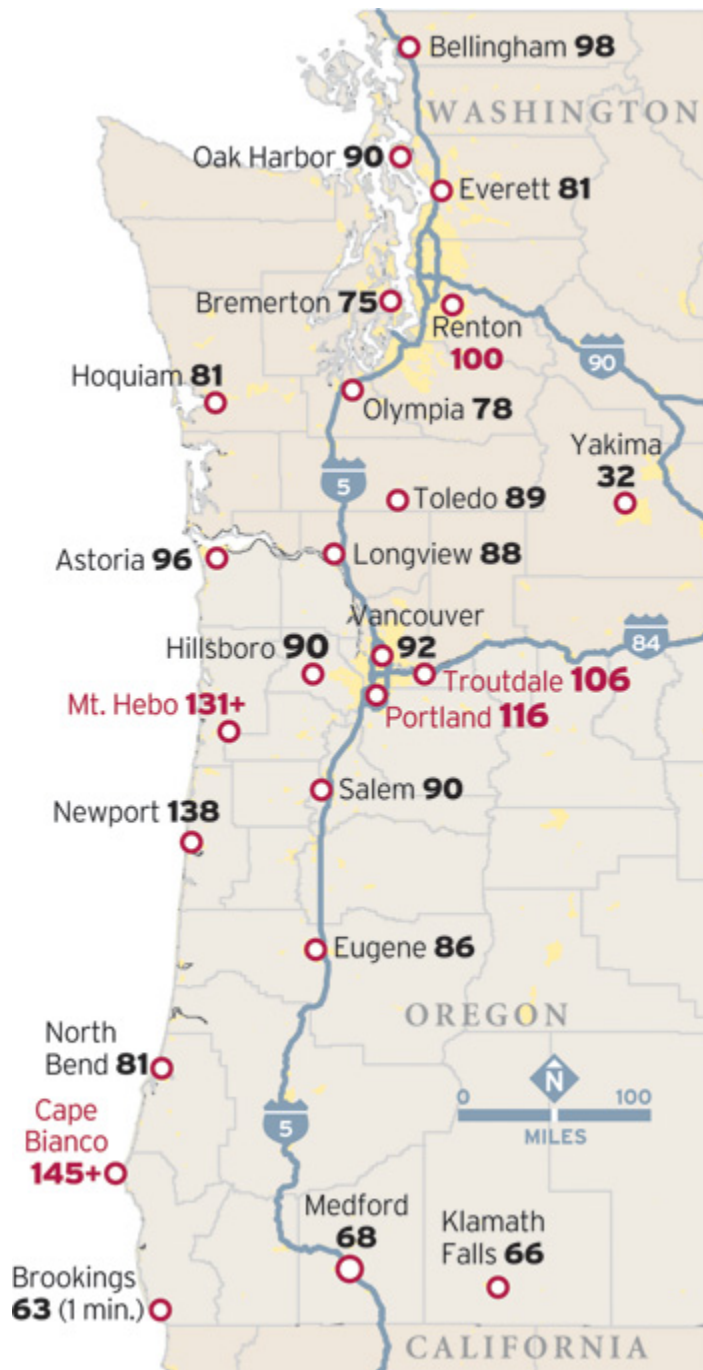


Columbus Day Storm 50 years later

On Oct. 12, 1962, an unusual mix of weather conditions boiled over into a hurricane-force blast that many Columbus Day Storm still howls through Portland history, 50 years later weather experts say is the most significant windstorm ever recorded in the Portland area. It did millions of dollars in damage and killed more than 40 people.

Peak gusts during Columbus Day Storm



The sky that Friday afternoon was like something Elizabeth Salsbery had never seen: yellow and green with a tortured jumble of clouds. Salsbery, who worked as a lab technician in a doctor's office in the Portland Medical Center on Southwest 10th Avenue, called her co-workers to the window on the 13th floor. They all agreed -- they had never seen anything like it, either. At 5 p.m., the office shut down and Salsbery made her way through the blustering wind to the parking lot and her parents' 1957 Chevrolet, which she had borrowed for the day while her pickup was in the shop. As she walked toward the Multnomah County Library, a gust blew her into a parked car; she could barely stand against its fury. But she managed to get to her car and pointed the Chevy east, heading toward the Ross Island Bridge for the 10-mile commute to Jennings Lodge, where her two daughters, Mary, 9, and Nancy, 13, waited. Her husband had left earlier in the day to go deer hunting in eastern Oregon. As she drove, the wind velocity increased and the world turned surreal: trees fell and power lines tore away from utility poles. At one intersection, a spaghetti tangle of arcing power lines blocked her way. She watched for awhile as the wires swayed back and forth, measured the interval when they were blown skyward, and then dashed through without a wire hitting the car. But the worst of that afternoon -- Oct. 12, 1962 -- was yet to come.

