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RANKING MEMBER

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AVIATION

HIGHWAYS AND TRANSIT
RAILROADS



Congress of the United States House of Representatives

May 1, 2014

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Governor John Kitzhaber
254 State Capitol
Salem, Oregon 97310

Dear Governor Kitzhaber:

The U.S. Geological Survey along with partner universities has been planning for deployment of a public West Coast Earthquake Early Warning system. This is especially important to the State of Oregon given our current state of readiness and the likelihood that a major earthquake will occur sometime in the future.

I have joined with colleagues in Congress to try to secure the \$16.4 million reoccurring cost necessary to build out and manage the West Coast Earthquake Early Warning system. While this federal government effort is underway, there is an opportunity for the State of Oregon to preserve and strengthen seismic monitoring activities.

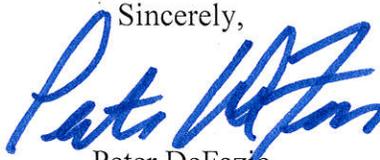
The University of Oregon (UO) and the University of Washington currently provide seismic monitoring through the Pacific Northwest Seismic Network. The UO, through faculty and associated technicians, is responsible for maintaining and monitoring stations located in Oregon. The Pacific Northwest Seismic Network locates more than 1,400 earthquakes per year greater than magnitude 1.0 in Washington and Oregon. Thus, the network provides an assessment of earthquake and volcanic risks.

Unfortunately, the State of Oregon has many fewer sensors, particularly in southwestern Oregon. Unlike the states of Washington and California the State of Oregon does not partner to support seismic monitoring. Many of the resources available in Oregon were procured using federal research grant funds but this funding source has not kept pace with the investments being made by our West Coast partners. For example, the State of Washington provides the University of Washington with \$600,000 for seismic monitoring and the State of California invests about \$1.2 million with UC-Berkley/Caltech.

There is a time sensitive opportunity to preserve the sensor capacity that we have in our state by purchasing a National Science Foundation array of seismometers scheduled to be demobilized and moved to Alaska in 2015. Purchase of this array of seismometers would greatly enhance capabilities of the Pacific Northwest Seismic Network in poorly covered regions of Oregon, contribute to the Earthquake Early Warning system, and increase research capabilities and funding opportunities for the University of Oregon.

Details of this important opportunity are attached. If you have any questions, please do not hesitate to contact me or Travis Joseph of my staff (202-225-6065).

Sincerely,



Peter DeFazio
Member of Congress

Enclosures

cc:

Senate President Peter Courtney
900 Court St. NE, S-201
Salem, Oregon 97301

House Speaker Tina Kotek
900 Court St. NE, Rm 269
Salem, Oregon 97301

Subject: Opportunity to Purchase NSF Seismometers

There is an opportunity to purchase part of an NSF-array of seismometers currently installed in Oregon. Purchasing these high-quality sites will enhance monitoring of earthquake and volcanic hazards, contribute to an Earthquake Early Warning System in Oregon and Washington, enhance the research capabilities of University of Oregon faculty, and strengthen Oregon's commitment to the Pacific Northwest Seismic Network. *It is cost-effective to purchase these installed and operating sites before they are demobilized and moved to another site, likely Alaska.*

