

# USGS Cascades Volcano Observatory Turns 40!

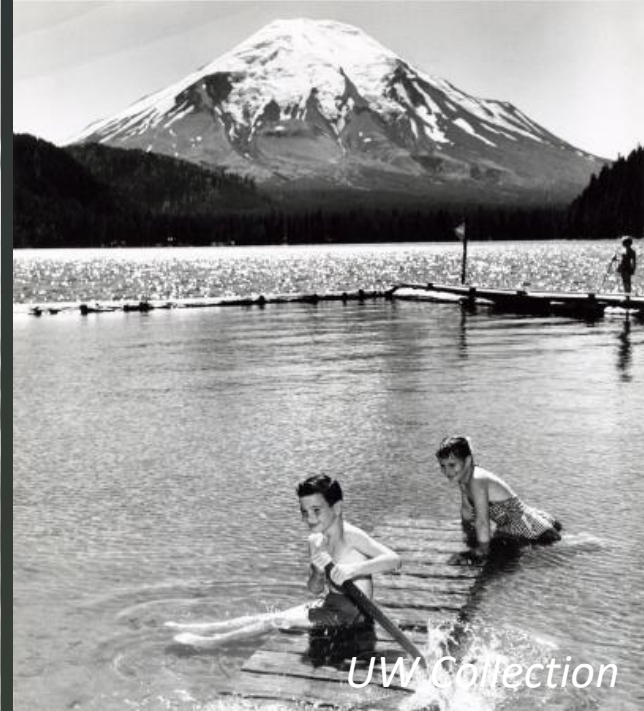
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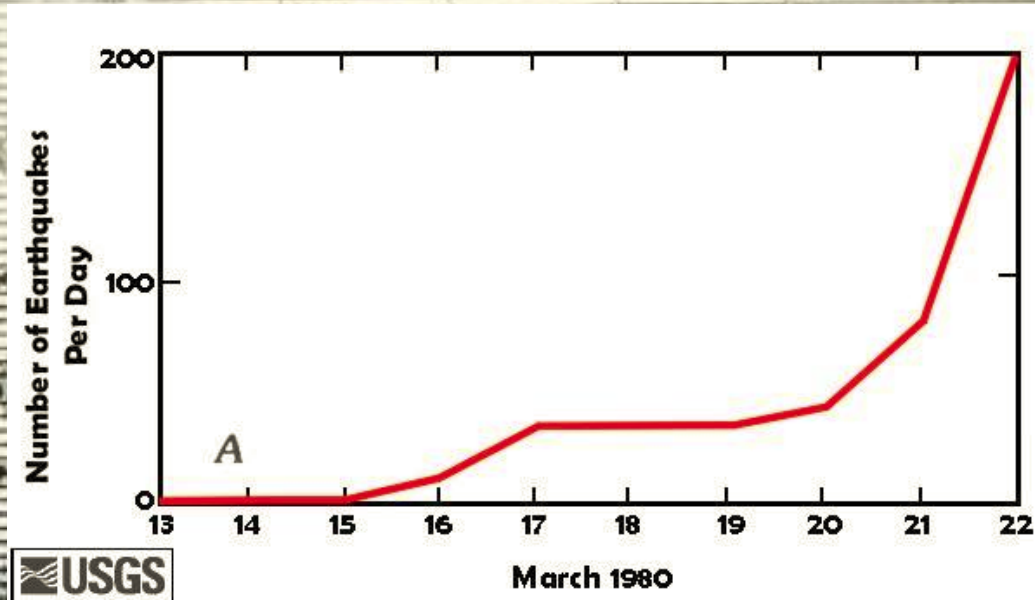


USGS

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# A sudden and dramatic increase in earthquakes



April 6, 1980, Cougar WA



**Explosions blast open a crater at the summit**

# Troops on watch at roadblock near Cougar

By NANCY TODD  
Columbian Staff Writer

COUGAR — National guardsmen armed with guns but no bullets stood watch at a new roadblock five miles west of here Saturday. They turned back tourists bent on a once-in-a-lifetime glimpse of erupting Mount St. Helens.

Several Cougar residents and business owners were fuming because the roadblock was cutting off their lifeline of tourist trade — with or without an erupting volcano. The roadblock had been moved early Saturday from east of town to west of town and it was keeping people — and their money — away.

Some residents, however, welcomed the roadblock, fearing that the glut of roving outsiders this last week would cause traffic jams if an emergency evacuation became necessary.

One businesswoman threatened to consult an attorney Monday if the roadblock was not removed. "We plan on going to see an attorney and getting an injunction," Sandy Mortenson, co-owner of the Wildwood Inn, said.