Two days earlier, and a thousand miles off the Oregon Coast, cold air streaming out of the Gulf of Alaska had collided with warm, moist air bubbling up just north of the equator. One storm formed, moved rapidly to the northeast, and inflicted \$1 million in wind damage Thursday morning in Gold Beach along the southern Oregon coast. Rain drenched Klamath Falls, snow fell in the Cascades and waves crested at 30 feet from Northern California to Depoe Bay. Eight homes were destroyed.

Then, Thursday afternoon, the same forces once again clashed. This time, however, they blended into something even more fearsome, becoming a storm that would relegate the earlier tumult to footnote status. The one brewing now would be forever known as, climatologist George Taylor said, "the pinnacle of a type of weather event that is quite common in Oregon ... a midlatitude synoptic-scale cyclone." Or, as it has come to be known: the Columbus Day Storm. At 7 a.m. that Friday, a U.S. Navy picket ship 340 miles off the Northern California Coast reported a wind gust of 92 mph and a precipitously steep drop in barometer pressure -- .66 inches in a three-hour period. The report came into the then-U.S. Weather Bureau on Northeast Marine Drive. Forecasters Jim Holcomb and Dub Yates were on duty. They had no weather satellites, no weather buoys, no super computers running modeling programs that see into the weather future. Instead they had hand-drawn weather maps and data gathered from ships at sea, weather balloons and observations taken on land and transmitted by teletype.

The forecasters were in quandary: could they trust the data? They were used to erroneous reports, and had to check each for consistency. "We looked at all these reports very carefully because it was all we had," KGW meteorologist Jack Capell said years later. By 9 a.m., the storm had moved to just 205 miles off Eureka, Calif. Winds were light, about 5 mph in Crescent City. But the barometer was dropping rapidly. Holcomb and Yates were convinced: they issued what was then the highest wind warning ever released by forecasters at the Portland Airport, calling for gusts to 69 mph for the Portland-Vancouver area by late in the afternoon. Glenn Boyer, another weather bureau forecaster, called Capell, who died in 2009 at age 86. "He said, 'Jack, you might want to get out here and take a look at what we're getting on the teletype,'" recalled Capell. The barometer, he said, was dropping like a rock.

Elizabeth Salsbery reached the Ross Island Bridge just as hundreds of other commuters did. Traffic was barely moving. Cars were rocking back and forth; the wind was screaming in from the south. As she inched to the east, a truck in the westbound lane was caught by a gust and tipped up onto the downstream railing over the Willamette River, 120 feet below. A wind gust just to the north on the Morrison Bridge registered 116 mph. Finally, she reached the east end of the bridge, close to the exit ramp to McLoughlin Boulevard. The wind increased. It lifted the rear of her two-ton car, she said, off the ground and set it back down. Other cars were doing the same. "The wind was really at its worst," she said. "I was scared -- what if I got blown over the edge? The water was down there." As she turned south into the teeth of the storm, trees, rooftops and other debris flew over, across and onto McLoughlin. The roof of a shed narrowly missed her car. The wind was so strong, the Chevy sedan started going backward. She floored it, asking the six-cylinder engine for everything it had, and her car crawled forward.

If they had been able to view the storm from space at 4 p.m., forecasters would have seen a monstrous, comma-shaped cloud, with a tight center rapidly rotating counter-clockwise and covering a large swath of the North Pacific Ocean. As the pressure gradients steepened, the wind slammed into southern Oregon, knocking out power and silencing teletyped weather reports. North Bend went silent; so did Coos Bay. Just before power went out, a report clattered in from Eugene: winds were a steady 67 mph, with gusts to 86.

The most powerful storm to hit the Northwest in modern history was taking direct aim at western Oregon, funneling devastating winds up the Willamette Valley between the Coast Range and the Cascades. Like water flowing through a hose to a narrow nozzle, the winds grew stronger as they were squeezed by the terrain.

George Miller was just two years out of the meteorological program at the University of Washington and working the swing shift at the weather bureau when the storm hit. Fifty years later, he still lectures and writes about Pacific Northwest weather. The storm, he says, had the strength of a Category 3 hurricane, its track hewing so close to the coast that it obliterated homes, knocked over trees and killed dozens of people from California to British Columbia.

"With this particular type of storm, you have extreme vertical motion going on in the atmosphere: air is being forced to rise and the air is trying to fill in behind that rising air. It's what's known as a meteorological bomb because of the rapidly lowering air pressure." It was that rapid change in pressure over a very short distance that produced staggeringly high winds: 179 mph at Cape Blanco; 138 mph at Newport; 131 mph on Mount Hebo; 127 mph at Corvallis; 116 mph on the Morrison Bridge; and 93 mph at the KGW studios in downtown Portland.

