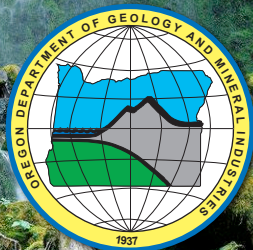


# THE OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES



Proxy Falls in the Three Sisters Wilderness cascades over andesite from volcanic eruptions that occurred about 500,000 years ago

## 2009–2015 STRATEGIC PLAN

*OUR MISSION: PROVIDE EARTH SCIENCE INFORMATION AND REGULATION TO MAKE OREGON SAFE AND PROSPEROUS.*



### Earth Science

Agency goal: Acquire and organize complete and current descriptions of the geologic resources, materials, landforms, processes and hazards to benefit the people of Oregon.



### Natural Hazards

Agency goal: Reduce risk, damage and loss by acquiring and organizing comprehensive descriptions of natural hazards throughout the state of Oregon.



### Education and Outreach

Agency goal: Place earth science information in the hands of the right people at the right time to shape decisions on an individual, local, regional and statewide level.



### Resource Management

Agency goal: Prudently regulate mineral, oil and gas, and geothermal energy development to protect the environment and people of Oregon.



### Governance and Operations

Agency goal: Optimize operations and maintain professional standards to support the agency mission.

*Baker City Field Office Geologists Jason McClaughry (above) and Mark Ferns led a well attended field trip in the Prineville area to explore the Crooked River Caldera.*

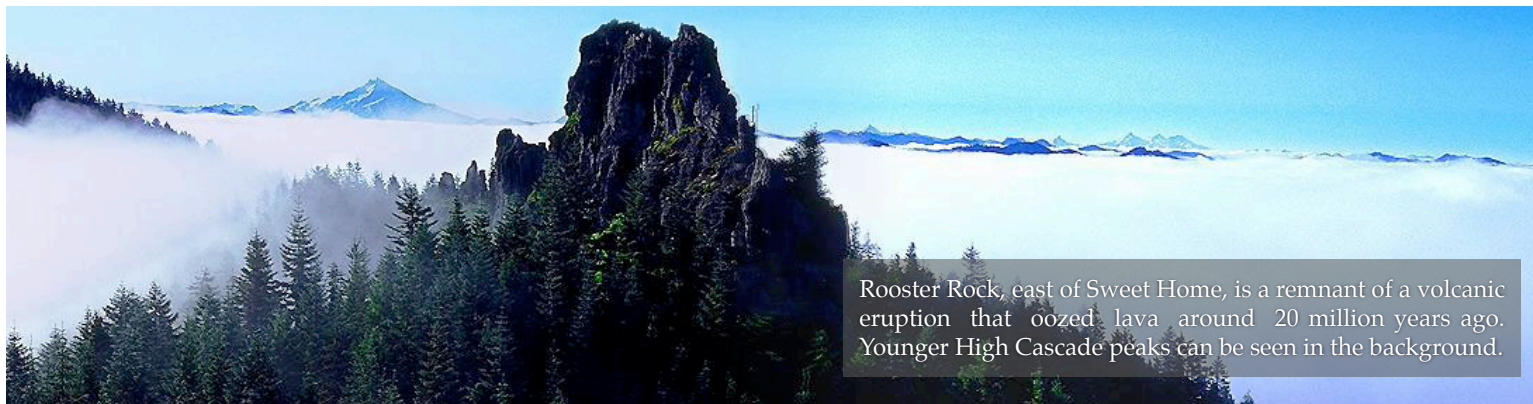
*In December, 2007, a debris flow that traveled 1.5 miles and buried Highway 30 near Clatskanie also destroyed several homes and businesses.*

*Siletz Tribal Chairperson Delores Pigsley (left) and State Geologist Vicki McConnell dedicate a roadside historical marker on tsunamis at Siletz Bay.*

*This quarry near Grants Pass operated by Stein Enterprises received recognition as an Outstanding Operator in the Mined Land Reclamation Awards program.*

*Grants Pass Field Office Geologist Tom Wiley examining a rock sample at Ochoco Reservoir near Prineville.*





Rooster Rock, east of Sweet Home, is a remnant of a volcanic eruption that oozed lava around 20 million years ago. Younger High Cascade peaks can be seen in the background.