National guardsmen and women in Army

green combat fatigues complete with hard-shell helmets flanked the roadblock starting at 6 a.m. Saturday. The roadblock was set up where the state Highway 504 turns south into Clark County adjacent to Jack's Sporting Goods and Cafe. One or two local trucks stopping cars, assisting the same number of Washington State Patrol troopers.

The guardsmen carried various rifles or pistols — whatever weapon they are most skilled in using, explained Capt. Craig King of Seattle. But the guards were not carrying bullets, he confirmed. Some had sheathed knives on their belts.

Traffic allowed through the roadblock was restricted to local residents or workers, and the media, said Trooper Dale Johnson of the State Patrol office in Vancouver. Drivers' licenses were checked and the guards also had a list of Cougar and Swift-area property owners from the Cowlitz County Assessor's office, Johnson said.

Drivers permitted past the roadblock were issued a white piece of paper with this warning printed in red, "HAZARDOUS AREA — VOLCANO — YOU ARE ENTERING AT YOUR OWN RISK." It was issued by the state Department of Emergency Services.

The tourist traffic was not as heavy as last week, possibly because of Saturday's steady rain with billowing clouds hiding even the 8,422-foot mountain to the north.

"Will they let us in?" asked one determined to see the volcano spout — perhaps Sunday if the clouds lifted. She was told no. Under clear skies the mountain would be visible from nearby shores. "Yale Her" was visible from nearby shores.

Of the 100 cars that were in the roadblock, only a few were allowed to pass. The road was busy with cars and trucks. The road was busy with cars and trucks. The road was busy with cars and trucks.

Smoke rising above one of the sites which the National Guard will call home for at least seven more days, a National Guard spokesman said.

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businesses will take legal action against the roadblock. She and the others complained that they were given no forewarning of the move, nor have they seen any official evacuation plans for Cougar. She said the first learned of the roadblock on television Friday.

"I don't know what to do," she said. "I'll have to lay off."

"Do you know that the community of Cougar has less information (on the situation) than anybody else in the state?" Ken Katzer said.

Katzer said he had been told by a state official that the roadblock was a "good thing" because he, too, thought it would be more than enough to evacuate townspeople, much less frantic tourists. "You couldn't get out of here for nothing," Richards said.

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"If they're so concerned with safety, why is the Forest Service moving trailers here?" he said.

Katzer claimed that two or three Cougar or Yale area residents put pressure on Cowlitz County officials to clear the tourist traffic.

The possibility of an eruption of Mount St. Helens requiring evacuation of Cougar has worried Slayton since the volcano first vented 10 days ago.

"I had to get those people out of here, or they would have happened?" he said.

One local resident who contacted a state Emergency Services official about the traffic overload in Cowlitz District 7 Fire Chief Dick Slayton.

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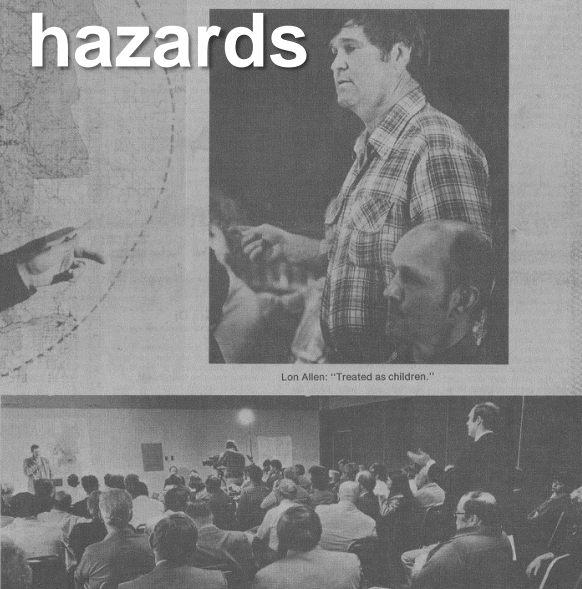
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## Scientists crack activity talk about hazards



Dwight Crandall: "Worst plausible cause."



James Holland: "Guessing game." (Staff photos by Dave Olson)

### Despite warnings

## Loggers want back in woods

By PAT MOSER  
Columbian Staff Writer

If enough molten rock spewed out of Mount St. Helens.

"The electrically charged pumice will cut off radio and telephone communications."

The pumice avalanche from as high as 120,000 feet in the sky could hit people below.

Daytime will turn to night; And the mud slides from melting snow will race as fast as 200 mph down the mountain like wet concrete spilling over roads, streams and homes.