That was KGW's last reading for the next few days; flying debris tore down the wind equipment mast about the same time the TV station's 600-foot tower on Skyline Boulevard crumpled into a pile of twisted metal. Radio towers on Mount Scott also fell under the wind's onslaught. On Swan Island, cargo ships were torn from their moorings, their bows pointing north like giant weather vanes. Horses broke free from shattered barns at Portland Meadows, and ran wild through the streets. To the north, officials at the World's Fair in Seattle, which was in its last week, evacuated fairgoers from a swaying Space Needle. People said the skinny legs of the futuristic tower hummed a tune in the 80-mph winds.

The stories from the people who lived through the storm have an eerie similarity. Moments of terror from flying bricks, trees crashing and crunching through living rooms, bedrooms and kitchens, and roofs peeling off and soaring away. At least 70 percent of the 4,000 homes in Lake Oswego were damaged. In rural areas, barns were reduced to piles of lumber, dairy cows died by the score. One woman reported watching a prize chicken disappear into the tempest only to have it stagger back into her yard two weeks later, missing most of its feathers. A man in Forest Grove told friends that as his house crumpled around him, he nailed his coat to a windowsill to keep from being blown away. It was flying debris -- glass, metal and tree limbs, and falling trees -- that killed most of the 46 people who died in Oregon and Washington. Others died from heart attacks or electrocution.

Oregon Hall of Fame baseball coach Jack Dunn said the roof of his house near Alpenrose Dairy in Southwest Portland lifted off and split into two pieces, with one large portion flying into

his neighbor's living room and out the other side. The other part smashed through the corner of a garage and then took out a cluster of power poles. Ironically, Dunn said, his house was the only one that still had power. "We had electricity, but no house," he said.

Geoff Moorman was a 15-year-old freshman at Grant High School that afternoon. Just like Elizabeth Salsbery, he'd seen the sky turn shades of yellow and green. When the wind loosened the flashing on the house he shared with his parents and three siblings on Northeast Skidmore, he held the ladder while his father tried to fix the damage. Seconds later, a wind gust toppled the chimney, bringing a ton of bricks down onto Moorman's head and legs, shattering his right ankle and giving him a depressed skull fracture. His father fashioned a stretcher from an old door and a neighbor's station wagon served as the ambulance to Portland Adventist Hospital. "My right foot is still a half-size smaller than the left because of the cast I had to wear," Moorman said.

By 8 p.m., the winds began to ease, but still gusted to 50 mph. The storm tracked to the north, inflicting serious damage in Vancouver, Olympia, Tacoma, Seattle, Bellingham and into Canada. People spent the night huddled in basements, picking up broadcasts on battery-powered radios from the few stations still on the air.

Saturday morning dawned clear, calm and mild. Oregonians gazed stupefied at the ruin. Portland city officials estimated that 16,000 trees in the city were blown over. Breakfast was cooked in fireplaces and on camp stoves.

On Saturday morning, Oct. 13, 1962, Elizabeth Salsbery woke in Gladstone at her parents' house. She had been unable to get to her daughters, the way blocked by downed trees. But she found them safe and sound in the basement with their cats and the family dogs. Salsbery spent the day wringing water from soaked insulation in the attic where a portion of the roof was torn open, and later got one of the last pieces of plastic from the lumber yard to cover the hole. The damage was easily fixed; the psychological scars would linger. "I had nightmares for a quite a long time afterward every time the wind blew," Salsbery said. "I'd wake up screaming and scared."

David Denecke, who had watched towers fall on Council Crest, summed up that Saturday and days after as "all chain saws, all the time."

Power in some areas would not be restored for weeks. Hundreds of insurance claims adjusters arrived, and the phone company sent in repair crews and trucks on flatcars of trains. Candles,

lamp oil and kerosene were hard to find; gasoline couldn't be pumped from electric pumps at gas stations. But some things didn't stop. Workers and some fans cleared roof shingles and debris from the field at Multnomah Stadium (now Jeld-Wen Field) before the Washington-Oregon State football game. The Huskies won 14-13.

Although storms with the same genesis would strike the Northwest in the years since -- most notably in November 1981, December 1995 and December 2007, and some with even lower pressure readings -- the Columbus Day Storm may never relinquish its title as the Storm of the Century.



