Map showing hazard zones, faults, and volcanic vents in the Crater Lake region.


Proximal Hazard Zone A -- Area bounded by Crater Lake caldera rim; subject to pyroclastic surges and ballistics from explosive eruptions anywhere within the caldera.

Proximal Hazard Zone B -- Area outside of Proximal Hazard Zone A that may be affected by pyroclastic surges and ballistics from vents within the lake and close to the shoreline; boundaries defined by height/runout ratio of 0.1 and source of surges up to 500 m above lake surface.

Regional Hazard Zone RH -- Zone of relatively high probability of a volcanic eruption; contains volcanic vents less than 100,000 yrs in age. Annual probability of eruption from a new vent estimated to be ~1 in 5,000 (2x10^{-4}); 30-year probability ~1 in 170 (6x10^{-3}).

Regional Hazard Zone RL -- Zone of relatively low probability of a volcanic eruption; contains volcanic vents 100,000-1,000,000 yrs in age. Annual probability of eruption from a new vent estimated to be ~1 in 100,000 (10^{-5}); 30-year probability ~1 in 3,000 (3x10^{-4}). The probability of an eruption from a new vent outside this zone is considered insignificant.

Lahar Hazard Zone -- Areas potentially inundated by lahars (volcanic debris flows) caused by explosive eruptions within Crater Lake caldera.

Maximum extent of pumiceous pyroclastic-flow deposits of climactic eruption of Mount Mazama (~7,700 yrs ago). Area devastated by pyroclastic flows and ash fall exceeds limits of pumiceous pyroclastic-flow deposits.

Approximate location of initial vent for climactic eruption of Mount Mazama ~ 7,700 yrs ago.

Silicic vents <10,000 yrs in age (rhyodacite only).

Silicic vents 10,000-100,000 yrs in age (dacite and rhyodacite).

Silicic vents 100,000-1,000,000 yrs in age (dacite and rhyodacite).

Mafic vents <10,000 yrs in age (basalt to andesite).

Mafic vents 10,000-100,000 yrs in age (basalt to andesite).

Mafic vents 100,000-1,000,000 yrs in age (basalt to andesite).

Solid line where mapped, dashed where inferred, dotted where concealed by younger deposits; bar and ball on downthrown side. Shown are faults known to have been active in the past few million years.