Despite such warnings, the loggers want to return to the woods. They don't like the

roadblocks that have sealed off the woods surrounding the volcano since March 27, the day a hole appeared on the mountain for the first time in 123 years.

"We've been treated as children," Lon Allen of Harts Dell said Friday when 10 loggers met in Vancouver with county commissioners from Skamania and Cowlitz counties. "Loggers are independent, always have been. We are used to the woods and not afraid of the woods," he added, as others in the audience applauded.

Following similar comments, commissioners and five logging representatives began meeting with federal and state officials to draw up a plan which will allow timber companies to return to work at the

base of Mount St. Helens. The plan would have the logging firms assuming liability and still keep the tourists out.

Dr. Dwight Crandall of Denver, who wrote a 1978 U.S. Geological Survey report on the dangers of a Mount St. Helens eruption, based his warnings at the Friday meeting on a "worst plausible case," based on the mountain's history.

Such an eruption scattered pumice 40 inches deep within 15 miles of the volcano, 39 inches within 20 miles and 12 inches within 50 miles, Crandall said the expectancy of such an event would be once in every 2,000 to 3,000 years.

"Those are pretty good odds," said George Acker of Ober Logging in Carson.

"I'll work under those."

Crandall also pointed out that in 1800, eight inches of pumice fell within 15 miles, four inches within 20 miles and three inches within 50 miles, while in 1842, an inch fell within 20 miles and less than an inch as much as 50 miles away.

Because such eruptions have happened in the past, they are not being ruled out this time, Crandall said.

"I don't know if the new molten eruption will occur," Crandall said. "Day by day there are signs that the eruption is more likely."

James I. Holland, a Vancouver attorney representing a logging company, said, "It appears to be a guessing game."

He questioned whether the counties and the U.S. Forest Service had the authority to cut off access into the Mount St. Helens area, normally called for when there is a clear and present danger.

Dell Schulze, chairman of the Skamania County commissioners, said the plan for reopening logging areas in the Gifford Pinchot National Forest around Mount St. Helens is expected to be completed by Monday.

One route, N90 north of Swift Creek Reservoir and vulnerable to mud slides, should be kept open, loggers said, because 90 percent of the timber would be transported over the road.



April 10, 1980



April 27, 1980



May 4, 1980

**A bulge  
develops  
on the  
north flank**



# Bulge brings new warnings of avalanches

Columbian  
4/29/80

●Mount St. Helens Log. Page 14.

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 138 summer cabins, several lodges and several large organizational-type camps for groups such as Boy Scouts and YMCAs.

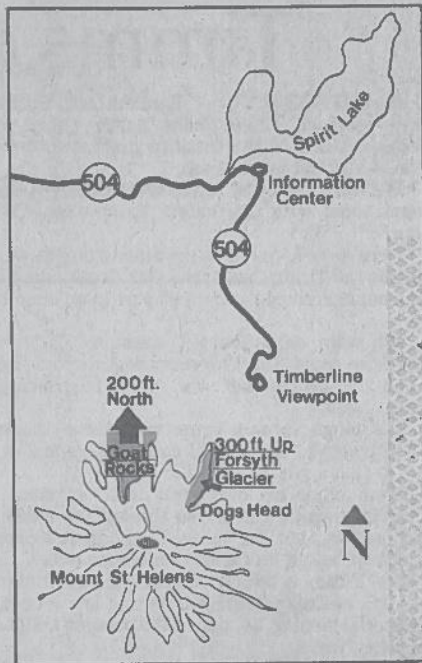
Scientists checking instruments Monday said Forsythe Glacier, on the shoulder of the formation known as Dog's Head, has risen 300 feet. And Goat Rocks, believed the plug from one of the last lava eruptions more than a century ago, now are as much as 200 feet north of where the formation was a year ago.

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

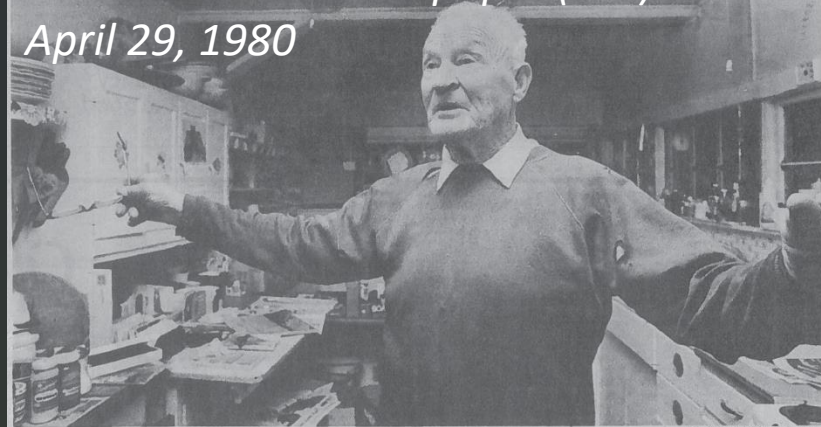


Spots of color locate areas of movement.

miles from the peak. Many smaller incidents are more likely, he added.

