

National forest around volcano suffers \$134 million in damage

VANCOUVER, Wash. (AP) — Mount St. Helens has inflicted \$134 million in damage to the Gifford Pinchot National Forest which surrounds the volcano, the U.S. Forest Service announced Wednesday.

Earlier, Gov. Dixy Lee Ray said a "very conservative" estimate of damage to state

and private property from the May 18 eruption was more than \$1.1 billion and expected to go higher.

Forest Service officials also estimated the blast and its aftermath killed 2,000 black-tailed deer, 300 elk, 20 black bears and 12 mountain goats. That count was based on

estimates of wildlife in the blast area.

An estimated one billion board feet of timber were blown down in the forest, but some of that may be recoverable, Forest Service officials said, depending on how soon logging crews are allowed in the area.

Meanwhile, the Weyerhaeuser Co. has begun rebuilding roads into timber operations around Mount St. Helens and is retrieving some logs from the Cowlitz and Columbia rivers, company officials say. They believe many trees blown down in the eruption may be salvageable.

Port of Seattle puts diverted ships low on the priority list

SEATTLE, Wash. (AP) — Regular customers at Puget Sound ports are getting preference over ships diverted from the Columbia River, clogged with mud from an eruption of Mount St. Helens.

Richard D. Ford, executive director of the Port of Seattle, told port commissioners Tuesday that shippers who were regular customers were "very concerned that their operations will not be interrupted."

Ford said Seattle and Tacoma port officials were handling vessels and cargo diverted from Portland and other Columbia River ports only on a "space-available basis."

Glenn V. Lansing, senior director of operations and facilities for the Seattle port, said there would be a 12 percent increase in business if container ships which normally call on both Portland and Seattle unload all their cargo in Seattle. If the same ships loaded all cargo in Seattle, the increase in outgoing containers would be 40 percent, he added.

Diversion of all steel shipments from Portland to Seattle would boost handling of that cargo by 45 to 55 percent, Lansing said.

However, Ford said he expected the additional business to bring "very little permanent redistribution of traffic."

Port of Portland sees \$7 million volcano loss

PORTLAND (AP) — The Port of Portland expects to lose between \$5 and \$7 million in revenue through the end of August because of silt choking the Columbia River from Mount St. Helens.

Dennis West, the finance and administration director of the Port of Portland, said Wednesday that the prediction involves the time between the volcano's initial angry eruption May 18 and the dredging of the river channel to a navigable depth of 40 feet.

West said all the projections were preliminary estimates that could change as more information becomes available. The port may lose \$3.25 million between May 19 and July 3, he said, when the channel is expected to be dredged to 35 feet.

Currently the channel is open to 25 feet. The port could lose another \$1 to \$2 million per month until a 40-foot channel is established in September, West said.

In the meantime, the Port of Portland will undergo financial austerity, said Executive Director Lloyd Anderson. He indicated the port may hold off on any expansion projects or purchases of new equipment.

Port officials forecast gloomy news in terms of the total financial impact of the clogged river. They say the community may lose \$13 million prior to July 1 and another \$4 and \$8 million for each month beyond that date while channel depth is under 40 feet.

The Army Corps of Engineers estimates that some 22 million cubic yards of debris and mud have invaded the Columbia from the volcano's aftermath.

The corps has established a July 3 deadline for opening the Columbia navigation channel to 35 feet — a depth that would allow fairly normal ship traffic.

Gas pipelines survive mud

SEATTLE, Wash. (AP) — Oil and natural-gas pipelines crossing the Toutle River have withstood the pressure of mud flows from Mount St. Helens and continue to operate normally.

Southwest Washington and western Oregon get most of their petroleum products and natural gas from the pipelines.

The Olympic Pipeline carries gasoline, diesel fuel and jet fuel from refineries in the northwest Washington to Portland.

The Northwest Pipeline carries natural gas from the Canadian border to Portland.

The natural-gas pipe's crossing of the Toutle is in good shape, John G. McMillan, chairman of Northwest Pipeline, said Wednesday. Like the oil pipeline, it is buried and protected.

"Silt and mud from the volcano have provided further protection for the pipeline, and we think the chances are remote that any damage will occur," McMillan said.



STEPHEN HARRIS
Writes "Fire and Ice"

Prof expects Spirit

Lake lava

They use break in weather

to rescue helicopter

SEATTLE (AP) — The volcano expert who predicted the eruption of Mount St. Helens says the mountain probably will erupt again and even send lava into Spirit Lake.

"We can probably expect a long cycle of intermittent activity, with explosions such as we saw last Sunday but of gradually diminishing intensity," said Stephen Harris.

"Hot rock will probably sweep into Spirit Lake. It will be very dangerous in that area," he said Wednesday.

Harris is a geology and humanities professor at California State University and author of "Fire and Ice," a book on Cascade Range volcanoes.

In the book, published in 1976, Harris said Mount St. Helens was the most volatile volcano in the Cascades. He

predicted it was likely to erupt before the end of the century. Since the eruption, Harris has updated the book.

The peak started spouting steam and ash March 27 and on May 18 it blew off its top in a destructive blast that coated Eastern Washington in grey ash. Another eruption Sunday scattered more ash to the west.

While a major explosion similar to the May 18 destruction is "unlikely," Harris said more eruptions like Sunday's can be expected as molten rock and gas push up within the mountain.

"What we are likely to see is the rise of a dome within the crater, a thick mass of lava," Harris said. "Gases will push against the dome, and force bits of it into the air."

Eventually the dome or "plug" will rise to the hollowed out north rim of the crater and lava could flow as far as Spirit Lake. The lake on the north flank of the mountain was reformed by the eruption with a mud slide making a new dam.

"Lava from St. Helens usually doesn't flow very far, only two to five miles," he said.

The lava will rebuild part of the summit blasted away, he said. "Parts of the damage could be restored within our lifetimes."

Harris advised tourists to stay away from the volcano. And when he was told about area residents and loggers wanting to go back near the mountain, he said, "As long as the mountain stays active, it's the height of foolishness."

An Army helicopter which sat for three days on the slopes of Mount St. Helens after being forced to land because of bad weather has been rescued.

A break in the weather on Tuesday allowed Fort Lewis pilots to return to the abandoned helicopter near Elk Rock, 10 miles northwest of the summit.

The craft's original pilots, Chief Warrant Officer Michael Capron and Lt. Ron Klein, washed ash and snow from the helicopter before flying it back to Toledo, Wash.

A five-man rescue team, which included a coroner and a forestry official, abandoned the helicopter about 6 p.m. Saturday in

heavy fog. They draped the helicopter with parachutes and other tarps to protect it from ash, and then hiked down the mountain about 1,800 feet where they were picked up by another helicopter.

"We were jumping off logs and getting buried in mud waist-high," said Capron of the walk down the mountain. "And we had to dig ourselves out with shovels. It was not very pleasant."

Capron said it took an hour and a half to walk to the second helicopter.

"Actually, it was in better shape than some of the helicopters left down here (at Toledo)," he said.

Both men agreed they made the right decision to abandon the helicopter, since

the mountain erupted again early Sunday.

Meanwhile, a government scientist says the gigantic ash cloud from the May 18 eruption of Mount St. Helens probably will reach the United States again early next week after traveling around the world.

"We were doing some rough figuring and it will probably take about 17 days," said Roland Draxler of the National Oceanic and Atmospheric Administration's Air Space Laboratory in Silver Springs, Md..

Draxler said the cloud reportedly passed over Gibraltar and North Africa on Saturday. The United Kingdom Meteorological Service was supposed to be tracking it, he said.