Meteorologist Wolf Read, who maintains the Storm King website, said the sudden violence of the storm bowled over or snapped 1,000-year old trees in Pacific Northwest forests. The region wouldn't see winds as powerful as the Columbus Day Storm until the Great Coastal Gale of '07, which while not as sudden and violent, had winds that lasted a longer time. In both storms, forests were annihilated by "windthrow," a natural phenomenon in which large patches of trees -- often near clearcuts or roads -- get blown over en masse, their trunks snapping off just above the ground.

And while the U.S. Weather Bureau issued one of its highest wind warnings ever in advance of the Columbus Day Storm, it wasn't until 2002 that the National Weather Service in Portland was authorized to issue a wind warning using the word hurricane, the meteorological equivalent of turning a rock band's speakers from 10 to 11. Five years later, that first warning was issued in advance of the Great Coastal Gale of '07.

But Read still stands in awe of the Columbus Day Storm, also known as the Big Blow and the Terrible Tempest. While other storms like 2007's may slowly erode the memory of the Columbus Day Storm, it remains "an outlier, a singularity," he said. "An event like the Columbus Day Storm probably won't happen again for another 100 years, maybe even 1,000."

Sources: The Storm King website, Office of the Washington State Climatologist, Oregon Climate Service; "The Oregon Weather Book," by George Taylor and Raymond Hatton.



Pittcock Mansion suffered extensive damage from the storm, but was eventually restored to its former grandeur.



Falling trees did a tremendous amount of damage, as seen here in Salem where a couple surveys the damage to their 1957 Ford. *Courtesy of Mike McDonald*

By the numbers

46: People who died in Oregon and Washington

317: People hospitalized in Oregon and Washington

15 billion: Board feet of timber lost in Oregon and Washington, enough to build 300,000 homes

179 mph: wind gust at Cape Blanco

138 mph: wind gust at Newport

131 mph: wind gust at Mount Hebo

116 mph: wind gust recorded on Morrison Bridge

104 mph: wind gust at Portland International Airport (estimated)

53,000: Homes damaged in Oregon and Washington

1 million: People without electricity in Oregon and Washington

3: Equal to Category 3 hurricane on the Saffir-Simpson scale

\$1.25 billion: Estimated damage cost in 2012 dollars (some estimate \$3 to \$5 billion)

16,000: Trees blown down in Portland

28.84 inches: Barometer reading, second only to the 28.69 inches value achieved during the December 12, 1995, storm.

4:15 p.m.: Weather observer writes "Abandoned Station" on the weather observation form in Corvallis. The only time in the history of the Pacific Northwest that an officially supervised weather station was abandoned due to high winds.

Sources: National Weather Service, "The Big Blow," by Ellis Lucia; "West Coast Disaster," by Dorothy Franklin; "The Weather of the Pacific Northwest," by Cliff Mass; "Weather Extremes of the West," by Tye Parzybok; "The Oregon Weather Book," by George H. Taylor and Raymond R. Hatton.

Other significant windstorms in Oregon

Jan. 9, 1880: Often referred to as the Storm King, winds gusted to 80 mph in Portland and trees up to eight feet in diameter were blown down. Tree loss rivaled the Columbus Day Storm. "If cyclones competed for 'Strongest Storm on Record,' the final round would probably be between the windstorm of January 9, 1880, and the Columbus Day storm of 1962," says climatologist Wolf Read.

April 21-23, 1931: Most damaging windstorms come in off the Pacific, but this storm brought freakishly strong winds from the east, bringing down trees and 48,000 pounds of dust per square mile over northwest Oregon. Ships at sea reported visibility so low from the dust they navigated "as in a fog."

Nov. 13-15, 1981: Actually two windstorms, with the highest winds to hit the Pacific Northwest since the Columbus Day Storm. The strongest winds in Oregon were on Nov. 14, with 85-mph gusts on the Morrison Bridge. Hundreds of thousands lost power, and 12 people died in Oregon and Washington.

Dec. 11-12, 1995: High winds included gusts of 119 mph at Sea Lion Caves, 107 mph at Newport and low pressure readings at Astoria equaled a Category 2 hurricane. Although some wind gusts matched or even exceeded the Columbus Day Storm, the storm did not track as closely to the coast, sparing western Oregon heavy damage.

Dec. 1-3, 2007: The Great Coastal Gale of '07, while not having winds that were as powerful as the Columbus Day Storm, was unprecedented for its long duration and accompanying major flooding. "Even though the October 1962 storm proves stronger in overall wind speed at many locations, the Dec. 1-3, 2007, gale completely outclasses the Columbus Day Storm -- and probably any other windstorm in the modern record -- in terms of the duration of high winds," Read said.

Lynne Palombo of The Oregonian staff contributed to this report.

[--Stuart Tomlinson](#)