



United States
Department of
Agriculture

Forest
Service

Gifford Pinchot
National Forest

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Dear Interested Citizens:

The Gifford Pinchot National Forest is in the process of evaluating a request for a special use permit to a research group to conduct a series of geophysical experiments on the Forest. The purpose of this letter is to notify the public and seek scoping comments.

The project is named GeoPRISMS (Geodynamic Processes at Rifting and Subducting Margins): a collaborative research project illustrating the architecture of the greater Mount St. Helens magmatic system from slab to surface. The main objective of this research project is to obtain high-resolution geophysical data of the magmatic plumbing system beneath the greater Mt. St. Helen area. Mount St. Helens was selected for this project because of the frequent and recent eruptions that ensure the presence of magma. In addition, there is a significant amount of previous research and data (geologic, petrologic, & geophysical) from which to build upon.

The researchers expect to publish results that will have a considerable influence on volcanic hazards assessment and advance the understanding of subduction zone processes. These data will be made publically available to the public and entire research community. The research team consists of members from Oregon State University, Rice University, Columbia University, the University of Washington, US Geological Survey (USGS)/Cascade Volcano Observatory, and USGS/Crustal Geophysics and Geochemistry Science Center, Denver.

Three data collection techniques have been proposed, and include passive-source seismic imaging, a magnetotelluric (MT) survey and active-source seismic imaging.

The Forest Service is planning to analyze the passive-source seismic imaging as well as the majority of the MT survey that will be outside of the Wilderness areas in a categorical exclusion (CE) this summer. The researchers request permission to work on field equipment installation starting September 2013 for the passive and MT portions of the project. For sites that use active-source seismic technology, the Forest Service will draft an environmental assessment (EA) beginning in the fall of 2014. This EA will also include those sites that use MT located in Wilderness areas.

Passive-source Seismic Imaging (University of Washington)

The research team will deploy broadband seismometers for a 2-year period, each will be visited every 3-6 months to collect data and check their status. Each installation includes: one sensor buried 3 feet into the ground; one plastic box the size of a cooler containing a sealed battery, GPS receiver, a power box, and a digitizer that writes the data onto a flash card; and one or two 2x3 foot solar panels mounted near the ground.

Magnetotelluric (MT) Survey (Oregon State University)

The MT instruments are small battery powered electronics/recorders contained in a shoebox sized instrument case (either metal or plastic Pelican case, depending on instrument). This is powered by a 12 volt external car/truck battery. The MT recorder case may be buried one foot underground, or if in a sensitive area, it may remain on the surface, covered by a tarp. Each MT instrument would be installed and record for between 1 to 21 days per location, following which each instrument is removed and



installed at another location. In contrast to the seismic experiments, all of the MT instruments do not have to be installed and operating simultaneously. At any one time it is unlikely that more than 16 instruments will be in the ground simultaneously.

Active-Source Seismic Imaging (Rice University)

The active-source seismic imaging will occur in five stages. Each stage involves the drilling of four to six 80' deep boreholes, the simultaneous deployment of 2,600 PASSCAL 'Texan' Reftek seismic recorders and the emplacement/detonation of 1,000 to 2,000-lb charges in the boreholes. Sensors will remain in place from two to four days and subsequently removed. Since the process occurs in five stages, this portion of the project will result in an aggregate total of 24 boreholes and 13,000 'Texan' deployments.

Further public involvement in regard to the active-source seismic experiment will begin in the fall of 2013.

The Gifford Pinchot National Forest is now seeking comments from individuals, organizations, local and state governments, and other federal agencies that may be interested in or affected by the proposed action. Comments may pertain to the nature and scope of the environmental, social, and economic issues, and possible alternatives to the proposed action. Your comments will help us assess the proposed action and/or modify its design.

The Forest Service would like your scoping comments by August 15, 2013. Please send your written comments to:

GeoPRISMS Project, c/o Ryan Cole
Gifford Pinchot National Forest
10600 NE 51st Circle
Vancouver, WA 98682

Comments may also be submitted by facsimile to: (509) 395-3424 or by email to: comments-pacificnorthwest-giffordpinchot@fs.fed.us. For comments submitted electronically, the acceptable file formats are .RTF (Rich Text Format) or .DOC (Microsoft Word format). For those submitting hand-delivered comment, office hours are Monday through Friday, 8:00 AM – 4:30 PM.

If you have any questions concerning this proposal, please contact Forest Service project lead Ryan Cole at (360) 891-5233 or racole@fs.fed.us and/or Chinling Chen, Natural Resources Planner at (509) 395-3418 or cchen@fs.fed.us.

Sincerely,

/s/ JANINE CLAYTON
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Forest Supervisor

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