

# LAWETLAT'LA MOUNT ST. HELENS

## LAND IN TRANSFORMATION

**1** The volcano's restless nature is acknowledged in its name. The Cowlitz Indian Tribe refers to the mountain as Lawetlat'la (Lah-wet-lat-'Klah), or "the one who smokes."

**2** 272,000 years ago—Activity begins. Hundreds of eruptions happen in distinct episodes, each one modifying the landscape.

**3** 4,000 years to today—This very active volcano erupts on more occasions than any other Cascade Range volcano.

**4** 3,600 years ago—An explosive eruption four times larger than in 1980 produces ash that drifts with the wind across North America. Around 3,000 years ago, eruptions of lava begin to build the volcano we see today.

**5** 2,650 years ago—Massive lahars (volcanic mudflows) block a creek 30 miles downstream from the volcano and create Silver Lake, seen at the Mount St. Helens Visitor Center.

**6** 1,850 years ago—Lava flows transform the volcano's south side. Cooling lava creates a hardened crust. Lava flowing under the crust drains and forms a tube-shaped void—Ape Cave. Lava surrounds and burns trees, leaving behind tree molds visible today.

**7** 1479–1720—A long series of eruptions producing ashfall, lava, and lahars, culminates in the addition of 1,000 feet of elevation to the summit.

**8** 1800 to early 20th century—Local inhabitants report numerous eruptions between 1800 and 1857, and later steam explosions remind people that the volcano remains active.

**9** 1975—U.S. Geological Survey geologists forecast that Mount St. Helens would erupt again "possibly before the end of the century."

**10** March 20, 1980—A magnitude 4.2 earthquake signals to scientists that the volcano is awakening after 123 years. Over the next few months, magma pushes the volcano's north flank outward at an astonishing rate, as much as 5 feet per day, forming a bulge.

**11** May 18, 1980—At 8:32 a.m., the north flank fails as one of the largest terrestrial landslides in recorded history. It triggers a lateral blast that travels at more than 300 miles per hour, and within 3 minutes, blows down trees and destroys 230 square miles of forest.

**12** May 18, 1980—Within 15 minutes a vertical plume of steam and volcanic ash rockets 15 miles into the sky. The ash cloud drifts eastward and turns daylight into darkness. Airborne ash crosses the United States in three days and circles the earth in 15 days.

**13** May 18, 1980—Lahars kill millions of fish, damage 27 bridges and 200 homes and stall commercial shipping in the Columbia River.

**14** May 18, 1980—This deadly eruption, the largest and most powerful in 3,600 years, claims the lives of 57 people.

**15** May 18, 1980—Soil and winter snow protect small plants, trees, and animals, but countless living things still perish during the eruption.

**16** The May 18, 1980, eruption becomes the most economically destructive volcanic event in the United States during the 20th century, around \$1 billion in 1980s dollars.

**17** Late May 1980—Wind-dispersed spiders and scavenging beetles are the first creatures to arrive on the barren landscape, laying a foundation of nutrients.

**18** May 25, June 12, July 22, August 7, and October 16, 1980—Explosive eruptions rock the volcano, and ash falls in major cities of Seattle and Portland.

**30** Eruptions have changed natural habitats, continually. Remarkably, the diversity of plant and animal life today exceeds that of the pre-1980 landscape.

**29** Today, trees that were killed by the eruption and left standing are important habitats for returning birds. Nitrogen-fixing bacteria on the roots of lupines nourish soils and support wildflower meadows.

**28** Lawetlat'la is listed on the National Register of Historic Places and acknowledged as a Traditional Cultural Property of significance to the Cowlitz Indian Tribe and Confederated Tribes and Bands of the Yakama Nation.

**27** The Toutle River Sediment Retention Structure, completed in 1989, slows water and prevents about 50 percent of the sand and mud from filling downriver channels. It prevents flooding, and navigation problems downstream. Fish collected nearby get a tank-truck ride to clear creeks above sediment-choked rivers.

**26** Between 1980 and 2018, the lower Toutle River transports enough rock, sand, and mud to bury downtown Portland, Oregon to a depth of 300 feet.

**25** Crater Glacier exists because steep crater walls supply it with snow avalanches and protect it from the sun.

**24** Future eruptions are certain because magma is generated in regions of melting more than 25 miles deep and accumulates about 3–6 miles beneath the volcano.

**23** 1980–1986 and 2004–2008—Eruptions build two composite lava domes that replace 6 percent of the volcano removed by the catastrophic events on May 18, 1980.

**22** September 2004 to January 2008—The volcano awakens and erupts continuously for three and a half years.

**21** 1989–1991—About 30 bursts of intense earthquakes, lasting minutes to hours, shake the volcano, with some small explosions in the crater.

**20** October 1980–1986—During 17 eruptions, lava accumulates and creates a muffin-shaped pile of rock—a lava dome that reaches 875 feet above the crater floor.

**19** 1982—Mount St. Helens National Volcanic Monument is created to protect changing landscapes, and to encourage research, education, recreation, and safety.

Volcanic eruptions transform landscapes into places of beauty and grandeur.