Thus far no slope changes have been noted on the south side.

The Columbian Newspaper (WA)  
April 29, 1980



CHERYL HASELHOBST/Columbian

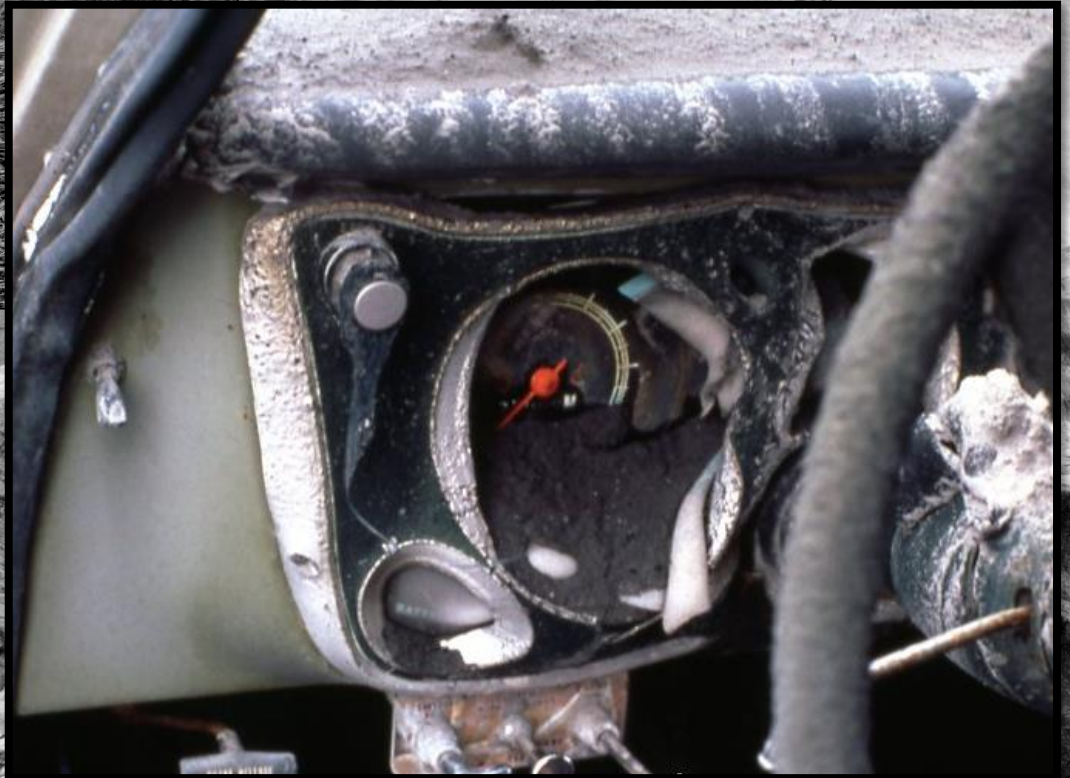
"Everybody wants a piece of old Truman now," says Harry Truman of recent offers of marriage and attention paid him by the media.

'Bunch of hooley'

## Fame stalks Harry Truman

SPIRIT LAKE (AP) — Harry Truman is a stubborn man who says just moved his bed to the basement of his home. "When you live through so many generations, you start to wonder them." he said. "I don't want to disillusion them."





