USGS Cascades Volcano Observatory Turns 40!

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USGS Cascades Volcano Observatory
All photos USGS unless otherwise indicated
A sudden and dramatic increase in earthquakes

April 6, 1980, Cougar WA
Explosions blast open a crater at the summit
Scientists track activity, talk about hazards

Despite warnings
Loggers want back in woods

The Columbian Newspaper (WA) April 6, 1980
A bulge develops on the north flank

March 24, 1980

April 15, 1980
Bulge brings new warnings of avalanches


Bulging on the north face of Mount St. Helens continued today, triggering renewed warnings of possible avalanches in the area above Spirit Lake.

As a result, state officials are considering closing the area that includes 128 summer cabins, several lodges and several large organizational-type camps for groups such as Boy Scouts and YMCAs.

Scientists checking instruments Monday said Forsyth Glacier, on the shoulder of the formation known as Dog's Head, has risen 300 feet. And Goat Rocks, believed the plug from one of the last lava eruptions more than a century ago, now are as much as 200 feet north of where the formation was a year ago.

New readings on the bulging should be available Wednesday.

Slope changes on the north side now are several times what normally is considered a large movement. The standard "large" tilt change is 10 "micro-radians." One micro-radian is the movement of a one-kilometer slope upward or downward by one millimeter, or one part per million. A single micro-radian would be about one-inch displacement if the slope were roughly 16 miles long.

In this case, the movement of Mount St. Helens "is a few tens of micro-radians," according to U.S. Geological Survey scientist Bob Christiansen.

No one knows what the bulging means. It could mean movement of lava within the mountain. Or it could be that the peak is settling to a new shape because of extensive

A landslide could devastate Spirit Lake
May 18, 1980: Lateral blast
Ash goes east
Devastation and recovery
Scientists work to understand what happened and why
1980–86 intermittent lava dome growth

May 29, 1980

March 9, 1981
Lessons applied

...in 2004-08

USGS video of Mount St. Helens in 2005, 2006
Mission: provide volcano hazards assessments, detect unrest, give timely warnings about volcanic activity, and work with stakeholders to ensure that communities are “volcano ready.”