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Yellowstone's Old Faithful

Old Faithful is a cone geyser located in Yellowstone National Park in Wyoming, United States. It was named in 1870 during the Washburn-Langford-Doane Expedition and was the first geyser in the park to receive a name. It is a highly predictable geothermal feature, and has erupted every 44 to 125 minutes since 2000.

More than 1,000,000 eruptions have been recorded. Harry Woodward first described a mathematical relationship between the duration and intervals of the eruptions in 1938. Old Faithful is not the tallest or largest geyser in the park; those titles belong to the less predictable Steamboat Geyser. The reliability of Old Faithful can be attributed to the fact that it is not connected to any other thermal features of the Upper Geyser Basin.

Eruptions can shoot 3,700 to 8,400 US gallons of boiling water to a height of 106 to 185 feet lasting from 1 1/2 to 5 minutes. The average height of an eruption is 145 feet. Intervals between eruptions can range from 60 to 110 minutes, averaging 66.5 minutes in 1939, slowly increasing to an average of 90 minutes apart today, which may be the result of earthquakes

affecting subterranean water levels. The disruptions have made earlier mathematical relationships inaccurate, but have actually made Old Faithful more predictable in terms of its next eruption. After the Borah Peak earthquake in central Idaho in October 1983, the eruption intervals of Old Faithful were noticeably lengthened.

The time between eruptions has a bimodal distribution, with the mean interval being either 65 or 91 minutes, and is dependent on the length of the prior eruption. Within a margin of error of ± 10 minutes, Old Faithful will erupt either 65 minutes after an eruption lasting less than 2 1/2 minutes, or 91 minutes after an eruption lasting more than 2 1/2 minutes. [https://en.wikipedia.org/wiki/Old_Faithful]

