

WSSPC Awards in Excellence 2009

Outreach to Business/Government

Division of Geology and Earth Resources-Geological Hazards Program

Washington Department of Natural Resources

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The initial Decision Maker Field Conference was held on September 17, 2005 by the Washington Department of Natural Resources, Division of Geology and Earth Resources-Geological Hazards Program (DGER). DGER held a one-day field conference for legislators and other local decision-makers. The field trip was an opportunity to learn first-hand about natural hazards and their impacts on people, economic development, and transportation. In an informal outdoor setting, speakers presented the latest information on understanding and mitigating geologic disasters. Since the conference was field-oriented, participants visited sites that are the focus of concern. The field-trip format stimulated onsite debates about public policy, strategies for growth, funding for geologic hazard work, and methods for solving problems.

The first stop was Timberlake Park on Lake Sammamish to view earthquake induced landslides and evidence for a major earthquake along the Seattle fault. During this stop, Tim Walsh of DGER gave an introduction on what risk is and how it is mitigated. Brian Sherrod of the USGS described his research on the Seattle fault, which has documented evidence of faulting and the size and extent of the fault. Tim Nogler, Director of the Building Codes Council, gave a presentation on seismic hazards and how they affect building codes.

At Carkeek Park, Walsh set the stage by talking about the unstable bluffs north of the park, where hundreds of debris flows blocked a critical rail corridor in January of 1997. Bill Laprade of Shannon & Wilson described bluff stratigraphy and causes of the debris flows. He explained that, even with the engineered works along this important rail line, prevention is uncertain. Hugh Shipman of the Shorelands Division of the Washington State Department of Ecology gave an overview of landsliding in Puget Sound and the broader shoreline management picture. While the bluffs are a geological hazard, there are also environmental issues that must be considered. Shipman said there should be an emphasis on avoiding hazards rather than mitigating or controlling them and recommended educational work with communities and property owners. The Department of Ecology looks to agencies such as DGER and the USGS for mapping and technical guidance. With the emergence of LIDAR and new geologic mapping, there is a critical need for updated slide mapping.

The final stop was at the Don Armeni Boat Launch in West Seattle. It provided a spectacular view of Seattle, Elliott Bay, the lower Duwamish Waterway, Harbor Island, Magnolia, Mount Rainier, and landslides along Harbor Drive. The presentations centered on our vulnerability to hazards from the Seattle fault, tsunamis, and eruptions of Mount Rainier. Tim Walsh led off by describing what would happen if there were an earthquake along the Seattle fault. He vividly described the liquefaction that would occur and the tsunami that would roll Harbor Island and described what would happen if there were a large lahar from Mount Rainier

today. George Crawford of the Washington State Emergency Management Division (EMD) explained the warning systems in place for tsunamis and Mount Rainier lahars. Jon Koloski of GeoEngineers, Inc., talked about deep-seated landslides in western Washington, using examples from Aldercrest in Cowlitz County and Carlyon Beach in Thurston County.

State Geologist Ron Teissere closed with a presentation on how cities and counties use geoscience information for land-use planning under the Growth Management Act and how emergency managers can use geoscience information for preparedness and mitigation planning, to guide response efforts, and to aid in recovery planning. He explained how DGER plays a key role in all of the above and needs funding to be restored to continue that role. Participants left knowing that Washington State: has the second largest population at risk from earthquakes in the nation, has experienced earthquakes, tsunamis, landslides, and volcanic eruptions large enough to be catastrophic to the state's people and economy should they recur without the proper geological, land-use, and emergency management planning, has suffered at least 20 damaging earthquakes during the past 125 years, the most recent of which caused billions of dollars in damage.