

Briefing highlights role of geoscience in reducing lahar hazards

July 12, 2016

The Hazards Caucus Alliance, a network of organizations that promotes nationwide natural disaster resilience, held a briefing to highlight the role that science plays in protecting communities that are vulnerable to lahars. Introductory remarks from Senator Lisa Murkowski (R-AK) were followed by talks from several natural hazard and emergency management experts.

Dr. Charles Mandeville from the U.S. Geological Survey (USGS) emphasized the importance of lahar detection and public warning, noting that lahars can occur even without a volcanic eruption. Mandeville discussed the Mount Rainier lahar-warning system in the Carbon and Puyallup River Valleys of Washington State, which measures ground vibrations of passing lahars through a network of underground sensors called acoustic flow monitors (AFMs). He reported that prioritized activities for the USGS Volcano Hazards Program for fiscal year 2016 include two new broadband seismometers and web cameras in the Puyallup River drainage, and expanding the lahar detection system into Mount Rainier's other major drainage systems by 2020.

David Norman, State Geologist of Washington, talked about the 3D Elevation Program (3DEP), an initiative that collects lidar data to produce high-resolution topographic images, and how it has improved landslide hazard evaluation and mitigation in Washington state. Norman described Washington's ongoing collaboration with the USGS and other agencies to collect lidar data across the state, adding that an increase in 3DEP partnerships would reduce statewide collection time.

Dr. Jeff Rubin from Tualatin Valley Fire and Rescue in Oregon underscored the importance of promoting public safety and communicating hazard risks to the public and decision makers. He showed how hazard zonation maps of Clackamas County, Oregon, could delineate high-risk areas around Mount Hood. He also related results from the recent Cascadia Rising exercise, which simulated the response to a magnitude 9 earthquake and tsunami along the Cascadia Subduction Zone.

Sources: National Oceanic and Atmospheric Administration (NOAA), U.S. Geological Survey, Federal Emergency Management Agency (FEMA)

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