

Cascadia

News and information from the Oregon
Department of Geology & Mineral Industries

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How does geology affect your community?

Practical Geology

There is a reason every state in the United States and every country in the world has a geology department. Detailed, unbiased, and publicly available information concerning the nature and origin of the geology of an area is essential for informed public-policy decision-making and for economic development. The Department of Geology and Mineral Industries (DOGAMI) fulfills this role in Oregon by providing cost-effective, geologic information essential to the private, not-for-profit, and public sectors.

DOGAMI is the primary source of information about Oregon's geology and geologic resources, including oil and gas, geothermal energy, mining aggregate, and metals.

DOGAMI is also the principle source of information about geologic processes, including the distribution of ground water and the nature and scope of natural hazards. Geologic data from DOGAMI also drives rural economic development, programs relating to natural hazard protection, waste disposal, land use planning, and resource management.

Practical benefits

DOGAMI is a small agency, with only one staffer for every one thousand state employees. Staff generally are either paid for by non-general

fund dollars, or are in general fund positions that are then used to leverage other funding sources.

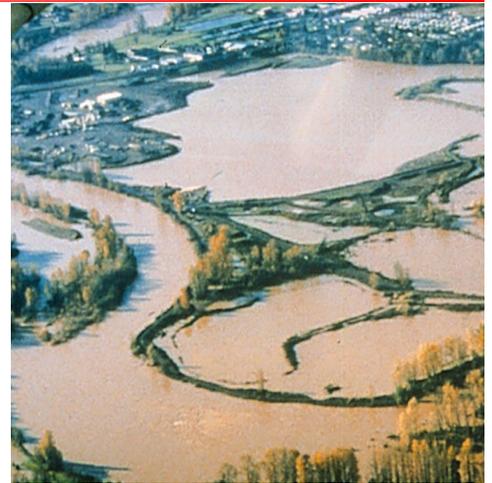
DOGAMI spends only 34 cents of every \$1,000 of Oregon's general fund. An economic study in 1996 found that for every \$1 spent by DOGAMI, the state received more than \$200 in benefits.

Some of these benefits are seen in obvious ways, such as the \$300 million per year of mineral production in the state. Some benefits are more abstract, such as savings from landslide damage that did not happen because of DOGAMI's information. Some benefits

are strategic, like the use of geologic information to decide where best to spend limited funds for seismic retrofits or where to site critical facilities.

Practical partnerships

DOGAMI is a field-based agency, with offices located in different regions of the state. This allows department geologists and staff to work with stakeholders on economic and environmental issues using intuitive local knowledge and geologic information that a centrally based agency could not provide. A commitment to the *field offices* model underlies much of the strength of the agency. DOGAMI staff must be in the field to best understand the regional geology, and because of this, all stakeholders benefit.



A repeat of the catastrophic flooding in the Confluence Island area near Eugene that happened 1996 has been lessened by the use of practical geology.

Understanding the local geology benefits the economics of aggregate resources, helps in mitigating earthquake, landslide and debris-flow hazards, and pinpoints groundwater quality and quantity. Fish, floods, irrigation, engineering, soils, farming, archeology, recreation, and volcanic hazards also fall within this understanding. In many cases, having adequate local knowledge of a regulatory problem and related geologic information can even allow non-regulatory solutions.

Water management

As part of the current 6 year strategic plan, the agency's Governing Board has identified the state's water supply and water quality issues as the highest priority for the department and has instructed DOGAMI to use its geologic expertise in helping the state deal with these issues. DOGAMI is now working with many state and local organizations on important water-focused projects in the Klamath,

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Grand Ronde and Rogue basins.

Reducing losses from natural hazards

DOGAMI works with many partners to provide services measured by State Progress Board benchmarks for the reduction of risks due to natural disasters. The department has produced earthquake hazard maps for more than 70 communities across western Oregon, and has mapped earthquake faults throughout the state. Landslide mapping, tsunami hazard mapping, and coastal retreat (erosion) mapping are other important contributions.

Mined land regulation and reclamation

An important aspect of our mined land efforts involves the regulation of aggregate mines (sand, gravel and crushed rock are the most mined resources in Oregon). About 60% of aggregate mined in the state goes to government agencies for road building. Because the cost of aggregate doubles every ten miles, it has to be transported. Using detailed geologic knowledge to site these mines becomes an important economic factor in saving the state money. Along with regulation, DOGAMI also oversees the reclamation of mined lands for a second beneficial use compatible with surrounding land use and plans.

Regulating the Mist gas field in

Columbia County is another of DOGAMI's responsibilities. The site is not only important for extracting natural gas, but is also used to store gas in depleted natural pools which allows utilities more flexibility in buying gas at lower prices.

Experience gained in the Mineral Land Regulation and Reclamation Program also provides the expertise needed in environmental restoration projects, including river enhancements and fish habitats.

Practical Geology

Focused outreach efforts touch every corner of the state. Through our peer-reviewed scientific publications, information center, web sites, and field offices, we aggressively distribute the information we develop. Whenever possible, we create partnerships with other government agencies and the private sector for funding, resources, expertise, and public education.

From water studies in the Upper Klamath River Basin to landslide hazard mapping in urban areas, DOGAMI puts practical geology to good use throughout the state, benefiting public-policy decision-making and economic development for all Oregonians.

Learn more about DOGAMI by logging on to: <http://www.oregongeology.com>



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DOGAMI field offices

Baker City: In the eastern Oregon field office, geologists have been working in the Grande Ronde and Umatilla Basins where there are significant water resource and natural hazard questions.

Grants Pass: In the southwestern Oregon field office, geologists have been working in the Klamath Basin and the Grants Pass area to better understand the limitations of, and opportunities for, the use of water resources.

Newport: The coastal field office is dedicated to the many specific hazards along Oregon's beautiful beaches and the Coast Range next to them. Natural hazards like landslides along Highway 101 and tsunamis are an important focus, along with better understanding coastal processes.

Albany: Oversight of mined land and drilling regulation, and selected mine site restoration and reclamation involves DOGAMI's Albany office, located at the strategic center of the state in terms of travel times to widely dispersed regulatory sites.

Portland: The Nature of the Northwest Information Center (NNW) – is a partnership with the US Forest Service, US Department of Interior, and many state agencies. NNW is a one-stop center for the public to get information and publications about the outdoors from a variety of government agencies. DOGAMI's northwest field office is also in Portland, coordinating geologic mapping across the state. Statewide geologic hazards are analyzed from this location close to partner agencies and private firms.