Areas that could be affected by pyroclastic flows, pyroclastic surges, lava flows and ballistic projectiles in future eruptions [2].

During any single eruption, some drainages may be affected by some or all phenomena, while others may be completely unaffected. Debris avalanches and lahars originate in this area, but depending upon their size may move far downstream beyond the flanks of the volcano.

Valleys heading on Mount Jefferson that are subject to lahars generated by pyroclastic flows, debris avalanches, heavy ... A special case exists for the valleys of Shitike and Minto creeks, which do not head directly on the volcano (see text).

Area that could be affected by a lahar with a volume of 20 million cubic meters (about 25 million cubic yards). Highest probability.

Area that could be affected by a lahar with a volume of 100 million cubic meters (about 130 million cubic yards).

Area that could be affected by a lahar with a volume of 500 million cubic meters (about 650 million cubic yards). Lowest probability.

Lahar inundation zones in Shitike and Minto Creeks are shown for lahars with a maximum volume of 20 million cubic meters ... or pyroclastic flows entering these areas would have to overtop 200 to 250 meter− high divides. Experience from the 1980 eruption of Mount St. Helens suggests that only extremely large flows ... as a lahar. Probability of such an event happening is similar to that of the largest (500 million cubic meters) lahar.

Areas that could be affected by eruptions of monogenetic volcanoes. Hazards include near−vent tephra falls, ballistic projectiles, pyro−clastic flows and lava flows that may travel as far as 10 to 15 kilometers (6 to 9 miles) from source.

NOTE: Although the map shows sharp boundaries for hazard zones, the degree of hazard does not change abruptly at these boundaries. Rather, the hazard decreases gradually as distance from the volcano increases (small volume events are more common than large volume events). In addition, for lahars, the hazard decreases rapidly as elevation above the valley floor increases. Areas immediately beyond outer hazard zones should not be regarded as hazard−free, because the boundaries can only be located approximately, especially in areas of low relief. Too many uncertainties exist about the source, size, and mobility of future events to locate the boundaries of zero−hazard zones precisely.

Numerals in brackets refer to end notes in the report.