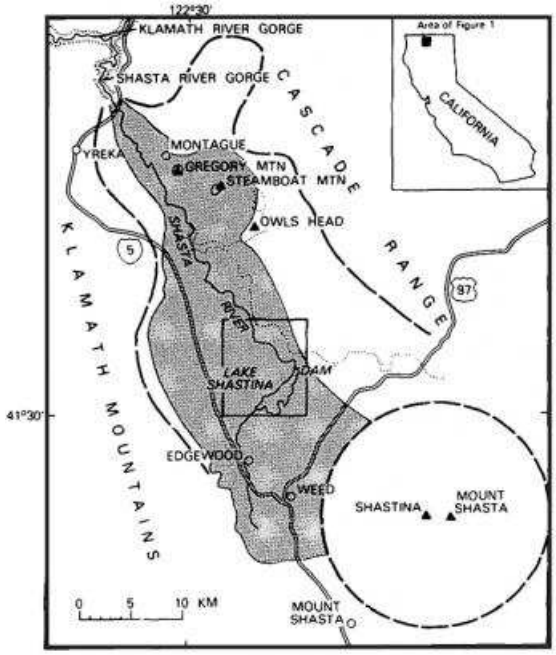
Mount Shasta Eruption History (from volcanoes.usgs.gov)

Mount Shasta has erupted on the average at least once per 800 years during the past 10,000 years, about once per 300 years during the past 3,500 years, and about once per 250 years during the past 750 years.



Map of Shasta Valley
debris-avalanche deposit (shaded)

Heavy dashed lines show approximate margins of Shasta Valley and base of Mount Shasta volcano

Dotted line indicates western edge of Quaternary basalt.

The Mount Shasta magmatic system has evolved more or less continuously for at least 590,000 years, but the ancestral cone was virtually destroyed by an enormous volcanic sector collapse and landslide around 300,000 years ago. Only a small remnant of this older edifice remains on the west side of the stratovolcano. Shasta Valley to the north is largely floored by debris from the sector collapse, likely representing a considerable amount of the volume of the ancestral cone.

Four major cone-building episodes constructed most of the stratovolcano around separate central vents. The eruptions that formed these cones probably lasted for only a few hundred or a few thousand years, during which numerous lavas erupted, mainly from each cone's central vent. The final major eruptions from each of the central craters produced dacitic domes and dense-fragment pyroclastic flows. After each episode of rapid cone building, the volcano underwent significant erosion while less frequent central- and flank-vent eruptions occurred. The flank eruptions typically produced cinder cones, small monogenetic lava cones, or domes, the latter commonly accompanied by pyroclastic flows. The Sargents Ridge cone, oldest of the four, is younger than approximately 250,000 years, has undergone two major glaciations, and is exposed mainly on the south side of Mount Shasta. The next younger Misery Hill cone is younger than approximately 130,000 years, has been sculpted in one major glaciation, and forms much of the upper part of the mountain.

Holocene eruptions

Eruptions during the last 10,000 years produced lava flows and domes on and around the flanks of Mount Shasta, and pyroclastic flows from summit and flank vents extended as far as 20 km (12.4 mi) from the summit. Most of these eruptions also produced large mudflows, many of which reached more than several tens of kilometers from Mount Shasta. Shastina was formed mainly between 9,700 and 9,400 years; the Hotlum cone, which forms the summit and the north and northwest slopes of Shasta, may overlap Shastina in age, but most of the Hotlum cone is probably younger.