At 80,000 feet, it hunts victims

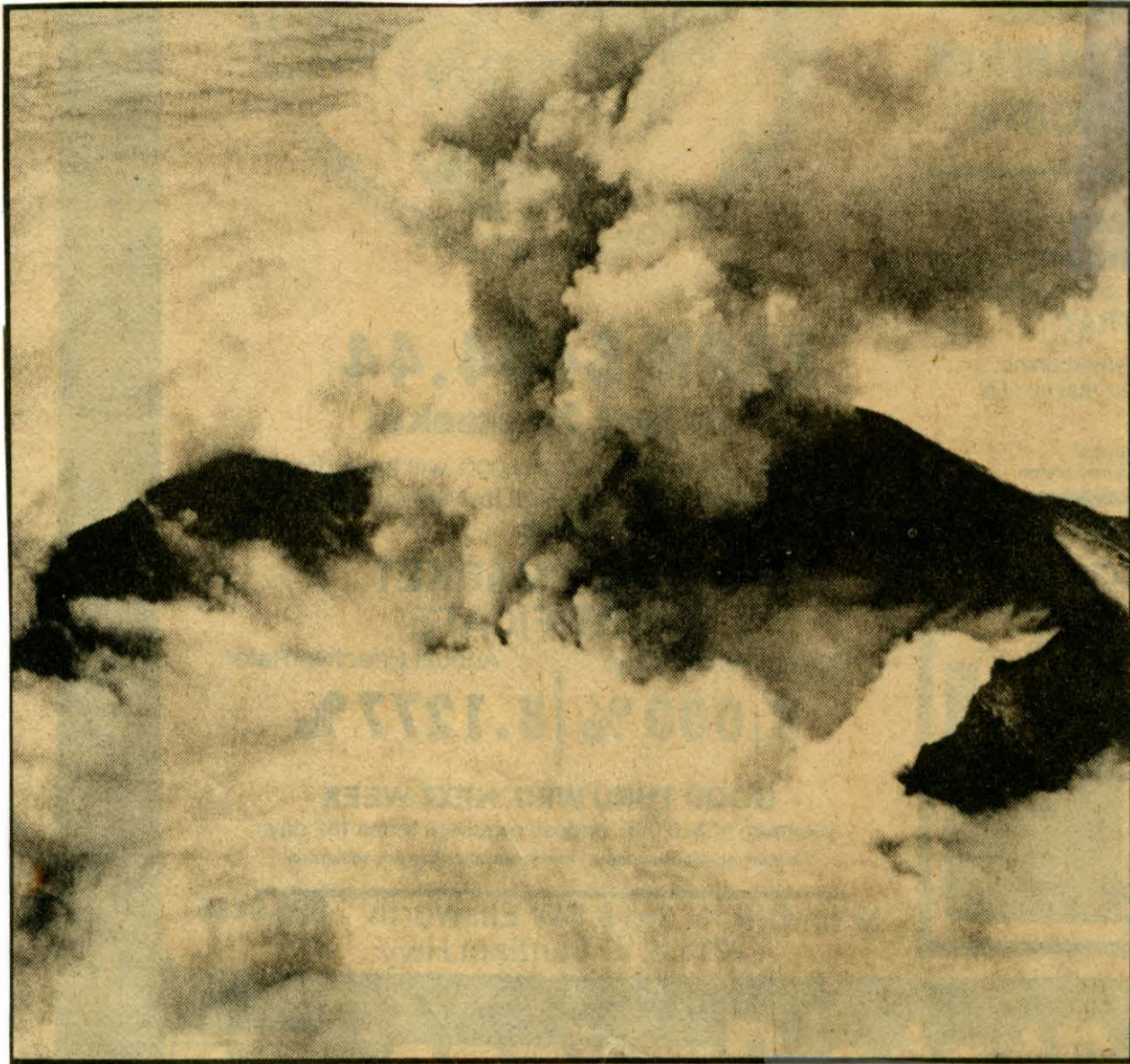
VANCOUVER, Wash. (AP) — The search for victims of the May 18 eruption of Mount St. Helens is being boosted to 80,000 feet or higher today.

The U.S. Air Force said Wednesday an SR-71 aircraft was being dispatched this afternoon from Beale Air Force Base, 40 miles north of Sacramento, Calif., in hopes that its sophisticated electronic gear will help ground and helicopter search crews find some of the dozens of persons still listed as missing.

The flight was requested by the Forest Service, in coordination with the Federal Emergency Management Agency.

Bill Kowalski, a spokesman at McChord Air Force Base, said the spy plane could "read license plates on cars" from altitudes of more than 80,000 feet while flying at more than three times the speed of sound.

Explosion: It snuffs out lives of young and old



AP Laserphoto

Mount St. Helens erupts, sending a plume through the clouds Wednesday.

VANCOUVER, Wash. (AP) — When Mount St. Helens exploded May 18, it snuffed out the lives of the young and the old.

Laughing young women...trusting children...self-reliant loggers...outdoor lovers...the death toll totals 21, authorities said late Wednesday.

Seventy-one persons are missing.

The eruption was accompanied by a red-hot heat wave with temperatures to 1,000 degrees Fahrenheit, deadly gases and a searing, ash-filled wind like a cosmic shotgun blast.

Death was so instantaneous that one man, not identified by authorities, was frozen in death on the seat of his car as he held a camera up to the volcano.

Authorities sadly have reconstructed many of the victims' final moments, without giving newsmen identities.

In one case, two men had been horseback riding about 12 miles north of the mountain. One was watering the horses when the mountain exploded. He apparently dived or was knocked him into a stream, surviving the blast.

His companion and the two horses were killed.

His face badly burned, the survivor stumbled eight miles through hot ash. Succumbing finally to gases or suffocation from the ash, he lay down and died.

Like a scene from the Vietnam War, an olive-green helicopter growled out of the sky.

Soldiers jumped out. They wrestled rubber body bags into the offices of the King County medical examiner in Seattle.

Inside the body bags were six of the volcano's victims. They died 10 to 14 miles from the mountain. Five of the six were found inside cars.

It was Saturday.

Autopsies were begun the next day — Ash Sunday,

when Mount St. Helens gave an encore eruption. Ash fell over southwest Washington, disrupting traffic, communications and utilities.

Later in the week, two other bodies arrived.

All eight victims died of inhalation of volcanic ash, said Dr. Donald Reay, chief medical examiner.

Toxic volcanic gases probably also contributed to the deaths, he added. Tests were continuing to determine what part, if any, gases played in the deaths.

"There are burns, but no blast or explosion-type injuries," said Dr. John Eisele, a King County medical examiner.

"It (the deaths) appears to have been asphyxial — more like smoke inhalation from a house fire."

Autopsies may be the best opportunity to learn about death from eruptions since Pompeii, an aide to Eisele said.

Eisele said it transcends pure science. Doctors stand to learn how people might protect themselves if caught in future eruptions.

Pilot would find satisfaction again if he could rescue more survivors

Jolene Edwards, 19, of Portland climbed onto 3,800-foot Elk Rock Peak in front of Mount St. Helens to get a better shot of sparkling Spirit Lake.

As she jockeyed for the best position, her mother, Arlene Edwards, 37, probably stood beside her, admiring the view.

They had about 80 seconds to live, authorities theorize.

It is a reasonable guess that they froze in unspeakable terror when the mountain exploded, sending a sky of searing air and literally a mountain of mud, earth and rocks down on them.

Their four-wheel-drive vehicle was found, flipped on its back, the parking lights melted.

Mrs. Edwards body has not been found.

Jolene was flung backwards several yards. Her body was found in a tangle of large trees that were

similarly cast away by the volcano.