*OUR VISION: DOGAMI is the source of earth science information, mineral development, regulation and guidance for Oregon while meeting the highest standards of objectivity and professionalism.*

This strategic plan outlines for our Agency a broad and ambitious agenda for 6 years beginning in 2009. Contributions in the formulation of the goals and objectives found on these pages came from across the Agency and from many of our important partners beyond the Department. This document will be an ongoing resource that guides our actions and supports our vision. As such, it is not intended to be a detailed catalog of all the tasks necessary to achieve these goals, but is intended to help focus our efforts while giving us the flexibility and creativity to reach them.

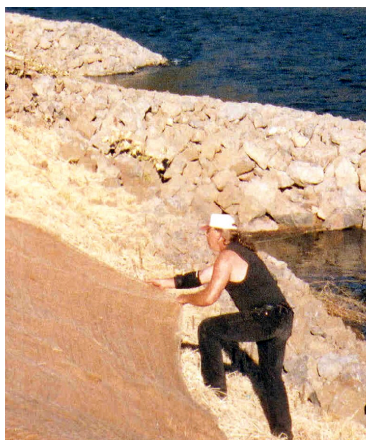
## OUR HISTORY



The Oregon Department of Geology and Mineral Industries (DOGAMI) was created in 1937, but actually began in 1911 as the Oregon State Bureau of Mines. DOGAMI has evolved from its early focus on mining to become Oregon's major source of knowledge and information on our spectacular landscape and how best to interact with it and prepare for the vast array of natural hazards that accompany the state's remarkable geology. Thus, today we continue the legacy and vision of scientist, scholar and poet Thomas Condon, appointed Oregon's first State Geologist in 1872.

*"In prying apart the stone layers of the rocks, the scientist is, in reality, opening the leaves of the past history of our world." Thomas Condon, 1902*

## OUR CURRENT FOCUS



The Agency's function, as defined by Oregon Revised Statutes, is to serve as *the* centralized source of geologic information in Oregon for the public and all levels of government. DOGAMI identifies and quantifies natural hazards and works to reduce the risk of earthquakes, tsunamis, landslides and coastal hazards through a comprehensive and broad-reaching mitigation strategy. We do this by mapping the state's geology using cutting edge science and creating and maintaining geologic data and information, primarily in digital form. Our geologic maps and technical knowledge provide the resources for effective state management of geologic hazards, land use, and mineral, energy and water resources.

Through our Mineral Lands Regulation and Reclamation program, DOGAMI serves as a steward of the state's mineral production while encouraging best practices within the industry. Our goals include environmental protection, conservation, effective site reclamation, and operational guidance regarding other engineering and technical issues.

*DOGAMI Reclamationist Frank Schnitzer spearheaded a public-private restoration effort on the Rogue River to support the Oregon Plan for Salmon and Watersheds.*





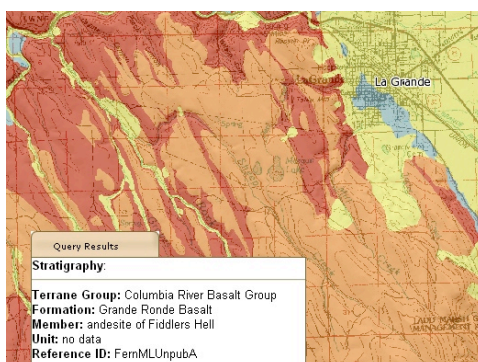
## EARTH SCIENCE:

*Acquire and organize complete and current descriptions of the geologic resources, materials, landforms, processes, and hazards to benefit the people of Oregon.*

### Objectives

- *Develop maps that describe the geology of the state.*
- *Construct 3-dimensional maps of surface deposits and their physical properties.*
- *Acquire and organize high resolution lidar imagery for the state.*
- *Create a comprehensive earth science digital database.*
- *Document the short and long-term evolution of the Oregon coast.*
- *Continue to develop the tools and resources necessary to solve problems and respond to new issues.*

