

15 Miles From Ground Zero

Mount St. Helens, revisited—unleashing the power of forestry.

Words by Jim Petersen. Photos by Mike McMurray.

At 8:32 a.m. on Sunday, May 18, 1980, a primeval force up from the basement of time decapitated the crown jewel of southwest Washington's Cascade Mountain Range. In a single killing moment, more than a cubic mile of Mount St. Helens' splendor rocketed into the heavens. It would fall back to earth in the form of a powderlike ash that blanketed communities as far away as Kellogg, Idaho. I know this because my mother filled a quart Mason jar with the stuff, declaring on a handwritten label that she had collected it on the back patio. I still have that jar, which I keep as a reminder that my mother never threw any-

thing out, including volcanic ash.

The rock-filled lateral blast that accompanied the mountain's beheading moved 23 square miles of debris across its heavily timbered north-northwestern slopes for 18 miles at more than 650 miles an hour—roughly the speed of sound—smashing everything in its murderous path.

Within 15 miles of ground zero, 670-mile-an-hour winds blew at 680 degrees Fahrenheit, ensuring that what was not flattened or pulverized was incinerated, if not by searing winds, then by the 1,300-degree pyroclastic flow that rushed down the mountain at some 200 miles an hour. The

rushing Toutle River mudflow swept away 221 homes and God only knows how many vehicles before reaching the Columbia River, where it plugged shipping channels.

The thermal energy released by the blast was later pegged at 24 megatons (24 million metric tons of TNT), more than 1,900 times the energy released by “Little Boy,” the 9,700-pound, 12.5 kiloton atomic bomb that flattened six square miles of Hiroshima on Aug. 6, 1945, instantly killing 60,000.

In the eternal moments that followed the Mount St. Helens' eruption, 57 lives were lost, together with an estimated 5,000 black-tailed deer, 1,500 Roosevelt elk, 200 black



Looking north toward Mount St. Helens in 1994, 14 years after the May 1980 eruption sent more than a cubic mile of volcanic debris into the stratosphere, reducing the majestic peak's height by 1,314 feet. Plantations on the south side of the mountain were spared, but pulverized rock moving at the speed of sound destroyed 230 square miles of timber on the mountain's north side. Spirit Lake, in the distance on the left, was momentarily drained by one of the largest landslides in recorded history. Debris moving at 155 miles an hour transformed the lake into a 600-foot-high wave that obliterated the heavily forested north rim. The timberland in the foreground is some of the most productive on earth. It is an ever changing landscape featuring seedlings, saplings, thinnings, clearcuts and replanting crews.

bears, 15 mountain goats, and countless millions of songbirds, small mammals, salmon and steelhead. Gemlike Spirit Lake was transformed into an 600-foot-high wave that rushed up slopes on its north end, momentarily draining itself before rushing back downslope, sucking a debris avalanche of some 350,000 acre-feet of pyroclized trees into its bed. Several resorts around the lake simply vanished.

The force of the blast flattened almost 150,000 acres of timberland, including 68,000 acres of the Weyerhaeuser Company's St. Helens Tree Farm, and 64,000 acres of the adjacent Gifford Pinchot National Forest. Huge trees, some over 250 feet tall, were snapped at their bases like wooden matchsticks and lay in jackstraw piles 10 to 20 feet deep. The thought of anything surviving was unthinkable.

You should see it today. The 18.4 million trees—mostly Douglas-fir seedlings hand

Huge trees, some over 250 feet tall, were snapped at their bases like wooden matchsticks and lay in jackstraw piles 10 to 20 feet deep.

planted on Weyerhaeuser ground beginning in 1981—are now more than 50 feet tall. The replanting was no small chore, since each hole in which a seedling was planted had to be dug deeper than ashfall to ensure that it took root in nutrient-rich mineral soil. But when harvesting of this new forest began in 2005, it was clear that the labor-intensive investment had been the right choice.