The superheated blast of unbearable heat must have sucked the breath from both women in an instant, said Lewis County Coroner George H. Blomdahl.

Day B. Karr, 37, and his sons Andy, 11 and Mike, 9, all of Maple Valley, Wash., took a pickup truck to the northwest slopes of Mount St. Helens May 17, a day before the volcano burst.

An avid outdoorsman, fisherman and amateur photographer, Karr wanted to shoot pictures of the placid mountain.

A family man, he wanted his kids to share his adventure.

Like most others, he underestimated the might inside the bulging 9,677-foot mountain. Some scientists now say it packed more killing power than a hydrogen bomb.

"When they did not return as scheduled, the family was worried, and we reported him missing," said Barbara Karr, a kindergarten teacher.

A startling photograph was published in a local newspaper, showing a dead child sprawled in the back of a pickup.

It was the Karr's pickup.

Final identification and recovery of the bodies of Karr and two boys didn't come until late last week — and then only after family members tracked down a photographer to find out where he had taken the picture of the truck.

Publication of the picture was "extremely hurtful," Mrs. Karr said.

"There must be a better way to handle things like that," she said, suggesting that such photographs be shown only to authorities to give them leads to find the victims.

GREEN RIVER CAMP-GROUND, Wash. (AP) — Beneath a log in the Mount St. Helens blast area, covered with mud and ash, the body of Terry Crall lay huddled next to that of Karen Varner, his arm draped protectively around her body.

"It was quite a compassionate scene," said helicopter pilot Capt. Jess Hagerman. "He had obviously thrown his arm over her at the last minute."

Hagerman, 37, a husband and father of three, walked to his Huey helicopter and grabbed two heavy bags.

He and another Army National Guardsman placed the bodies of the two young Kelso residents in the bags and flew them to the makeshift morgue at the Toledo Airport northwest of the volcano. Another "bag mission" was completed.

"It's a bad job," said Hagerman, who ran rescue missions for the Marine Corps in Vietnam. "It's one no one enjoys doing, but it's a job that has to be done."

"The satisfaction was in finding survivors. That's fun."

In the first days after the thunderous May 18

eruption, National Guard crews rescued more than 125 survivors, but no survivors have been found since.

On May 18, Hagerman and Guardsman Randy Frantz airlifted two of the first people found alive.

"We picked up two loggers on contract to Weyerhaeuser along the north fork of the Toutle River," he said. "We first saw their pickup truck and followed their footsteps in the ash. They were about four miles northeast of the mountain."

"Both of them were exhausted and burned on

their hands and every exposed part of their body."

The next day, Hagerman helped rescue Michael Moore, his wife and their two daughters from an obliterated trail 13 miles north of the mountain.

"The blast area was more devastating than anything I saw in Vietnam," he said. "I know what that area used to look like. It was very lush with beautiful fields and lots of greenery. Now it's all gone."

Pat Panty-hose Kid on back!

ISSAQUAH, Wash. (AP) — Cowlitz County deputies say Armin Thompson's idea of tying panty hose around auto carburetors to protect them from volcanic ash appears to be sheer inspiration.

"It seems to be working pretty well," Cowlitz County Sheriff's Department Sgt. Bob Swanson said in Longview.

"I'm not sure where we heard about it. Our local newspaper had a story about it, and some of the deputies decided to try it," he said.

It's Thompson, Issaquah's coordinator of emergency services, who is taking credit — and razzing — for the idea. "Some people around here are calling me 'The Panty-hose Kid,'" says Thompson, whose plan received national attention.

The Issaquah police chief said his officers are not among those considering panty hose as patrol-car accessories.

"I'm not surprised it works, although people

have been telling me I'm crazy," said Thompson, who repeated his earlier warning that panty hose should not be used in place of auto air filters by the general public.

"Using the panty hose would be an emergency measure. If ash falls here, we might not be able to get to stores for more air filters, and the stores might be out anyway."

In the wake of the volcano's eruption, the state insurance commission is advising insurance companies to be liberal in their interpretation of policies covering volcano-related damages, said Whittier Johnson, a commission spokesman.

But the companies may not be so liberal as to cover damages to autos whose owners have tried panty-hose filters, said Foster Cronyn, president of the private Washington Insurance Council.

"Well, uh, yeah," said Cronyn when asked about panty-hose coverage. "I'm stammering because we're still trying to figure out a lot of these things."

Eruption changes book

SEATTLE (AP) — A geologist who also is in the publishing business had planned to go to press with a book about Mount St. Helens on May 19. But the mountain exploded on May 18.

Geologist Bob Jackson, owner of a publishing company in Renton, Wash., said, "As soon as we heard the mountain erupted, we ran to the print shop and made revisions."

"My friend, a helicopter pilot on missions over the mountain, supplied photographs. By the next morning, we were ready."

The book — "St. Helens" — has 40 pages of text and photographs and sells for \$2.95. It was written by a geologist friend of Jackson's, Lanny R. Ream, who grew up in Toutle near Mount St. Helens.

Ream works as a forest-conservation geologist in Coeur d'Alene, Idaho. Jackson said he also wrote much of the book, but said, "It would look tacky to have the name of the

publisher as an author."

The book was to have been co-authored by a geologist friend of the two, David Johnston. Johnston, who worked for the U.S. Geological Survey, was monitoring the mountain when it erupted and is among those missing.

"I was very excited by having the volcano erupt the day before our press run," Jackson said, "but that was dampened by losing Johnston. "He was helping us gather information but had to stop when the volcano got very active. That was a real loss to us — but we had no idea we'd lose him for life."

Another book on the mountain, by Beautiful America Publications of Beaverton, Ore., is to be out by the end of the week.

The Portland Oregonian newspaper has published a special book on the eruptions. It is to be available at the newspaper on Friday for \$3.95, \$4.75 by mail.

New cone on floor of volcano's crater puzzles scientists

VANCOUVER, Wash. (AP) — Mount St. Helens entered a phase of foreboding quiet today as puzzled scientists reported a new cone on the floor of the volcano's crater.

Search helicopters lifted off in low clouds and fog while forecasters promised clearing skies.

The death toll rose overnight to 22, as a Woodburn, Ore., man died in a Portland, Ore., hospital from burns suffered in the mountain's major eruption May 18. He was identified as Leonty Skorohodoff.

The number of missing dropped to 58 Thursday, down from 68 the day before, as people on the missing list continued telephoning the county sheriffs coordinating the search to say they were alive, said Rhonda Brooks of the Washington Department of Emergency Services.

The cone on the floor of the mile-deep crater was seen by radar and from spotter planes, which circle the peak 24 hours a day, weather permitting.

"A small edifice is being built on the crater floor and occasional glimpses into the crater by aerial observers indicate this may be a cone or rampart of pumice and ash," Don Finley, a U.S. Geological Survey spokesman, said today.

Scientists were unsure if this was a dome of magma pushing to the surface, a dome which eventually could signal the mountain was trying to rebuild itself.

Observers in the spotter plane, wearing infrared goggles, also reported seeing hot spots in the crater.

"It shows an increase in thermal temperatures, but we don't know what it means. It is not unexpected," said Finley.

Mount St. Helens continued to pose as many scientific questions as it answered. Best indications are that the mountain gradually is quieting down.

"It is one of the quieter periods we have had since the May 18 eruption," said Walter Conner of the Federal Emergency Management Agency.

Seismologists at the University of Washington in Seattle report only 11 earthquakes in the 24 hours ending at midmorning today and none of them was larger than 2.7 on the Richter scale.

Only one plume was spotted from the top of the mountain and, while it rose to about 11,000 feet, scientists said it mostly was steam.

