

Quaternary Fault and Fold Database of the United States

As of January 12, 2017, the USGS maintains a limited number of metadata fields that characterize the Quaternary faults and folds of the United States. For the most up-to-date information, please refer to the [interactive fault map](#).

unnamed faults near Squaw Valley (Class A) No. 1609

Last Review Date: 1999-03-06

citation for this record: Sawyer, T.L., and Adams, K., compilers, 1999, Fault number 1609, unnamed faults near Squaw Valley, in Quaternary fault and fold database of the United States: U.S. Geological Survey website, <https://earthquakes.usgs.gov/hazards/qfaults>, accessed 12/14/2020 02:35 PM.

Synopsis

The faults shown here are part of a distributed group of predominately north-striking intra-plateau faults that extends from the north end of the Smoke Creek Desert basin at Wall Canyon, northward across a volcanic plateau to near Jones Canyon, and has plateau-bounding and piedmont faults in northern Squaw Valley and along the western side of the northern valley. Squaw Valley, appears to be a north-trending graben. The suspected Quaternary faults bound the north end of Squaw Valley juxtapose Quaternary alluvium against Tertiary bedrock and are also expressed as west-facing scarps on Quaternary alluvium. Reconnaissance photogeologic mapping and regional geologic mapping are the sources of data. Trench investigations and detailed studies of scarp morphology have not been conducted.

Name comments	Refers to faults mapped by Bonham (1969 #2999), Slemmons (1974, unpublished Lovelock 1? X 2? sheet), and Dohrenwend and others (1991 #285) extending along west side of northern Squaw Valley.
County(s) and State(s)	WASHOE COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. <i>Comments:</i> Fault locations are primarily based on 1:250,000-scale map of Dohrenwend and others (1991 #285) which was produced by analysis of 1:58,000-nominal-scale color-infrared photography transferred directly to 1:100,000-scale topographic quadrangle maps enlarged to scale of the photographs. Locations were checked against 1:250,000-scale photogeologic map of Slemmons (1974, unpublished Lovelock 1? X 2? sheet) and 1:250,000-scale bedrock map of Bonham (1969 #2999).
Geologic setting	The faults shown here are part of a distributed group of predominately north-striking intra-plateau faults extending from the north end of the Smoke Creek Desert basin (at Wall Canyon) northward across a volcanic plateau to near Jones Canyon, and has plateau-bounding and piedmont faults in northern Squaw Valley and along the western side of the northern valley (Bonham, 1969 #2999; Dohrenwend and others, 1991 #285). The intermontane faults, which are not included because they do not show evidence of Quaternary movement, are expressed as linear escarpments and drainage valleys, sidehill benches, and aligned saddles. Squaw Valley appears to be a north-trending graben.
Length (km)	10 km.
Average strike	N2°E
Sense of movement	Normal <i>Comments:</i> Shown as normal faults by Dohrenwend and others (1991 #285) and inferred from topography.
Dip Direction	E; W
Paleoseismology	

studies	
Geomorphic expression	Faults that bound the north end of Squaw Valley juxtapose Quaternary alluvium against Tertiary bedrock and are expressed as west-facing scarps on Quaternary alluvium (Dohrenwend and others, 1991 #285).
Age of faulted surficial deposits	late Pleistocene. Some of the faults shown displace piedmont-slope deposits as young as late Pleistocene in age (Bonham, 1969 #2999; Dohrenwend and others, 1991 #285); here and elsewhere, faults juxtapose undifferentiated Quaternary alluvium against Tertiary bedrock (Dohrenwend and others, 1991 #285).
Historic earthquake	
Most recent prehistoric deformation	late Quaternary (<130 ka) <i>Comments:</i> Although timing of most recent event is not well constrained, a late Pleistocene time is suspected based on reconnaissance photogeologic mapping of Slemmons (1974, unpublished Lovelock 1° X 2° sheet) and Dohrenwend and others (1991 #285).
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr <i>Comments:</i> A low slip rate is inferred from the generally low slip rates of other normal faults in the area and the modest height of escarpments on Tertiary bedrock.
Date and Compiler(s)	1999 Thomas L. Sawyer, Piedmont Geosciences, Inc. Kenneth Adams, Piedmont Geosciences, Inc.
References	#2999 Bonham, H.F., 1969, Geology and mineral deposits of Washoe and Storey Counties, Nevada: Nevada Bureau of Mines and Geology Bulletin 70, 140 p., 1 pl., scale 1:250,000. #285 Dohrenwend, J.C., McKittrick, M.A., and Moring, B.C., 1991, Reconnaissance photogeologic map of young faults in the Lovelock 1° by 2° quadrangle, Nevada and California: U.S. Geological Survey Miscellaneous Field Studies Map MF-2178, 1 sheet, scale 1:250,000.

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