

Lahar risk on the NE flank of **Popocatepetl** volcano.

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Popocatepetl volcano has an altitude of 5452 meters high and is capped by glaciers which represent a volume of less than 0.017 km³ of ice. These glaciers are distributed on the northwest-north face of the cone, starting at 4900 m.a.s.l. The ablation runoff of the glaciers is **channelized** to the north through the **Barranca** Central and **Barranca Ventorillo** which at lower altitude join together to form a larger canyon bent to the northeast following a spur made of volcanic rock from the extinct **Iztacchuatl** volcano. Images of the volcano show that at the height of 3200 m.a.s.l. there is a sudden change in the morphology of the canyon becoming narrower and diffuse. This change marks the starting point of outcrops of **laharic** deposits. Several mudflows have been **identified** at the northeast flank of Popo distributed along the narrow valley of Santiago **Xallizintla**. The outlet of this valley is characterized by a large fan that extends up to 30 km from the vent. Among the mudflows we have mapped the most remarkable of them consisting in three **depositional** units with a maximum thickness of 20 m and very indurated. This **lahar** can be observed with variable thicknesses reaching up to 20 km from the vent. The San **Nicolas Lahar** covers a poorly developed soil where pottery and other cultural remains have been found. There are several towns in the area covered by the **lahar** like Santiago **Xallizintla**, San **Nicolas** de Los Ranchos, San Pedro, San **Buenaventura Nealtican** with a total of 23,000 inhabitants. The **nahuatl** word **Xallizintla** means River of Sands.