

30 FACTS FOR 30 YEARS

In Celebration of Newberry National Volcanic Monument



Photo Courtesy of USFS

Rich with cultural and natural history, here are a few facts Newberry claims as a part of its story:

Compiled by the Monument Leadership Team for Newberry National Volcanic Monument

- Newberry National Volcanic Monument contains the widest variety of volcanic features of any U.S park or monument.
- Numerous attempts were made to protect Newberry as either a National Park or Monument: in 1903, 1920, 1940, 1970, and finally, successfully in 1990.
- The term ‘Crater’ found in the place names Newberry Crater and nearby Crater Lake are both misnomers for volcanic features correctly termed, ‘Caldera’.
- Newberry Volcano is a large shield-shaped composite volcano approximately 25 miles in diameter, covering 500 square miles.
- Newberry Crater is a crater formed from several enormous violent eruptions of ash and pumice. The summit of Newberry collapsed during a series of eruptions over a period of half a million years. By contrast, the top of Mt. Mazama (now Crater Lake) collapsed in one vast eruption.

- Before the formation of the Caldera, Newberry's summit was 500 to 1,000 feet higher than Paulina Peak is today.
- Newberry Volcano is still active and will certainly erupt again, either passively (lava flows) or explosively (ash and pumice).
- There are 9 USGS monitoring stations at Newberry to detect the early and subtle signs of a reawakening volcano.
- The Big Obsidian Flow is the youngest lava flow at Newberry.
- Volcanic ash from the eruption 1,300 years ago reached as far as the state of Idaho.
- Surgical blades made from obsidian are sharper than those of steel.
- **Newberry Volcano is made up of ash, pumice, lava, cinder and mudflows and contains 120 cubic miles of volcanic material, compared to Mt. St. Helens with 6 cubic miles.**
- Eruptions at Newberry Volcano have changed the course of water flowing in the Deschutes River drainage many times.



Photo Courtesy of USFS

- Elevation within the National Monument ranges drastically. The highest elevation is Paulina Peak - sitting at 7,984ft. Conversely, the lowest elevation is along the Deschutes River, at 3,960ft.
- The monument's annual precipitation is 18.37 inches.
- Lava River Cave crosses beneath Hwy 97, where the roof of the cave is 50 feet thick.



Photo by Dennis Benson

- The Monument's 4,000 foot vertical range is host to climates and microclimates with specialized plant and wildlife species. Some display distinct adaptations such as the rare Pumice Grape-Fern, found here and few other locations in the world.

- One of the oldest habitation structures discovered in North America was found under 3 to 4 feet of ash and pumice during road reconstruction at Paulina Lake. The structure dates about 9,500 years old and was likely similar to a wickiup.
- Lava Butte was first used as a fire look-out in 1913, and is still staffed today.
- Oregon state's first wildlife underpasses were constructed in 2011 on Highway 97 to allow safe passage for wildlife.
- The first generation of fish were carried in a bucket and planted in East and Paulina lakes around 1912.
- The Oregon Department of Fish and Wildlife stocks approximately 20,000 Kokanee, 65,000 Rainbow trout and 10,000 Brown trout fingerlings each spring in Paulina Lake. East lake receives 115,000 Rainbow trout, 20,000 Brown trout and 50,000 Brown trout fingerlings each spring.
- Within the caldera are two lakes: Paulina Lake (250ft deep) and East Lake (170ft deep). Paulina is one of the deeper lakes in Oregon.
- East Lake has no surface outlet and acts like a giant rain gauge for the indication of climate.
- Paulina Lake Guard station is on the national register of historic buildings. The station was built in the early 1930s and is currently the Visitor Center for the Monument.



Photo from Paulina Peak - Courtesy of USFS

- The earliest auto access to Newberry Crater was over the east rim to East Lake. In 1933, the Civilian Conservation Corps built a road to Paulina Lake from the west.
- The slopes of Newberry Volcano are covered in about 400 cinder cones. These cinder cones are dotted throughout the Central Oregon area.
- Paulina Lake “turns over” periodically. There is an upwelling which pushes water from the bottom of the lake to the surface. This creates changes in oxygenation and fish feeding patterns. Only a few lakes in North America do this.
- Both caldera lakes have hot springs with temperatures as high as 135° Fahrenheit. In 1981, temperatures higher than 500° Fahrenheit at a depth of 3,000 feet were found in a U.S. Geological Survey (USGS) drill hole sited in the center of the caldera.
- Because Newberry Volcano has erupted relatively recently (within the past 1,500 years) and more than 200,000 people live nearby, the USGS considers it a very high threat volcano.