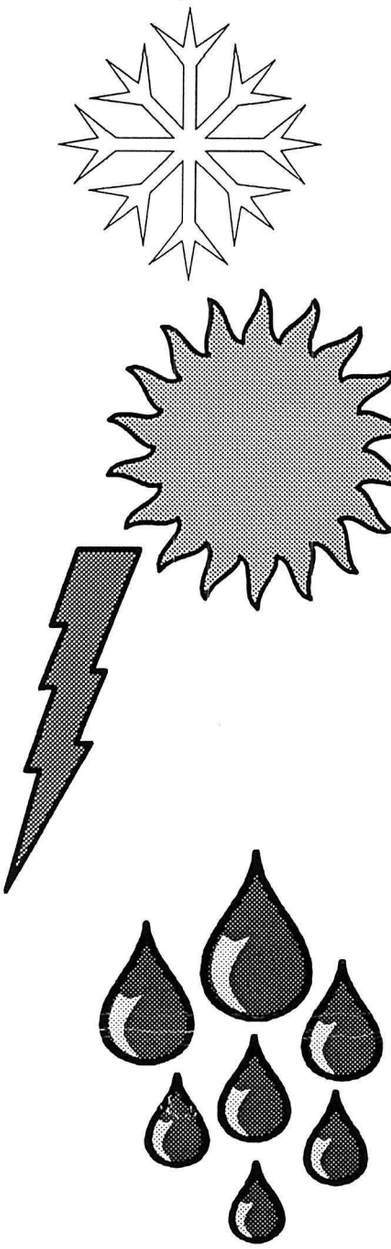
Crater Lake

National Park
National Park Service
U.S. Department of the Interior

General Expectations



Crater Lake National Park Weather Statistics

Five Year Averages, 1989 through 1993

Month	Max. Temp. (°F)	Min. Temp. (°F)	Rainfall (inches)	Snowfall (inches)
January	35	18	8.7	83
February	35	18	6.2	70
March	38	22	8.06	61
April	43	25	7.2	46
May	50	29	4.7	18
June	57	34	2.2	3
July	66	40	1.2	0
August	68	41	1.2	0
September	66	38	1	0
October	54	31	3.9	18
November	41	23	7.8	67
December	35	19	8.8	65

The Fairly Predictable Months: **July, August, and September** are typically dry with occasional afternoon showers. **November through ~~March~~** APRIL are assuredly snowy with poor visibility, fair to poor driving conditions, and wonderful skiing and snowshoeing opportunities.

The Wild Cards: **October** may be warm and sunny. It may be cold and lightly snowy. Either way, it's nearly perfect. **~~April~~** MAY will be cold but varies greatly in snowfall and visibility. **~~May~~** JUNE is warmer but the entire park will remain under deep snow, waiting for the glow of ~~June~~ JULY. **June** JULY is the month of spring at Crater Lake. Melt-off makes the park very wet and fresh.

Dressing for the Weather

Winter at Crater Lake begins in early to mid-October and typically ends in ~~late May or early~~ June. Plan on wearing lots of layers of warm clothes, hats, gloves, winter-weight boots, and a facial cover. Winds are usually quite high with blowing snow, leading to perfect conditions for hypothermia. The sunny periods create extreme glare, requiring visitors to reach for their sunglasses and sunscreen.

Summer is brief and beautiful. Days are typically dry and sunny with temperatures varying between 60 and 85. Those travelling by foot down the Cleetwood Trail to the lake level should expect cooler temperatures. Nights are cold, frequently dropping to freezing level. However, light to heavy rainshowers can occur anytime in June through mid-September. These storms often bring dramatic, frightening displays of lightning and high winds. Boat tours, guided hikes, and evening programs are cancelled if lightning is viewed in the park. Understand that this is for both your safety and our staff's. Best clothing options during summer are layers of light clothing with a jacket and hat. Sunglasses and sunscreen are still strongly suggested.

Once in a Lifetime: Does Crater Lake Ever Freeze?

Countless numbers of visitors ask this every year. Such an event is a very rare occurrence which may happen only once in a lifetime. The last time Crater Lake "froze over" was in 1949, when an icy layer completely covered it for over two months. Prior to 1949, the only other time this was reported to have happened was for four days during February, 1924.

Like most large bodies of water, Crater Lake is a heat reservoir where temperatures do not fluctuate greatly except near the surface. Below about 200 feet, water temperature remains at a perpetual 38 degrees Fahrenheit. When surface water is cooled by frigid air, it becomes denser and sinks, forcing up less dense warmer water. Ice formation is usually prevented in this way; but in 1949 the upper 200 feet of water was forced down to 32 degrees and the surface water even lower.

On March 14, 1949, two park rangers set out to investigate this unusual event. Using a predetermined route, they walked to Wizard Island. They descended into the caldera from Rim Village and found the ice thickness to be about 12 inches when they reached the shoreline. The ice layer was reduced to two inches at a spot near where the lake is 1000 feet deep. At this point, the pair discovered watery slush filling their tracks, so they made a hasty advance to the island.

Since retracing their steps was out of the question, the two rangers decided to take the shortest route across the lake and go back along the shore. They crossed Skell Channel, where the ice had formed up to four feet thick, with no difficulties; but their most difficult hurdle still lay ahead. That was the 900 foot ascent back to Rim Village. This was made in snow averaging 150 inches deep at an angle of approximately 45 degrees. With perseverance and more than a little luck, both of them returned that afternoon with their observations.

Crater Lake remained a giant expanse of white (instead of its usual deep blue) until almost mid May of 1949. Since then, the closest it has come to a repeat performance was during April 1983 when ice covered approximately 95 percent of the lake. Who knows what this year will bring?

Why Does Crater Lake Get So Much Snow?

The major weather patterns in the park originate in the Pacific Ocean. Storm events originate in the north Pacific and build in strength and moisture while over the ocean. Wind patterns at these northerly latitudes move storms from the ocean to the Pacific Northwest. Over 100 inches of rain falls each year on the Oregon Coast. The Rogue and Willamette valleys receive about thirty inches of rain as the moist air descends and warms. This advancing moist air cools greatly as it encounters the Cascade Range. These high mountains push the warm moist air to elevations over 10,000 feet. This change in elevation cools the air and hastens the precipitation process. As warm moist air rises, it cools. Water vapor in the air condenses to form clouds. If there is enough moisture in the clouds, rain is produced. If the temperature is low enough, this precipitation freezes into snow.

The most snow ever reported on the ground in the park was 21 feet on April 3, 1983. The snow pole at park headquarters records the official depth of snow on the ground. Each time it snows in the park, we measure the new snowfall and keep a running total. For the past five years that amount has been in the 430 inch - or 36 foot - range. This is quite a drop, however, since the early 1900's when the average was 533 inches or 44 feet of snow annually.

Keep in mind that the park's weather doesn't stop at our boundaries. The ocean borne winds that bring us snow and rain, although drained of much of their moisture, continue to eastern Oregon, usually dropping what little rain remains. Each area of this state reflects its precipitation. The Cascades collect snow and rain which sculpt rock and create subalpine and alpine environments. If you visit the park in summer or fall, try to imagine 21 feet of snow blanketing everything. Then envision spreading phlox covering the roadsides. Without the snow, there would be no phlox, no streams, and ultimately, no Crater Lake.