"There has been progressively less ash each day since the eruption last Sunday, and by Wednesday there was no ash visible in the plume," said Finley.

As helicopters clattered over the blast zone Wednesday, Gene Smith of the U.S. Forest Service, coordinator of search-and-rescue efforts, said it was "extremely unlikely" that anyone remaining in the area since the thunderous May 18 eruption could have survived.

"We've overflown all those areas many times and checked them carefully," Smith said.

Search crews rescued 128 persons in the first two days after the eruption, but since then they have found only bodies and a few surviving dogs.

Glowing spots signal start of lava dome

VANCOUVER, Wash. (AP) — Glowing red spots sighted again today in Mount St. Helens' mile-deep crater signal the formation of a lava dome on the floor of the ravaged volcano, scientists said.

"It's most likely the lava dome starting to occur," said Tim Hait, a geologist for the U.S. Geological Survey.

The spots were seen early today by observers circling the mountain in a small U.S. Forest Service plane.

"It looks like a red molten piece of lead," according to the observers.

Charles Raudebaugh, a spokesman for the Federal Emergency Management Agency said, "there are indications the glowing area may be bubbling."

The spots first were noticed Thursday but were only visible to people wearing light-intensifying glasses. The spots seen today were visible to the naked eye.

Raudebaugh said on the plane's initial pass over

the mountain today, observers glimpsed one spot, about 30 feet in diameter. On another pass over the peak, the observers saw two spots, and on a third pass there was one spot about 50 feet in diameter.

The volcano was reported emitting steam but little or no ash. There was little seismic activity on the mountain.

Scientists said earlier the appearance of a dome in the crater could signal the mountain's first efforts to rebuild itself.

The death toll from the mountain's explosive eruption on May 18 now stands at 22. But the Cowlitz County coroner says he will begin issuing "presumptive" death certificates for the 55 people missing since the eruption.

The air search for the missing was called off Thursday after officials admitted the chances of finding any survivors now were "nil."

Hait said there is no way of telling whether the

dome would get big enough to fill the two-mile-long, mile-wide crater.

But growth of the dome probably would mean a decreased chance of heavy ash falls, geologists said.

However, the dome's appearance increases the chance for small lateral explosions, probably directed northward, because that is the direction the huge horseshoe-shaped crater is facing. Such blasts could threaten scientists near the mountain.

The thunderous May 18 explosion which blew some 1,300 feet off the top of the mountain was such a lateral blast, scientists say.

Cowlitz County Coroner D.F. Winebrenner said the presumptive death certificates will be for those persons proved to be near the volcano on May 18. Under state law, a coroner can issue a certificate if a body is not recovered and the official is convinced the missing person has died.

A small, air-supported ground search out of

Salkum continued today but was expected to last only a few days, officials said.

As for the decision to cancel the major air search:

"They (helicopters) have recrossed, regridded and re flown for literally thousands and thousands of miles," said Lewis County Sheriff William Wiester.

"We're not writing off any of the 60-odd people that are still missing," said Wiester, "but the chances of finding anyone else alive are nil."

The decision to suspend air searches, which have been carried out by Army and Washington National Guard helicopters, was announced Thursday by Wiester, Cowlitz County Sheriff Les Nelson, and Skamania County Sheriff Bill Closner.

"It is senseless to jeopardize the lives of the military search and rescue personnel," said Wiester.

"Without a doubt the missing list will never probably be wiped clean," said Nelson.

Volcano area may become new national park

SAN FRANCISCO (AP) — The eruption-devastated Mount St. Helens area is under consideration by the Interior Department as a candidate for a new national park.

The park status "would be

the best use for the area, considering the devastation and destruction," said a high National Park Service source who asked not to be identified Thursday.

Dust bowl could cost \$313 million on farms

YAKIMA, Wash. (AP) — The volcanic dust bowl of eastern Washington could cost \$313 million or more in crops, livestock and farm machinery due to ash fallout from the Mount St. Helens eruption, says Bob Mickelson, state agriculture director.

"I saw every degree of devastation much worse than I anticipated. I saw crops totally covered by the fallout," Mickelson said Thursday.

"Some farmers definitely will go out of business," he said. "Some have borrowed all the money they can. We've had drought and too much rain and cold in the past three years. It's been one disaster after another."

Mickelson, one of several top state officials to report on the aftermath of the May 18 explosion, said most damage was in a 20-mile-wide fallout swath from the southwest Washington volcano northeast to Spokane.

He said damage to wheat, barley and small grains — the state's biggest cash crops — could hit \$130 million.

Other major damage estimated by Mickelson were livestock, \$8 million; machinery repairs and replacement, \$25 million; horticulture crops, including fruits, vegetables, seed crops, speciality crops and bees, \$100 million; peas and lentils, \$15 million.

After rain, they breathe little bit easier

SPOKANE, Wash. (AP) — Residents of Spokane County were breathing a little easier today after rain doused the area, improving visibility on roadways and reducing dust from drying volcanic ash.

The National Weather Service says prospects for thundershowers through Saturday are good, decreasing Sunday and Monday with warmer weather.

Prior to the heavy rainfall that hit Spokane along with a few bolts of lightning late Thursday afternoon, Sheriff Larry V. Erickson extended the limited state of emergency. He did not, however, repeat strongly worded warnings to citizens to wear filter masks.

A statement released by the Spokane County Health District said:

"In our opinion, a sufficiently detailed analysis of the ash is not yet available for a complete evaluation of all risks of exposure to be made. However, from the knowledge gained so far, the short-term exposure currently being received by the general population is unlikely to pose a significant health hazard."

Ironically, 503,860 filter face masks already have been purchased for residents at an estimated cost of \$241,000. Ken Haskins, city purchasing director, said the masks have been distributed free since last weekend.

Elsewhere, road crews battled ash that was creating an increasing dust problem as it dried from recent rains. Officials said it could take all summer for cleanup crews to clear the state's highways.

The Washington State Patrol said all roads in eastern Washington were open.



AP Laserphoto

Off ash comes!

Bryan Turner hoses off his roof in Toledo, Wash., Thursday as he tries to remove the last bit of volcanic ash. Cleanup continues as the community slowly gets back to normal after eruptions on Mount St. Helens.

Volcano causes setback in return by lumber workers

PORTLAND (AP) — The May 18 eruption of Mount St. Helens caused a setback in the return to work of Western lumber-mill employees laid off because of the recession in the national housing market.

The Portland-based Western Wood Products Association said on Thursday that 50,000 workers were affected by mill closures and cutbacks during the week ending May 24 in 12 Western states compared with 44,000 the previous week.

There were 128 lumber operations in the path of ash fallout in Washington, Idaho and Montana that reported layoffs and varying degrees of operating difficulty, the association reported. Some mills near the volcano reported cutbacks because of flooding.

Out of 820 mills in the West, 310 were on curtailed schedules, up from 254 a week earlier. But only 97 were closed, down from 108 the previous week.

In Tacoma, the American Plywood Association said 4,600 plywood workers were idle in Oregon and 4,600 in Washington during the week ending May 24.

Parks reopen in Washington

SEATTLE (AP) — Eleven Washington state parks, closed by the eruption of Mount St. Helens, were to reopen today, the state Parks and Recreation Commission announced.

Six others will remain closed. They are Potholes, Olmstead, Ginkgo-Wanapum, Moses Lake and Riverside, all in eastern Washington, and Sequest near Castle Rock.

Eastern Washington parks to reopen include Steamboat Rock, Fort Simcoe, Camp Wooten, Crow Butte, Sacajawea and Squilchuck. Yakima Sportsman, Central Ferry and Lyons Ferry parks will reopen with limited facilities.

