

2008 National Awards in Excellence

Outreach

Cascadia Subduction Zone Earthquake: A magnitude 9.0 earthquake scenario

Cascadia Region Earthquake Workgroup

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For years the earthquake engineering and scientific communities struggled with both determining the actual risks associated with a Cascadia Subduction Zone event as well as how to present its risks to the larger community. Skepticism was understandable because no earthquake had ever been recorded on the subduction zone and it was widely believed to subduct aseismically or even to have ceased subducting. It wasn't until the 80s when Dr. Brian Atwater, USGS, and others documented recent subduction activity from evidence of coastal subsidence and tsunami deposits.

As a result of this new science there was as much inaccurate information circulating as there was correct information. The Cascadia Region Earthquake Workgroup (CREW) took it upon itself to prepare a Cascadia Subduction Zone scenario that would both present what is known about the subduction process and describe it in a manner that could easily be understood by the general public as well as the region's emergency management practitioners. In March 2005, CREW published the *Cascadia Subduction Zone Earthquake: A magnitude 9.0 earthquake scenario*. It took many years of research, four HAZUS runs, and seven peer reviewed drafts and draft review by the lay community to develop this scenario.

Over 6000 copies of the scenario have been distributed, and numerous exercises have been based on this document. Most notable exercises are:

- Blue Cascades III, summarizing its findings about regional interdependencies in an extreme disaster. (over 300 participants)
- Pacific Peril 2006, summarizing its findings about mid- and long-term recovery issues. (over 500 participants)
- Cannon Beach long-term recovery planning, summarizing its action recommendations. (over 1000 community leaders from Cannon Beach)

Recognizing the usefulness of the Cascadia Scenario, CREW published a guide in 2007 documenting how the scenario was used, lessons learned and instructions on how the scenario could be tailored and drive exercises to advance local or regional planning efforts. This guide is called *CREW Scenario: Three Tabletop Exercises* and, along with other CREW products, is located on the CREW web site at www.crew.org.