Taxpayers have not fared nearly as well as Weyerhaeuser shareholders. Their 64,000-acre disaster area, which was part of the Gifford Pinchot National Forest, one of the richest (and fastest growing publicly owned

forest estates in the nation), was set aside in 1982 in the 110,000-acre Mount St. Helens National Volcanic Monument, a no-harvest reserve in which not a single tree topped by the 1980 blast was ever salvaged or replanted.

Meanwhile, Weyerhaeuser salvaged 850 million board feet of blast-toppled timber from its tree farm, enough to construct 85,000 three-bedroom homes. In the two years that it took to pick up the pieces, some 1,000 loggers and truckers were employed, and 600 truckloads of ash-covered logs descended the mountain daily during peak salvage summer months. On the adjacent Gifford Pinchot National Forest, not one logger was employed, not a single dead tree reached a sawmill, and not one dollar was generated for the U.S. Treasury. What nature had blown down, nature claimed.

The then-in-power Carter administration never bothered to estimate the dollar loss to taxpayers, but when Jimmy Carter



Tinges of green can be seen in this otherwise desolate September 2002 photograph. You are looking south into what remains of the north face of Mount St. Helens. In a matter of seconds, the entire north face was reduced to a fan-shaped pile of rubble 17 miles long and up to one mile deep. That's the North Fork of the Toutle River winding its way through the treeless landscape. Once-pristine Spirit Lake is off to the right. The eruption's superheated pyroclastic flow so quickly transformed the two water bodies into steam that it created a secondary explosion that was heard in British Columbia, Idaho, Montana and northern California. Bear in mind that this was a heavily timbered forest with a river running through it before the blast.



Volcanologists estimate that the force of the lateral blast quickly reached 670 miles per hour and probably exceeded the speed of sound [about 770 miles per hour] before subsiding. Within eight miles of the crater virtually everything was obliterated or carried away by the pyroclastic flow. Here the force of the blast equalled 24 megatons of TNT. Between eight and 19 miles, the direction of the blast was revealed in the parallel alignment of toppled trees. The trees in this April 1994 photograph look like they were mowed down by a giant scythe. Thousands of the largest trees were snapped like toothpicks, creating an enormous challenge for salvage loggers who had to cut the piles apart. Beyond 19 miles, trees that withstood the blast were killed by the 700-degree heat generated by escaping gases.

toured the blast area by helicopter three days after the eruption, he said the carnage made the surface of the moon look “like a golf course.” It was one of the few things he got right during his four years in the White House.

The volcanic monument was controversial as hell in 1982. The whole idea of purposefully walking away from so much downed timber seemed preposterous at the time. But environmental activists who opposed salvage logging such a large area and forest scientists who loved the idea of having their own outdoor laboratory where they could observe a natural recovery cooked up a story that Congress found irresistible. And so the Mount St. Helens National Volcanic Monument was created. It was a harbinger of things to come.

In hindsight, the monument has proved its value in spades, if for no other reason than the fact that it has given the public a side-by-side comparison of nature’s recuperative powers and the even more impressive power of forestry—real conservation written large by the very company that had invented industrial forestry in the 1960s. No company

on earth knew more about how to plant trees or how to make them grow than Weyerhaeuser.

So it was that in January 2005 its contract loggers returned to Mount St. Helens, this time to begin a commercial thinning operation in 25-year-old Douglas firs more than 40 feet tall. By September 1981, a little more than a year after eruption, the unthinkable had occurred. Deer, elk and songbirds were moving back into the blast zone, and Coho salmon were again swimming up the Cowlitz and Toutle rivers, proving that nature isn’t fragile at all. Even Dr. Jerry Franklin, a University of Washington forest ecologist who has been a leading proponent of leaving the region’s federal forests to nature, had to admit that his earlier prediction that the natural recovery would take centuries was dead wrong.

