

LEGEND



ALLUVIAL DEPOSITS

Slackwater deposits forming behind the west lava flow of West Crater



COLLUVIAL DEPOSITS

Rockfall-related deposits formed in response to gravity



DIAMICTON

Glacial-like grainy to bouldery materials in a silt to fine sand matrix but representing deposits of uncertain origin



GLACIAL DEPOSITS

Moraines, till, varves, rock glaciers and kames



BEDROCK

Varies depending upon location; primarily basaltic and andesitic igneous and pyroclastic rock with local mafic and quartz diorite

B-21, etc. = Soil sample sites

GLACIAL MORPHOLOGY

All major streams occupy U-shaped valleys modified by post-glacial incision. Cirque locations, aretes and elevated glaciated paleovalleys are common. Small rock glaciers can be found just below some north-east facing cirque locations. Intermittent till is common along one or both sides of most major streams for much of their length. Glacially scoured benches are common throughout most of the area above major streams. Striations and erratics can be found.

SOILS

Andic Entisols and Inceptisols are the typical soils developing in the Upper Canyon Creek drainage basin. The lack, or incipient development, of a well-developed "B" horizon reinforces the idea that glaciation has impacted soil formation in the basin. "B" horizon colors are generally higher in value (lightness) than 5YR 5/4 and 10YR 5/4. On the basis of "B" horizon development, basin soils have had, at most, 15,000 years to develop. As such, clay development is spotty and confined, primarily, to areas underlain by more easily erodible volcaniclastic rocks. The majority of soils are forming in overburden deposits rather than as residuum on bedrock. In either case, the soil is generally coarse-textured, highly permeable and unconsolidated. Water flows freely through many of these soils and is unimpeded by textural barriers. As such, failures are rare except on slopes approaching or exceeding the angle of repose.

