

DEPARTMENT OF HEALTH AND HUMAN SERVICES

PUBLIC HEALTH SERVICE
CENTER FOR DISEASE CONTROL
ATLANTA, GEORGIA 30333

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CDC--MOUNT ST. HELENS VOLCANO HEALTH REPORT #22

October 21, 1980

Recent Eruptions of Mount St. Helens

Over 2 months since the last major eruption on August 7, 1980, Mount St. Helens began its sixth major eruption on October 16.

A series of eruptions (phase 1) began as weak harmonic tremors at 8:47 p.m. (Pacific Daylight Time) on October 16. By 9:12 p.m., an ash plume had appeared and was rising to a height of 45,000 feet. Incandescent pyroclastic flow was observed on the north flank of the mountain, reaching approximately 1/3 the distance to Spirit Lake. The ash plume diminished and ceased to form after 11 p.m. The lower arm of the plume at 5,000 to 6,000 feet traveled in a southerly direction, while the upper part traveled in a southwesterly direction, reaching the Oregon coast in the vicinity of Lincoln City, Ore. The cities of Cougar, Wash., and Yale, Wash. (about 11 and 16 miles, respectively, from Mount St. Helens), received for several minutes a shower of pumice--pieces initially about 1/2-1 inch in diameter and then sand-sized pumice. A trace (1/8-1/64 inch) of light, powdery ash fell in the state of Washington at Ridgefield, Battleground, LaCenter and Vancouver. In Oregon the following cities reported trace amounts of ashfall: Portland, Forest Grove, Milwaukie, Salem, Scappoose, Hillsboro, Beaverton, and Lincoln City. The Oregon Department of Environmental Quality began monitoring the total suspended particulates (TSP) shortly after the eruption, but the results are not yet available. There have been no newly reported casualties around Mount St. Helens, and the 20-mile Red Zone is closed.

A second eruption (phase 2) began at 9:28 a.m. on October 17 and continued until approximately 10:15 a.m. The plume reached 47,000 feet, and the bottom arm of the plume traveled southeasterly toward north-central Oregon. A light dusting of ash was reported in Hood River and the Dalles, Ore. No ashfall was reported in Burns, Ore., or Walla Walla, Wash. Incandescent pyroclastic flow was also observed during this eruptive phase.

The third eruption (phase 3) occurred between 9:12 p.m. and 10:50 p.m. on October 17--with seismic activity, ash plume rising to 45,000 feet, and an accompanying incandescent pyroclastic flow. Traces of ash fell also at the Dalles and Hood River, Ore.

The fourth eruption (phase 4) began at 12:31 p.m. on October 18, with harmonic tremors and a burst of steam and ash at 12:35 p.m. The crater was observed to be growing at a rate of 15-20 feet an hour,

and soon measured 80 feet high and 235 feet across. The rate of growth had slowed to 16 inches an hour by October 20. The volcano thus appears still to be active, and further eruptions are very possible.

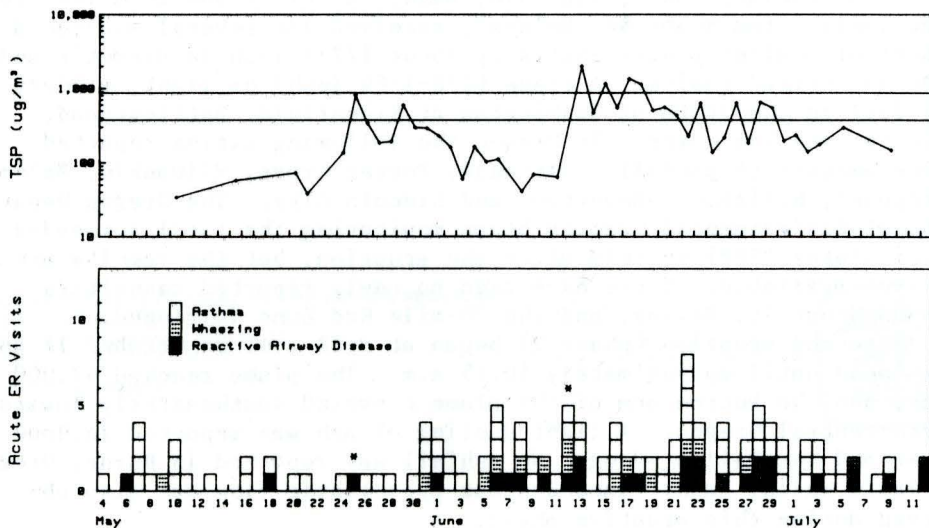
CDC Hospital Emergency Room Surveillance in Portland, Oregon

Including the fall following this sixth eruption, Portland, Oregon, has had 3 recent ashfalls from Mount St. Helens. A trace of ash fell after the second major eruption on May 25, and about 1/4-1/2 inch of ash fell after the third major eruption on June 12 (CDC--Mount St. Helens Volcano Health Report #14, July 18, 1980).

An acute hospital emergency room (ER) in Portland had increased numbers of visits for airway respiratory problems following each of the 2 previous ashfalls (CDC--Mount St. Helens Volcano Health Report #19, August 22, 1980). A large proportion of this increase represented visits for asthma, wheezing, or reactive airway disease. The daily visits to the ER for these respiratory conditions for May 4-July 12 are shown with the TSP levels for Portland in Figure 1.

CDC will continue surveillance of hospital ERs in the Portland, Oregon, Vancouver, Wash., area in light of the recent eruptions and the possibility of more eruptions in the near future.

Figure 1. Total suspended particulates (TSP) and emergency room visits, Portland, Oregon, May 4-July 12, 1980



CDC--Mount St. Helens Volcano Health Reports will be published on an ad hoc basis. Information in these reports represents the latest data reported to CDC; much of the information is preliminary in nature and subject to confirmation and change. It is distributed for the purpose of providing up-to-date health data from CDC and the many other groups involved in public health assessment. We hope to continue to receive relevant reports and data from others working on this problem.

The current mailing list will be retained for any future issues. Anyone who desires back copies or to be put on the mailing list should contact the Center for Disease Control, ATTN: Ms. Carolyn Forrester, Bureau of Epidemiology, Chronic Diseases Division, Atlanta, GA 30333.

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