Sun Lakes State Park campground also will reopen.

In Western Washington, Ike Kinswa State Park, east of Chehalis, will reopen.

Park officials began accepting telephone reservations for Ike Kinswa and Steamboat Rocks on Wednesday.

Volunteers call a truce with the volcano

KELSO, Wash. (AP) - Weary volunteers who staffed the Red Cross Disaster Center here have called a temporary truce with Mount St. Helens and closed down.

But 250 cots are in place at Cascade Middle School in Longview, another 2,000 are stored in trucks in the parking lot, and kitchen equipment stands ready in case the volcano again decides to spread death and destruction again.

Earl Smith, 66, is a retired substation manager for the Bonneville Power Administration who has helped run the center since the mountain blew its top on May 18. He said the center was closed Wednesday because the federal government now is caring for the 28 persons who remained this week.

But before state and federal disaster agencies began operating, the Red Cross center was the only haven for terrified families fleeing crushed and buried homes in the Toutle River Valley, or for Kelso-area residents who feared the rising Cowlitz River.

The Red Cross has a federal charter that requires it

to provide quick assistance to those displaced by disasters.

Louise Carroll, a former motel manager who donated 10 days to the center, said as many as 240 people slept and ate there at one time.

The refugees were aided by about 50 volunteers who came from as far away as Seattle. As the center closed, Smith sent home the last of the red-eyed volunteers.

"They were just plumb worn out," he said.

One was Aaron Prather, a 17-year-old local volunteer who worked almost day and night running errands for the Red Cross. Prather answered a radio advertisement for volunteers the day of the volcano blast.

"I used him up. I couldn't bear to use him another minute," Smith said as the teen-ager stumbled home for a long-needed rest.

The Red Cross center operated without state or federal assistance, and Smith said he was amazed at the number of people who volunteered to help. "We

had to turn some away," he said.

"Man, I just can't say enough about them. I just can't believe the cooperation we have had, and are still getting right now," he said. The residents of the center were fed with donations from local supermarkets and fast-food restaurants.

The functions of the Red Cross center have been taken over by the recently opened federal Disaster Assistance Center at Huntington Junior High School in Kelso. Homeless people are being booked into motels by officials at the new center.

The federal operation is not a dormitory for refugees. Officials call it a "one-stop" center for aid — a place for filling out paper work, getting housing, food stamps and other assistance.

But while the relief now takes a different form, Smith and the other volunteers say they are well aware that Mount St. Helens still is active and could spew ash again at any time.

"We are on standby," Smith said.

Ash may lead to a loss of cattle-feed supplies

WASHINGTON (AP) — Cattle-feeding problems caused by ash fallout from the volcanic eruption of Mount St. Helens may deplete fall feed supplies in Washington state, Agriculture Department officials said Thursday.

"Grass is not coming through the ash and cattle are now being fed on hay fields," department officials told Agriculture Secretary Bob Bergland in their daily report on the eruption aftermath.

"This will cause a severe shortage of hay this fall," the report said. "A rush of cattle sales is expected."

In Idaho, the report said 48,000 acres of lentils now appear "to be dying. A small amount of spring barley (8,000 acres) is seriously damaged."

But the report said wheat seems to be surviving and the major remaining problem is damage the ash causes in farm machinery and vehicles.

Agricultural Stabilization and Conservation Service officials in Washington state also said they had been advised that fully loaded cargo ships will be operating on the Columbia River by the weekend.

They acknowledged, however, that the report conflicts with earlier assessments that it would take much longer to clear the channel of the river, a major transportation link.

Blaming ash, students leave

PULLMAN, Wash. (AP) — Almost a quarter of the 15,000 students at Washington State University have requested an early summer vacation, saying that ash blasted from Mount St. Helens is affecting their health.

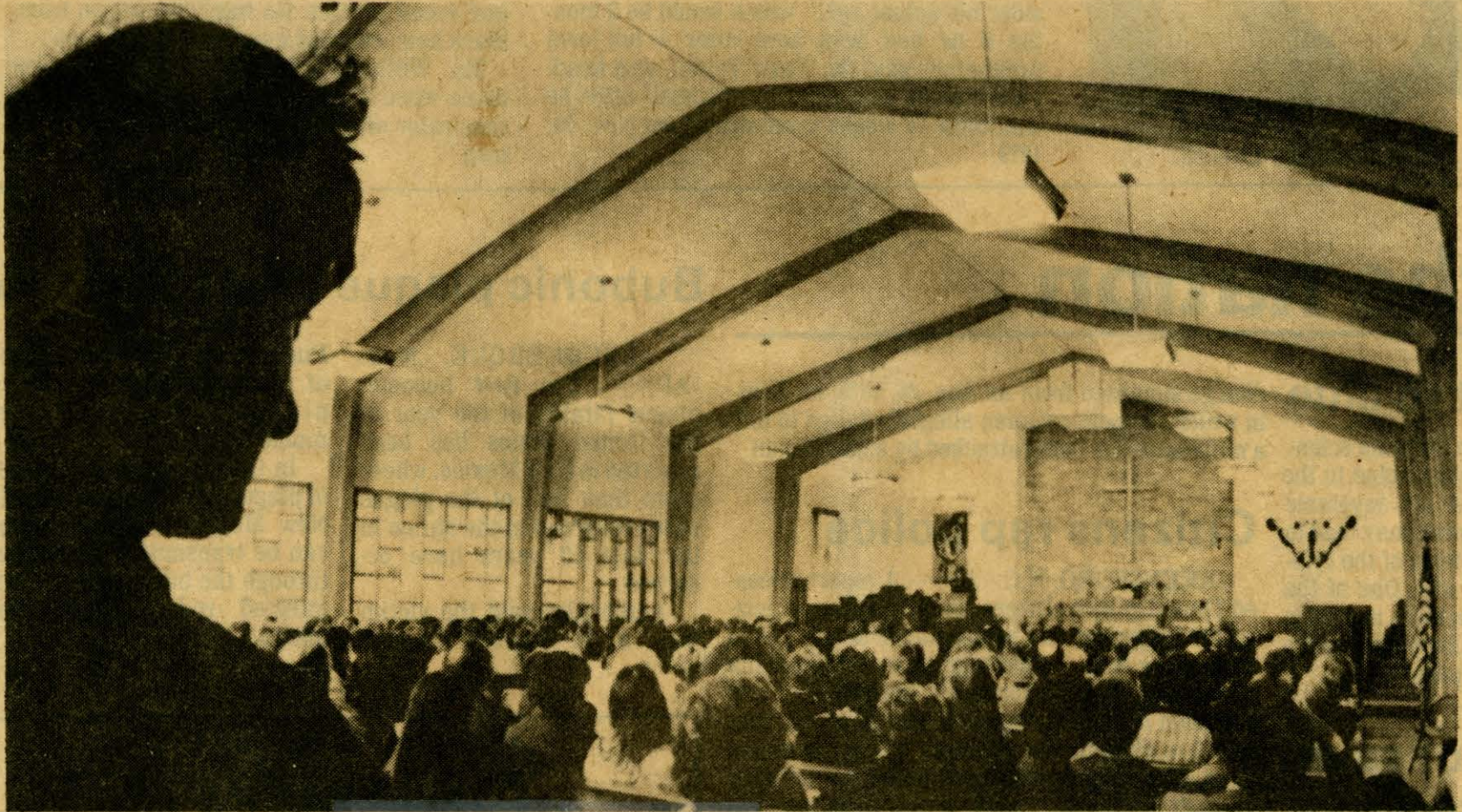
University officials said Wednesday they were surprised at the mass exodus and have cut off any more applications for early leave but said there was no evidence students are asking to go home to avoid flunking classes.

