

MOUNT ST HELENS COLDWATER RIDGE VISITOR CENTER National Volcanic Monument

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- ✓ The youngest of 15 stratovolcanoes of the Cascade range from British Columbia to California. Mount St Helens is about 40,000 years old. By contrast, Mount Rainier is about 1 million years old.
- ✓ The Mount St Helens National Volcanic Monument was dedicated in 1982. The monument is 110,000 acres in size.
- ✓ Previous Mount St Helens eruptive periods:
AD 1500, 1800, 1831-1857.
- ✓ Captain George Vancouver named Mount St Helens in 1792 after Baron St Helens, an English Diplomat.

May 18, 1980 Eruption Facts

Triggered by: 5.1 magnitude earthquake @ 8:32 am
Original Height: 9,677 ft./2950 m
Present Height: 8,363 ft./2550 m
Total Volume Removed 2/3 cu mi/2.76 cu km

Debris Avalanche

Speed: 180 mph/290 km/h (max)
Temperature: 160-212 deg F/70-100 deg C
Distance Traveled: 14 mi/22km West (Toutle R.)(approx)
5 mi/8km North (approx)
Depth: 640 ft/195 m (in NF Toutle R.)(max)
150 ft/45 m (average)
Volume Removed: .6 cu mi/2.5 cu km

Lateral Blast

Speed: Range- 225-730 mph/60-1180 km/h
Average- 450 mph/724 km/h
Temperature: Sing Zone 120-390 deg F/50-200 deg C
Blast Zone: 575-750 deg F/300-400 deg C
Blast Area: 230 sq mi/600 sq km

Vertical Plume

Height: 15 mi/24 km (approx)
Duration: 9 hours (approx)

Pyroclastic Flows

Speed: 50-80 mph/80-130 km/h
Temperature:
Near Crater: 1380-1500deg F/750-850 deg C
Most Flows: 570-1350 deg F/300-730 deg C (aveg)
Distance Traveled: 5 mi/8 km
Depth: 130 ft/40 m (cumulative)

Lahars

North Fork Toutle River 65.4 million cu yds/50 million cu m
Upper Muddy River 17 million cu yds/13 million cu m
Speed: Up to 90 mph/145 km/h
Volume: .0288 cu mi/.12 cu km

QUICK FACTS

Elevations

Coldwater Ridge	3110 feet	948 meters
Johnson Ridge	4300 feet	1311 meters
Windy Ridge	4170 feet	1271 meters
MSH (before)	9677 feet	2950 meters
MSH (after)	8363 feet	2550 meters

Crater Dimensions

East to West	1.2 miles	2 kilometers
North to South	1.8 miles	4 kilometers
Depth	2100 feet	671 meters

Dome Dimensions

Height	1000 feet	305 meters
Width	3450 feet	1.1 kilometers

From Coldwater Ridge

Lava Dome	8 miles	12.8 kilometers
Base of Mountain	6.3 miles	10 kilometers

From Johnson Ridge

Lava Dome	5.5 miles	8.8 kilometers
Base of Mountain	4.5 miles	7.2 kilometers

From Windy Ridge

Lava Dome	4.5 miles	7.2 kilometers
Base of Mountain	2.5 miles	4 kilometers

Coldwater Lake

Length	4.5 miles	7.2 kilometers
Elevation	2472 feet	753 meters
Area	800 acres	324 hectares
Maximum Depth	203 feet	62 meters

Castle Lake

Length	1.5 miles	2.4 kilometers
Elevation	2558 feet	780 meters
Area	200 acres	81 hectares
Maximum Depth	105 feet	32 meters

Spirit Lake

Length	3.2 miles	5.2 kilometers
Elevation	3475 feet	1060 meters
Area	3098 acres	1254 meters
Maximum Depth	151 feet	46 meters