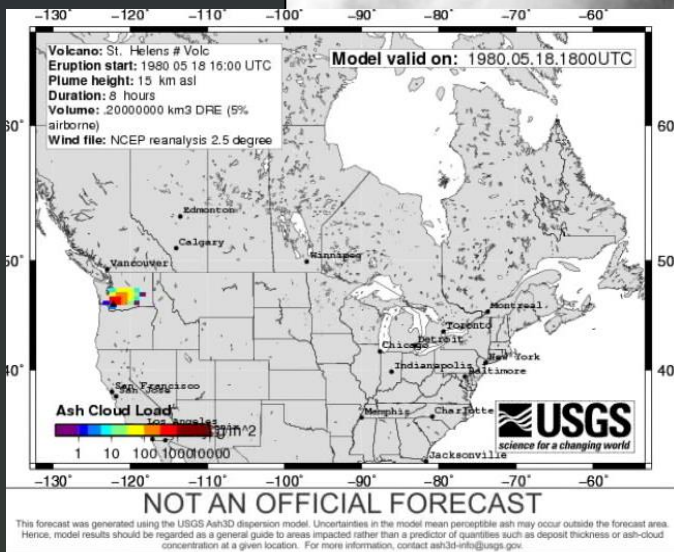
**May 18, 1980:  
Lateral blast**



## Landslide / Lahar

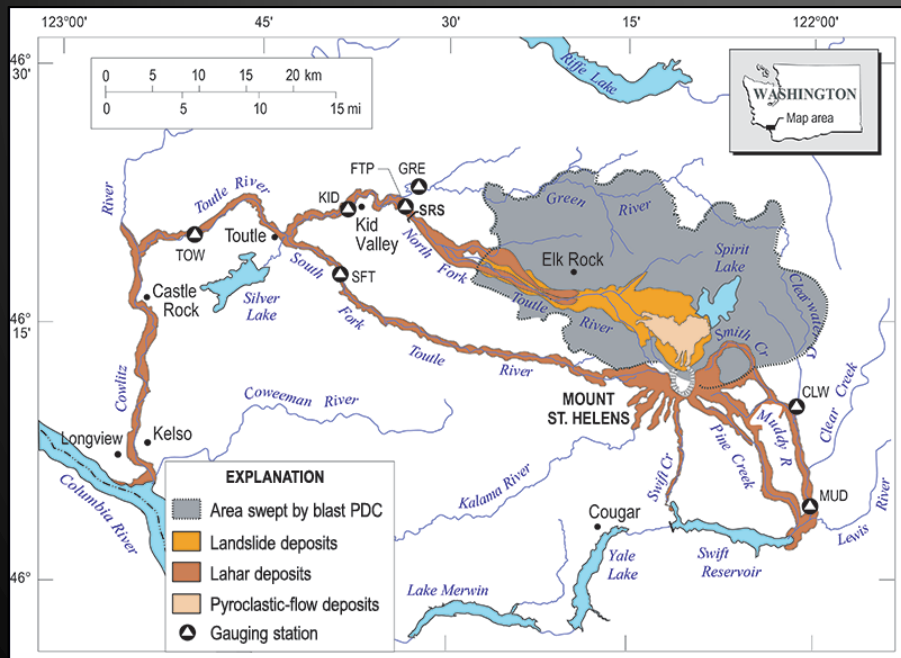


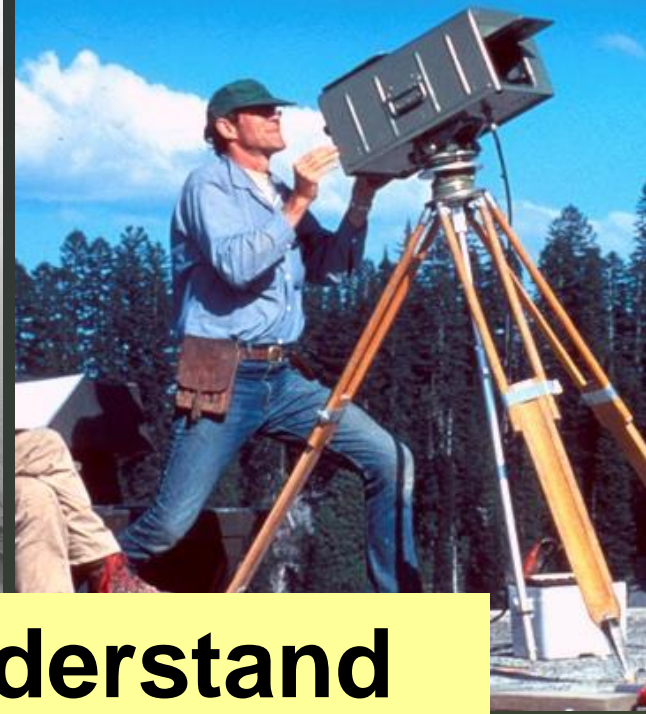
# Ash goes east





Devastation and recovery





**Scientists work to understand what happened and why**





*May 29, 1980*



**1980–86 intermittent  
lava dome growth**

 **USGS**

 **USGS**



*March 9, 1981*

# Lessons applied



## ...in 2004-08





# USGS Cascades Volcano Observatory (CVO)

the largest observatory in the USGS Volcano Science Center



Mission: provide volcano hazards assessments, detect unrest, give timely warnings about volcanic activity, and work with stakeholders to ensure that communities are “volcano ready.”