“It was a stupid perspective,” Franklin conceded in an MSNBC interview conducted on the 20th anniversary of the eruption. He had stepped out of a helicopter into ankle-deep ash two weeks after the eruption, expecting to find a lifeless moonscape. He did not. Plants were already recolonizing the

site: Indian paintbrush, lupine and fireweed, opportunistic plants that quickly gain footholds in big openings created by man or nature. “I expected to find nothing alive, but instead I was greeted by a recovery already underway,” he told the interviewer. “How could I have been so stupid?”

How indeed.

On the 10-year anniversary of the Mount St. Helens’ eruption, Jack Creighton Jr., Weyerhaeuser Company president, spoke at a Chamber of Commerce luncheon in Longview, Wash., a paper-industry hub on the Columbia River within eyesight of the mountain. “Congress should direct that the most productive portions of the region’s federal forests be managed with the same intensive practices that we and others, including the Washington Department of Natural Resources, have adopted,” he said. “By more than doubling the annual growth on these working forests and by shortening the rotation between harvests, the sustainable allowable harvest on these lands could be increased immediately. Spotted owl habitat could be preserved and a huge portion of the national forests could be managed for uses



Many believe the blast that accompanied the St. Helens' eruption was simply a high velocity wind created by the force of the eruption. This isn't true. The real damage was done by a split-second chain reaction: a magnitude 5.1 earthquake that caused the mountain's north face to collapse, exposing the volcano's mix of molten gas and steam-rich rock to low air pressure, causing it to explode northward, driving millions of tons of rock and mud across Spirit Lake and down the North Fork of the Toutle River. This photograph shows a small part of the resulting devastation. What may be most difficult to grasp about this scene, photographed in April 1994, is that most of the damage you see here occurred in a matter of seconds. Had you been standing here the day before the eruption, you would have looked into the tops of towering trees that are now nowhere in sight.



PHOTO COURTESY WEYERHAEUSER COMPANY

The power of man's forestry partnership with nature is revealed in this remarkable 2005 Weyerhaeuser aerial photograph. On the left you see the company's extraordinary effort to restore the timber-growing potential of its land. On the right, you see a completely natural—and much slower—recovery underway inside the Mount St. Helens National Volcanic Monument. Over the last 33 years, not much has changed inside the 110,000-acre monument, which was created by President Reagan in 1982 at the behest of environmentalists and forest scientists who wanted to study a natural recovery. Replanting Douglas and noble fir seedlings proved more difficult than Weyerhaeuser scientists had anticipated. For most of the 18 million seedlings, planters had to dig through at least a foot of volcanic ash to reach nutrient-rich mineral soil.

other than commercial timber production, including old-growth preservation."

The fact that Weyerhaeuser continues to prove Creighton's point on its St. Helens Tree Farm has not deterred critics, including Franklin, who remains a darling of the leave-it-to-nature set.

"Life in the forest is not that simple," Franklin said in response to Creighton's well-received speech. "Turning all or most of the public's forests into a Weyerhaeuser kind of tree plantation would be a deliberate sacrifice of the ecological diversity found in naturally growing forests containing a wider variety of plants, animals and trees."

But Weyerhaeuser's admirable commitment to restoring the full potential of its enormously productive tree farm is living proof that human intervention in the natural world teaches its own equally valuable environmental lessons. Very simply, it is not a good idea—nor is it possible—to separate humankind from nature. We are all part of the same world.

Weyerhaeuser Company helicopter pilot Louis Pottschmidt put the man-or-nature debate in perspective during a 1990 press tour when he said, "When we allow environmentalists to say that anything that changes nature is harmful, we kind of drift."

Nearly a quarter-century later, America is still drifting through a dead zone, a political no-man's-land controlled by environmental activists who insist that leaving forests to nature trumps forestry's good works. But our nation has paid a terrible price for their selfish grandstanding. More than 80 million acres of dead and dying federal forestland in the western United States bear silent witness to the undeniable fact that Jack Creighton was right. And the marvelous Weyerhaeuser St. Helens Tree Farm proves his point in spades. ■

Jim Petersen is founder and executive director of The Evergreen Foundation.