### What we do

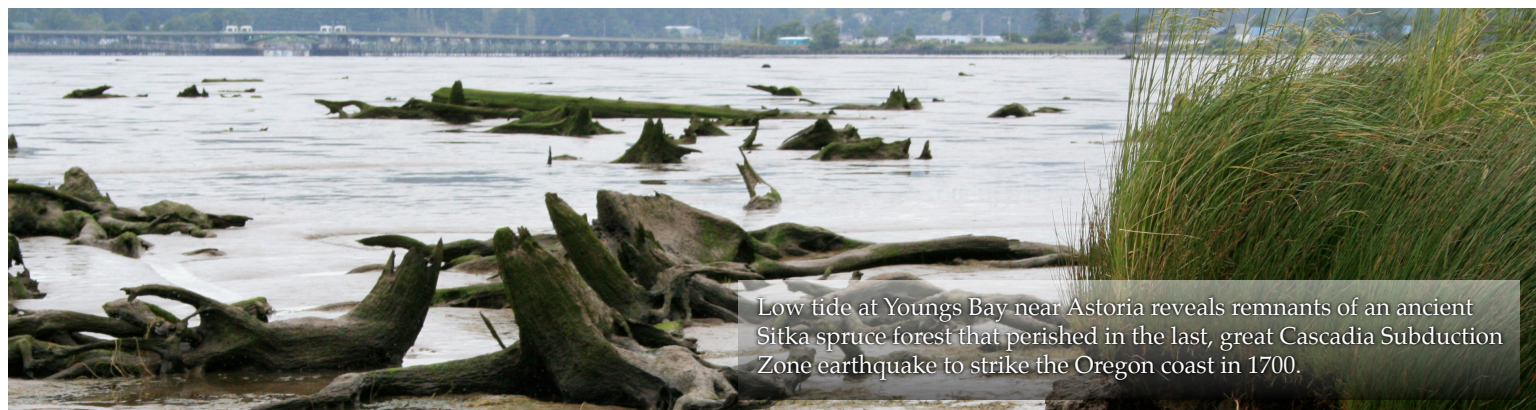


Data gathered from aircraft using Light Detection and Ranging (lidar) technology is allowing Agency geologists and our partners to map and interpret Oregon's topography in unprecedented detail. While DOGAMI will use this new data to better understand earthquake and landslide hazards, other uses include land use planning, floodplain mapping and watershed protection.

Our earth science digital database continues to grow. The Oregon Geologic Digital Compilation brings together for the first time the best available geologic mapping from all sources. Much of the data can be accessed via interactive web pages, including geothermal areas, minerals, landslides, geospatial analysis of rocks and minerals and general geology of the state.

Coastal geomorphologist Jonathan Allan (above) and other DOGAMI staffers use global positioning systems (GPS) throughout the year to precisely document changes to Oregon's coast. This critical information is used by coastal managers, city and county governments and the public to prepare for and mitigate against natural hazards and the inevitable effects of climate change.





Low tide at Youngs Bay near Astoria reveals remnants of an ancient Sitka spruce forest that perished in the last, great Cascadia Subduction Zone earthquake to strike the Oregon coast in 1700.

## NATURAL HAZARDS:

*Reduce risk, damage and loss by acquiring and organizing comprehensive descriptions of natural hazards throughout the state of Oregon.*

### Objectives

- *Identify existing landslides with lidar imagery, and map areas susceptible to future landslides.*
- *Effect earthquake risk reduction through hazard mapping and vulnerability assessments.*
- *Complete and update maps of shoreline variability, coastal erosion and tsunami hazards.*
- *Coordinate data collection and distribution following natural disasters.*
- *Advocate for and implement the application of lidar in flood hazard mapping.*

### What we do



Landslides are the most costly natural hazards on a yearly basis in Oregon, with damage from landslides reaching over \$100 million in some years. DOGAMI's landslide program is using lidar technology to identify and characterize landslide hazards and is working with communities like Astoria (above) to help mitigate for this natural hazard.