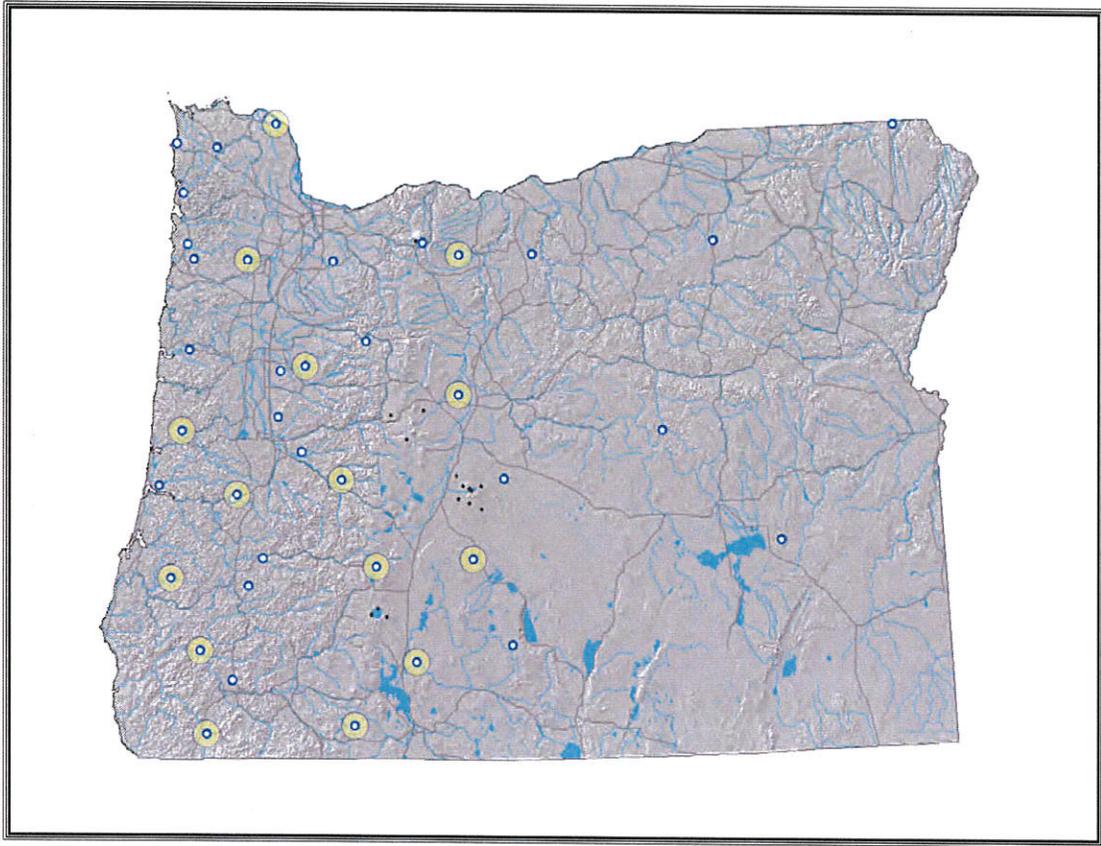
The **Cascadia Initiative** (CI) is an NSF-funded onshore/offshore seismic and geodetic experiment that takes advantage of an **Amphibious Array** to study questions ranging from megathrust earthquakes to volcanic arc structure. The Initiative was featured in Vice President Biden's list of "[100 Recovery Act Projects that are Changing America](#)" under the heading "Research to Avert Disaster: Understanding Earthquakes in the Pacific Northwest – Oregon, Washington, Northern California".

Amphibious Array: The amphibious array is comprised of state-of-the-art onshore and offshore seismometers. In 2015, this NSF-facility will move to a new site, possibly Alaska. However, the **onshore seismometers and vaults can be purchased:**

- 27 high-quality vaults, seismometers, and telemetry already installed in OR and WA.
- 15 of these sites are in Oregon (see attached figure) and provide enhanced coverage of the Cascadia subduction zone and the volcanic arc.
- Cost per site varies between \$44K to \$47K. We may be able to negotiate a bit. Total cost to purchase all 15 sites is currently ~\$670K.

Advantages of Purchasing 15 of the NSF array sites located in Oregon:

- Will greatly enhance capabilities of the Pacific Northwest Seismic Network in poorly covered regions of Oregon (effectively central and southern OR).
- Will contribute infrastructure to Earthquake Early Warning in OR.
- Will amplify research capabilities and funding opportunities for UO scientists.
- Will strengthen the University of Oregon's role in operations and maintenance of the Pacific Northwest Seismic Network.



Map showing the 15 NSF seismometers to be purchased (large yellow symbols). Blue/white symbols indicate modern, high-quality sites. Black dots indicate lower quality, vertical component seismometers.