/Heavy: steering of cars affected; extensive damage to unreinforced masonry buildings, including partial collapse; fall of some masonry walls; twisting and falling of
 - IX** Heavy: general panic; serious damage to collapse in old masonry buildings; wood frame structures rack and shift off foundations if unsecured; underground pipes broken.
 - X** Very Heavy (Includes Tsunami Inundation Zone): poorly built structures destroyed with their foundations; bridges and well-built wooden structures heavily damaged and in need of replacement.