The university, located in eastern Washington about 300 miles east of the volcano, was covered with up to an inch of ash following the eruption of St. Helens on May 18.

University officials say the volume of leave requests was unexpected. As of noon Wednesday, about 2,087 students had been granted leaves.

The last day of classes for spring term is next Friday.

300 attend photographer service



AP Laserphoto

Mourners fill a Vancouver church Thursday during a memorial service for Reid Blackburn.

VANCOUVER, Wash. (AP) — More than 300 persons attended a memorial service Thursday for Reid Blackburn, a news photographer killed covering the May 18 eruption of Mount St. Helens.

Blackburn, 27, was seven miles from the summit when the volcano erupted. He was taking pictures for The Columbian, Vancouver's daily newspaper and his employer, and for the National Geographic Society and the U.S. Geological Survey.

Tom Koeninger, editor and vice president of The Columbian, said, "There never will be another Reid, but there will be others eager to attain his high principles and standards. To encourage them, The Columbian will provide \$5,000 to a Reid Blackburn college scholarship fund for photojournalists."

The service was held at East Vancouver United Methodist Church.

Quartz in the ash worries scientists

FRIDAY, MAY 30, 1980

LIVERMORE, Calif. (AP) — Scientists who scrutinized the volcanic ash from Mount St. Helens under an electron microscope now know what the dust looks like up close but don't know how dangerous it is.

The study, done at the Lawrence Livermore Laboratory, shows that the ash contains quartz, a free silicate, which can lead to silicosis, an often fatal lung disease associated with miners.

"If we didn't see the quartz, we wouldn't be so concerned," said chemist Richard Landingham. "We found the majority of the material is in the one-tenth to 10 micron size range, which is right in or near the respirable size range."

"Everything is all jagged and the shape determines how it attaches to the various membranes in the lungs. We'd like to quantify it to determine what the hazard really is."

Material larger than 10 microns — or about one-hundredth of a millimeter — can be stopped by the nasal passages but particles smaller than that pass into the lungs. A millimeter is about the thickness of a paper clip.

"We don't know the breakdown of the silica at this time, so we don't know whether to be concerned about silicosis," William Schmidt of the Environmental Protection Agency said in a telephone interview from Seattle.

Silica is a hard, glassy mineral, which when inhaled in dust form over a long period of time causes silicosis.

The ash analyzed by the lab was brought back from Ellensburg, Wash., about 95 miles northeast of Mount St. Helens, by Harry Rizzo, a lab employee on vacation in the area when the volcano blew up on May 18.

Scientists said they will do more tests, particularly to determine the mineral content of the ash, as well as tests on ash found 200 miles from the volcano, to see if the samples differ.

The method used to analyze the ash was developed to test radioactive fallout, lab officials said.

Scientists study tie to Cal quakes

VANCOUVER, Wash. (AP) — Just one week after the massive eruption of Mount St. Helens, the first of three major earthquakes rocked the Mammoth Lakes, Calif., area.

Scientists said they believed the distant events were not directly related, but the possibility of an indirect relationship had to be considered.

"We don't feel there is any direct cause-and-effect relation between the volcano and these earthquakes," said Dr. William L. Ellsworth, of the Office of Earthquake Studies at U.S. Geological Survey in Menlo Park, Calif.

"But it's conceivable that they are both symptomatic of some broad-scale regional adjustment between the two plates that we might have only the most elusive hints of," he said.

Recent evidence along the San Andreas fault in Southern California shows that stresses in the Earth's crust can build up over a wide area in a relatively short period of time, they said. So events which seem to relieve stresses — such as earthquakes and volcanoes — might be triggered at widely separated places.

There is no precedent for connecting events as distant as Mount St. Helens and Mammoth Lakes, which are 550 miles apart. Yet the areas are related in that both are part of the western fringe of the continental plate that underlies North America and Greenland.

This North American plate is one of dozens that make up the earth's crust, floating on a layer of more liquid rock.

The volcanoes of the Cascade Range, including Mount St. Helens, occur because the Juan de Fuca plate that makes up the ocean floor off Washington and Oregon is plunging slowly under the North American plate. When the basaltic ocean floor rocks liquify, lighter portions of them rise to the surface and gradually erupt as magma.

A different process is at work at Mammoth Lakes. There, the Sierra Nevada range is rising relative to the land to the east, the result of buckling of the crust that occurs as the North American plate presses against the Pacific plate.

Volcano nods off as jolts diminish

SPOKANE, Wash. (AP) — Earthquake watchers can sleep more soundly now that Mount St. Helens has quieted.

The nation's most-active volcano seems to be nodding off, says Leonard Kerry, director of the Newport (Wash.) National Geophysical Observatory.

"We were recording 15 to 100 sharp jolts a day in the weeks before Mount St. Helens exploded," he said. "We're the only earthquake-detection station in the continental United States which is manned 24 hours a day."

Like a bad dream, the volcano made insomniacs of the observatory's staff. "We weren't getting much sleep keeping track of the shakes and wiggles just before the volcano blew its top," Kerry said.

"There was a dramatic increase in the number of shocks after May 18, the Sunday when the volcanic explosion occurred. After the blast, we measured a total of less than 12 in the 10 days since the eruption," Kerry said. "It just died off about Monday, the 19th. Hardly any quakes at all."

The same report comes from the University of Washington earthquake-monitoring station in Seattle. The station had been measuring an average of 30 quakes measuring more than 3 on the Richter scale daily before the big blow.

"Now we are recording only 10 to 15 under 3 on the scale," said research geophysicist Linda Noson.

John Minch, spokesman for the Geophysical Station at Golden, Colo., said the quake outpost is a vital one. The station takes over earthquake-watch duties for the nation when other stations end their days at 5 p.m., he said.

Newport's highly sensitive probes are located 10 miles north of the town in a concrete bunker on the back side of a hill closed to human traffic. The probes are so sensitive they can pick up the steps of a deer in the woods.

Scientists live close to the station, and when a big quake occurs, bedside bells ring, rushing them to the aid of the man on duty. Fortunately, Kerry said, the bells ring seldom now in Newport.

"Let's hope it stays that way," he said.

Life insurance

before 7 years could be given

SEATTLE, Wash. (AP) — While those missing on Mount St. Helens will not be listed as officially dead until seven years have passed, their relatives may be able to collect on life-insurance policies sooner.

Whittier Johnson, a spokesman for the office of the state insurance commissioner, said, "There are no hard and fast rules" in a situation like this, but other disasters have set precedents.

Johnson said the families of those missing will have to establish that the missing person was in the vicinity of the mountain at the time of the explosion.

"It has to be established they (the missing person) were out there," said Johnson.

Statements from people who knew the person was going to be near the mountain would be helpful as would a statement from a rescue authority that there is no hope of finding the person alive.

"Proof does not have to be a body," he said.

"It is an established rule of law that the burden of proof is on the insurance company to prove the person is not dead."

Bob Sasser, a spokesman for State Farm Insurance in Bloomington, Ill., said insurance claims in disasters such as the Mount St. Helens explosion are "usually settled right away. We don't wait."

Sasser said if the company is "reasonably sure the person was there (near the mountain), it will settle."

Service begins to check areas for their health

SEATTLE, Wash. (AP) — A health-assessment program is being started by the U.S. Public Health Service in areas affected by volcanic ash from the eruption of Mount St. Helens.

The four-point program was described Wednesday by Dr. William Foege, head of the Center for Disease Control in Atlanta, in a meeting with Sen. Warren G. Magnuson, according to a release from the Washington Democrat's Washington, D.C., office.

