

Carol Hasenberg
614 NE 114th Ave.
Portland, OR 97220

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SENATOR TAYLOR, REPRESENTATIVE REARDON AND THE JOINT COMMITTEE ON WAYS AND MEANS
SUBCOMMITTEE ON NATURAL RESOURCES:

I would like to testify on behalf of the Oregon Department of Geology and Mineral Industries.

I have been a resident of Oregon since 1980. When I arrived a nearby volcano, Mt. St. Helens, had recently erupted and was still very active. Less than 10 years later, scientists started talking about the possibility of great earthquakes in Oregon. At the time I was studying engineering and I took some classes in geology and geophysics to understand what geologists and seismologists were talking about when they mentioned the Cascadia Subduction Zone. I can tell you the effect on the design of buildings in Oregon from this knowledge was staggering, and keeping up with the constantly changing design requirements was a process that consumed much of my time for the next decade.

During the 1990's DOGAMI was at the forefront of this effort by producing earthquake hazard maps for the state of Oregon. The maps aided engineers and planners to do their work and to figure out how Oregon's hazards compared to those in Washington and California. Also during the 1990's, there were several earthquakes that happened in Washington, Oregon and California (Loma Prieta, Nisqually, Scotts Mills, Klamath Falls and Northridge) that raised public awareness of this hazard such that the public was stirred to action and many measures were instituted to improve earthquake design.

Another type of hazard had been identified in concert with earthquake shaking and that is coastal subsidence and tsunamis. Once again DOGAMI was at the forefront by generating models to estimate the runup contours along the coast for a Cascadia Subduction Zone tsunami. This effort generated more public awareness and response to this hazard in where and how we should build on the Oregon coast. DOGAMI also helped coordinate early warning systems for the public in tsunami hazard areas. These types of hazards were horrifically illustrated in 2004 and again in 2011 with the Banda Aceh and Tohoku tsunamis created by megathrust earthquakes in Indonesia and Japan.

Along with the major hazards, which can affect large swaths of the state, there are the more localized natural hazards to contend with. Oregon is a state riddled with landslides, from rockfalls to debris flows. The town of Dodson in the Columbia River Gorge recently experienced a lethal landslide. DOGAMI has been using a technology called LiDAR to map the ground surface of the state in incredible detail and this technology has been very useful in determining locations of landslides and earthquake faults. This technology is rather expensive to implement and so generating the landslide hazard maps is a multiyear project.

I've illustrated several natural hazards for which DOGAMI has been doing an incredible job at identifying and quantifying for the state of Oregon. In addition, this department has done geologic mapping, mineral exploration, mining permitting including gravel mining in active river systems, investigating groundwater systems, and has a large library of geologic reference that is extensively used by the public. DOGAMI geologists also serve the legislature of the state by providing them with current, high quality

scientific assessment of our state. And all on a shoestring budget from which they have needed to include fundraising to their many other tasks.

Now the proposed state budget includes disbanding this organization altogether and breaking up what few functions are to be retained into other departments with their own agendas. The minimal staff that still retain their jobs will not be working in an atmosphere of scientific collaboration and discovery that has aided DOGAMI in the last several decades. And the legislature and the citizens of Oregon will get what information is output through a distorted lens of non-scientific agendas. What will become of DOGAMI's online library and interactive mapping?

And how will the state of Oregon be prepared for the challenges of the twenty first century? We have not begun to comprehend fully either the effects on our state from climate change, nor the needs of new technologies that will develop in the future. For example, we will possibly need information about sea level changes, forest fire damage and mitigation, geothermal heating, carbon sequestering and other earth-centered activities. Then there are continuing earthquake and volcano hazards in our very active tectonic setting. And who knows what else? I think it is very short-sighted of the state of Oregon to consider turning its back on earth science by gutting this department.