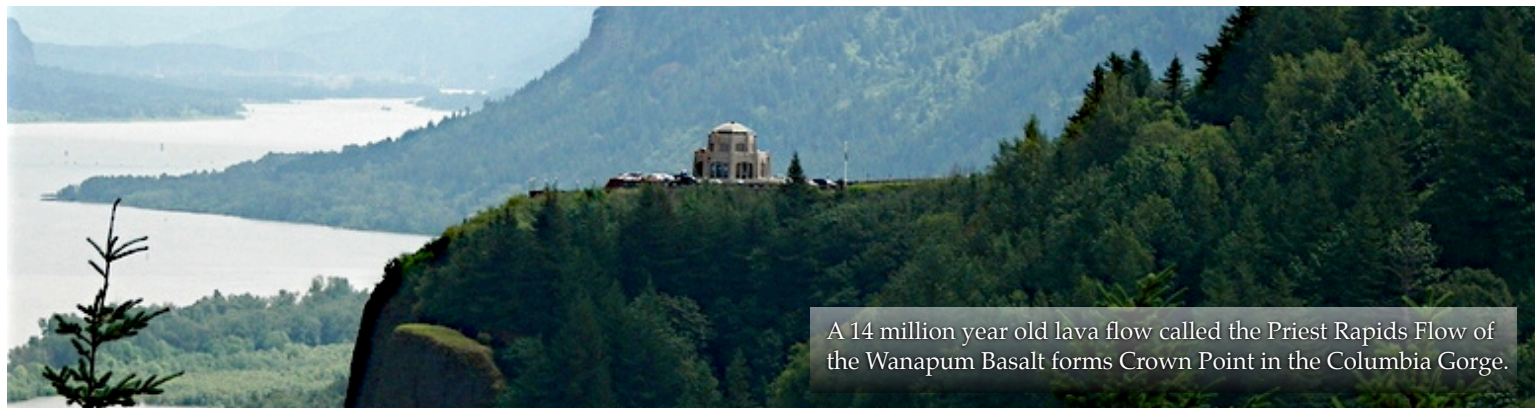


The Statewide Seismic Needs Assessment, completed by DOGAMI in 2007, catalogued over 3,300 schools, hospitals and fire and police stations across Oregon in order to assess their vulnerability to earthquakes. This information is being used as the first step in a multi-year process to seismically rehabilitate qualified schools and emergency facilities throughout the state.



Unwise development puts homes and lives at danger when winter storms (above) reshape the Oregon coast. DOGAMI geologists work with other scientists and organizations to characterize the dynamic relationship between earth and ocean so coastal communities can better prepare for the inevitable consequences of that interaction.





## RESOURCE MANAGEMENT:

*Prudently regulate mineral, oil and gas and geothermal energy development to protect the environment and people of Oregon.*

### Objectives

- *Control adverse impacts (channel migration, landslides, etc.) related to mining activities.*
- *Use appropriate technology to aid oversight and decrease costs of operations.*
- *Pursue proactive restoration and reclamation.*
- *Develop comprehensive resource (energy, aggregate) evaluations – including cultural, environmental and economic constraints.*

### What we do



The Mineral Land Regulation and Reclamation (MLRR) program works with industry and local government to insure best management practices are an integral part of everyday mining operations. The Agency also encourages and shepherds grass roots efforts that help preserve and protect habitat, like this project on the Rogue River aimed at restoring the natural river channel.



MLRR has overseen the reclamation of thousands of acres of mined land that is now used as parks, farmland, open spaces, housing developments and grazing land. Stream protection and restoration projects (above) adjacent to active quarries and storm water run-off monitoring are also important responsibilities for the Agency.



MLRR guides oil and gas exploration and production in the state and oversees permitting for geothermal exploration, an up and coming clean energy source with great development potential. Cities like Klamath Falls (above) are already using geothermal resources to heat sidewalks and roadways.





Rocks from the Smuggler Cove Formation were formed in muddy offshore shoals 15 million years ago and they can now be seen at Oswald West State Park near Manzanita.

## EDUCATION AND OUTREACH:

*Place earth science and natural hazards information in the hands of the right people at the right time to shape decisions on an individual, local, regional, and statewide level.*

### Objectives

- *Promote natural hazard information and risk mitigation products.*
- *Build and improve partnerships with agencies, organizations, universities, private sector and media.*
- *Launch an interactive web-based map and data delivery system and integrate Nature of the Northwest into this system.*
- *Market agency skills and resources and monitor customer satisfaction.*

### What we do



Working with coastal communities on earthquake and tsunami preparedness by using the latest research from our scientific teams is a critical component of outreach and education efforts. Innovative projects like the Seaside tsunami awareness program (above) are nationally recognized for their positive impact.