Twelve persons are to be assigned to the project, which will be based in Seattle and will cover parts of Washington, Oregon and Idaho, Foege said.

He said the first part of the program will be to take daily air samples, special sampling of high-risk groups and analysis of the ash to determine long-range health hazards.

The second part will be the use of emergency rooms in 40 hospitals to monitor effects of exposure to the gritty, abrasive material, he said.

Part three will be to register police officers, cleanup workers, persons rescued from areas near the volcano and others who have been exposed to high concentrations of ash or whose exposure has been especially frequent.

The final part, Foege said, will be to collect information and distribute the data among scientists and to the public.

Sheriff may cite desperate father-in-law

for running a roadblock

SATURDAY, MAY 31, 1980

TOLEDO, Wash. (AP) — A desperate man who mounted a private search for his son-in-law in the rubble of Mount St. Helens may be charged with running a roadblock.

Lewis County Sheriff Bill Wiester said Thursday he hasn't had time to review the case of Don Crick, 53, of Toledo, but the sheriff said if Crick violated a roadblock under any circumstances, "he should be charged."

Crick said in a telephone interview Thursday, "If I get a citation, I'd be very much surprised. They'd be stupid to do it. Politically, it would be one of the worst things the sheriff could do. If they cite me, everybody here would be up in arms."

"I don't think there's a judge in the state or anybody else who would hang me for it," Crick added.

Five hikers cited last weekend for being in an emergency area around the volcano without permission face a possible maximum penalty of a \$1,000 fine and a year in jail, authorities said.

Crick said other searchers who accompanied him into the devastated area were relatives of the missing and "told me they would go to the sheriff's office and ask to be cited, too."

On May 21, Crick conducted a fruitless search for his son-in-law, Tom Gadwa; another man, Wally Bowers; and two others reported among the missing from the initial volcano blast May 18.

Crick said he was with three other Toledo men — Don McKuen, Tom McKuen and Sonny Bonds — and that about 20 members of the families of the missing also

were in the area, struggling through knee-deep ash to find survivors or bodies.

Crick said he was frustrated by what he calls the slow initial response by the Lewis County Sheriff's Department. Crick said he received written permission from sheriff's deputy Mike Copenhefer to enter the area but did not have the document with him when he stopped at a roadblock near the restricted zone.

Crick said deputy Grover Laseke, who was at the roadblock, radioed the Sheriff's Department and then informed Crick that his authorization had been rescinded.

"I told him I had permission and I was going through," Crick said. He then drove around the roadblock.

Wiester claimed the roadblock was manned by U.S.

Forest Service personnel. When they radioed him and asked if Crick had his permission to pass, Wiester said he told them "no."

"There's no political problem here," Wiester said. "We've had a tough situation going on. We're trying to protect people, to save lives. He ran the roadblock. This mountain could still go."

"No matter how good his intentions are, it's not the thing to do."

Wiester said Laseke has been too busy helping with searches to write a formal report.

Crick said he's given up hope of finding his son-in-law alive, but he will seek permission to look for the body.

"I have a daughter who would really like to know where her husband is," he said.

As searches end, here are the missing

VANCOUVER, Wash. (AP) — Here is a list of persons believed missing in the eruption of Mount St. Helens.

Officials are not optimistic that more survivors can be found and most searches have been called off.

In many instances, officials said, conditional death certificates will be issued for those still missing.

When a person's home town is unknown, or when there is conflicting information, the town is listed as unknown.

Dean Berky, California
Thelma Berky, California
Wally Bowers, Winlock, Wash.

Albert T. Brown, Seattle
Christopher Burdge, Seattle
Ron Conner, Tacoma, Wash.
Ellen Dill, Kirkland, Wash.
Robert Dill, Kirkland, Wash.
Arlene Edwards, Portland, Ore.

Bruce Faddis, Bend, Ore.
Robert Fitzgerald, unknown
Cathleen Ford, unknown
Jim Ford, unknown
Tom Gadwa, Montesano, Wash.

Joe Hackley, unknown
Paul Hiatt, unknown
Larry Jones, Nehalem, Ore.
David Johnston, U.S. Geological Survey
Bob Kasewetter, unknown
Michael J. Kelly, Tacoma, Wash.

Christy Killian, Vader, Wash.
John Killian, Vader, Wash.
Harold Kirkpatrick, Newberg, Ore.
Joyce Kirkpatrick, Newberg, Ore.
Robert Landsburg, Portland, Ore.

Robert Lynds, Kelso, Wash.
Gerry Martin, California
Alfred McWilliams, Kelso, Wash.
Gerry Moore, unknown
Shirley Moore, unknown
Keith Moore, Mossyrock, Wash.

Ken Moore, unknown
Ed Murphy, unknown
Eleanor Murphy, unknown
Don Parker, unknown
Rick Parker, unknown
Natalie Parker, unknown
Kathleen Pluard, unknown
Melvin Pluard, unknown
Paul Schmidt, Silverton, Ore.
Don Selby, unknown
Evlanty Sharipoff, Mount Angel, Ore.
Doug Thayer, Kelso, Wash.
Terry Thomas, unknown
Zhur Tirowa, Portland, Ore.
Harry Truman, Spirit Lake, Wash.
James Tuta, unknown
Velvet Tuta, unknown
Beverly Weatherall, Portland General Electric
Floyd Williamson, unknown
John Williamson, unknown
Nancy Williamson, unknown
Klaus Zimmerman, Spokane, Wash.

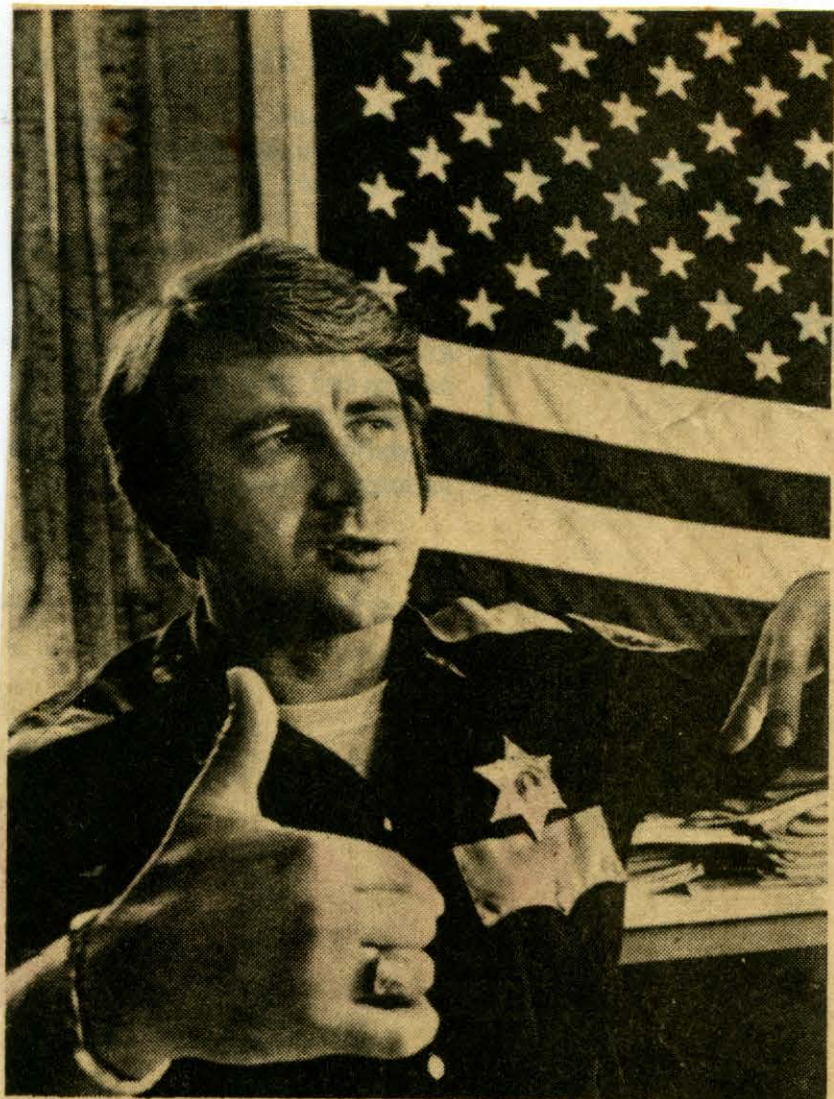
Ash in your hair? Hairdresser says 'don't fight it'

SPOKANE (AP) — When it comes to finding out what volcanic ash will do to hair, is seems only your hairdresser knows for sure.

In ash-laden Spokane, where the gray dust has not only clogged streets but also lodged in the hair of residents, hair salons report the ash may help hair.

"For those who wash their hair at home, I advise the use of a good detergent shampoo, not one with a soap base," says coiffeuse Bobbi Martin. "A soap shampoo won't remove the ash."

Ms. Martin said residents should be happy to be receiving, for free, a product only available on the beauty market at expensive prices.



AP Laserphoto

Deputy Copenhefer announces end to search.

Ground searches will end Sunday

SALKUM, Wash. (AP) — Members of the last ground operation searching for victims of the Mount St. Helens eruption are confident they could find more bodies — if given more time.

But the operation out of Salkum, with four Army helicopters, Lewis County sheriff's deputies, volunteers and rescue dogs, is scheduled to end Sunday.

Sheriff's Deputy Mike Copenhefer said Friday that with time, more bodies could be unearthed from ash and debris. "But it takes time," said Copenhefer, ground search coordinator. "And when it comes down to it, it's economics."

He also said prolonged ground search could endanger the searchers themselves, if the mountain erupts again.

Choppers out of Salkum ferried ground crews to two locations within ten miles of the crater Friday. An actual air search by Army and Washington National Guard choppers flying out of Toledo was called off Thursday afternoon.

Some 55 persons are still listed as missing as a result of the May 18 volcanic blast. The Salkum operation was the last official search being conducted.

Copenhefer said that at this point, a meticulous ground search is the sensible way to hunt for bodies. "There's a big difference in what you can see from 500 feet (above ground in a helicopter) and what's on the ground," he said.

He added that if the area received a heavy downpour, search conditions could improve because rain might wash off a much of the ash, which is believed to be covering bodies. "If we had a good downpour, this would be a new ballgame," he said.

He said search crews now have five "active hot spots," or areas where they think bodies are located. Searchers looked in the areas of three abandoned vehicles Friday, but found nothing.

The ground search crews have spotted five bodies, which have been recovered since the eruption.

U.S. mayors worry about Seattle meeting

SEATTLE (AP) — Jittery mayors have rung the phone off the hook, in light of the eruption of Mount St. Helens, inquiring whether Seattle is still a safe place to hold the U.S. Conference of Mayors.

They apparently don't know that Seattle is one of the few places in the Northwest that escaped volcano fallout. Even Portland, Ore., about 175 miles to the south, got dusted.

"Most of the people east of the Mississippi think Seattle and Portland are twin cities," said John Gunther, executive director of the national mayors' group. "We got a number of telephone calls from people who were concerned about their safety, about roads and airports being open and things like that."

He complained that television reports gave Easterners the impression the West Coast was knee-deep in ash.

"But we sure as hell aren't anticipating any ash in Seattle," Gunther said. "But some of the mayors said they wanted to come and take pictures, from Seattle, ha, of the volcano. I told them to look at a map."

To quell the fears, Gunther sent out a soothing letter this week to the more than 300 mayors expected for the five-day conference which opens June 8.

Botanist says timber is salvageable

PORTLAND (AP) — A Portland State University plant anatomist, who examined fallen timber on the north slope of Mount St. Helens, said Friday it is in good condition and salvageable.

Clyde Calvin flew into the Spirit Lake area with a Portland television reporter and cameraman to take a sample from the timber.

Forresters have said the thousands of acres of timber leveled by the May 18 eruption of the

volcano may be salvageable if the ash didn't penetrate the wood and if the cell structure of the wood has not been harmed.

Calvin took a sample from a tree only three miles from the crater and expressed optimism.

"It has pretty nice quality," he said of the sample taken. "It's torn on the surface but once you cut in a ways, the quality is very good."

Calvin said if the trees only three miles from the crater are in good condition,

Scientists say St. Helens may be in a rebuilding stage

VANCOUVER, Wash. (AP) — Lava on the floor of the half-mile deep crater on Mount St. Helens could be as hot as 950 degrees Fahrenheit, and scientists say it could be the start of a new peak.

Glowing lava appeared on the mountain Friday for the first time since the volcano began erupting March 27. The development raises the chance of explosions on the scarred flanks of the mountain, experts from the U.S. Geological Survey said.

Meanwhile, state Budget Director Lyle Jacobsen told Washington legislators that damage to state and private property from the

mountain's devastating eruption on May 18 will exceed \$2.7 billion.

Aerial observers Friday night said they couldn't see the glow, but scientists remained nearly certain the mountain had entered a new stage in its current activity. Reports Thursday night incated that the incandescent seams of lava covered about a sixteenth of a mile.

Scientists had predicted that the explosive eruptions of gas and ash would be followed by lava oozing to the surface to form a dome in the the crater.

"I think we can feel pretty sure we're at the beginning of the lava-dome stage," said Tim

Hait, a USGS geologist.

While noting that the level of earthquakes was the lowest since March, Hait and others were unable to speak in more than general terms as to what dangers the new development would pose.

They said the chance of another major ash fall had lessened but warned that lighter ones remained possible.

However, they said formation of a dome increased the chance of lateral blasts, albeit smaller than the cataclysmic explosion May 18, as well as the likelihood of superheated pumice cascading down the sides of the moun-

tain.

Any future lateral eruptions, like the earlier one, probably would be to the north, Hait said.

Scientists stuck to earlier predictions that there was little chance of quick-moving lava flows down the sides of the mountain.

"It would be like tar flowing down the mountain, slow and not very far," said Hait.

The crater is about a mile wide, a mile-and-a-half long and a half-mile deep, he added.

The death toll from the May 18 eruption stood at 22, with the Cowlitz County coroner announcing plans to issue "presumptive" certificates of death after ground searches for the 53 remaining victims are completed Sunday.

Crew rescues man, four dogs

VANCOUVER, Wash. (AP) — A helicopter crew has evacuated a 75-year-old man and four dogs from an ash-covered cabin 10 miles from Mount St. Helens, where they had holed up since the volcano erupted May 18, officials said today.

Ray Jennings had refused to leave his cabin before and after the blast but probably couldn't have gotten out anyway because of the ash-buried terrain, said a Skamania County Sheriff's deputy. The cabin was on the south side

of the mountain, away from the direct northbound blast of the eruption, the deputy said.

Jennings was airlifted out Friday, Rhonda Brooks of the state Department of Emergency Services, said today.

"He and his dogs both appeared to be in good health," she said.

Jennings was taken to the community of Yacolt, 20 miles northeast of Vancouver, for a reunion with relatives, Ms. Brooks said.

Jennings name never appeared on the list of missing, Ms. Brooks said.