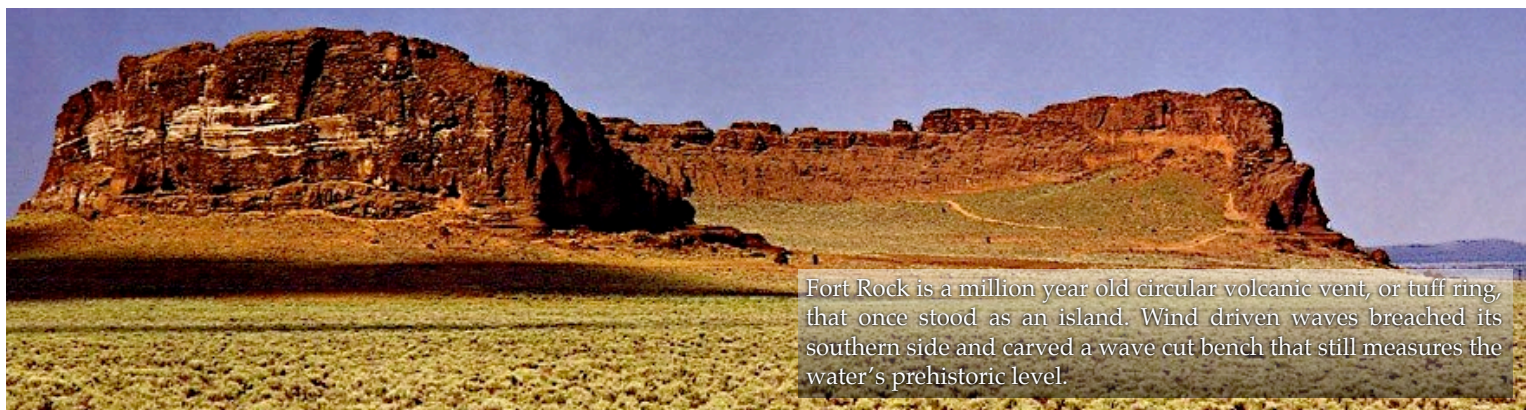


When the earth moves, whether it is landslides, tsunamis or earthquakes, DOGAMI has become the recognized authority the media and the public turn to for the facts. Interactive features on our website also attract thousands of online visitors a month who wish to learn more about Oregon's fascinating geological story.



Training and assistance for mine operators in site reclamation, stormwater discharge (above) and habitat restoration are important aspects of MLRR's public education efforts. DOGAMI's reclamation specialists provide the necessary technical expertise and leadership to address the adverse environmental challenges mining poses.





## GOVERNANCE AND OPERATIONS:

*Optimize operations and maintain professional standards to support the agency mission.*

### Objectives

- *Improve fiscal management and secure sustainable funding sources.*
- *Promote agency activities to the legislature.*
- *Provide for continuity of agency operations and services.*
- *Actively measure and improve agency performance.*
- *Review and optimize agency facilities and operations (i.e. library, warehouse, field offices, Portland office).*

### What we do



As DOGAMI continues to streamline its business operations, it also continues to be recognized by the State Controller's Office for excellence in fiscal accounting and reporting. A solid continuity plan and the upgrading of our computer based information systems and web based data delivery capabilities are all part of our strategic plan. Above, Tove Larsen, Neva Beck and Alva Schneff.



An open house at the State Capitol to showcase the Agency's many diverse programs and projects (above) is one of the ways DOGAMI interacts with the governing bodies of the State. Feedback, collaboration and partnerships with a diverse group of organizations will also continue to help DOGAMI craft an agenda that meets the needs of all Oregonians.



Shaped in part by the DOGAMI Governing Board (above), our key performance measures should reflect not only how many maps or reports we produce, but how and why they are being used to benefit Oregonians on a daily basis. It is also important that performance measures be tied to the everyday management of the Agency as a tool for managing staff and resources.

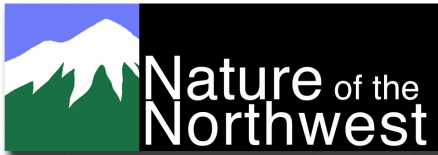




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The Nature of the Northwest Information Center, located in the State Office Building near Lloyd Center in Portland, is a partnership of the Oregon Department of Geology and the USDA Forest Service. In addition to offering a wealth of free information on outdoor recreation in the Pacific Northwest, the Nature of the Northwest is the best place to find outdoors guidebooks, software and maps for Oregon and Washington, including all publications by the Forest Service, USGS and DOGAMI. Contact the Nature of the Northwest at: [www.naturenw.org](http://www.naturenw.org)



DOGAMI is proud to be a supporter of the Oregon Paleo Lands Institute (OPLI), the only learning center in Oregon dedicated to the geologic landscape. Through field trips, classes, and their field center in Fossil, OPLI's mission is to protect, promote, and educate about Oregon's ancient and living landscapes, including the Earth's most accessible place to view the past 50 million years of life, while supporting the rural communities of the John Day Basin. Contact OPLI at: (541) 763-4480 or at [www.paleolands.org](http://www.paleolands.org)

## Oregon Department of Geology and Mineral Industries Strategic Plan 2009 - 2015

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