Jump to Navigation

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 fault southeast of Mosquito Valley (Class A) No. 1468

Last Review Date: 1998-07-19

citation for this record: **Sawyer, T.L., compiler, 1998, Fault number 1468, unnamed fault southeast of Mosquito 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 02:05 PM.**

Synopsis	The two faults southeast of Mosquito Valley shown here juxtapose piedmont-slope deposits against Tertiary basalt and are considered to be Quaternary; they are part of a large highly distributed poorly defined fault zone in the volcanic plateau between Long Valley and Surprise Valley in northwestern Nevada. The zone has many crosscutting faults that form orthogonal patterns. The other faults in this zone are not included here because they chiefly displace Tertiary basalt and sedimentary rocks and Quaternary movement is not demonstrated. Reconnaissance photogeologic mapping of the fault zone 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 a few faults mapped within a group of faults by Bonham (1969 #2999) and Dohrenwend and Moring (1991 #281) on volcanic plateau in northwestern Nevada between Long Valley and Surprise Valley from west flank of Fortynine Mountain northward along the northwest side of Carter Reservoir northwest across the plateau into California and possibly Oregon. Most of these faults are not known to be Quaternary with the exception of the one shown here.
County(s) and State(s)	WASHOE COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Fault locations are based on 1:250,000-scale map of Dohrenwend and Moring (1991 #281); mapping by photogeologic 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 and then reduced and transferred to 1:250,000-scale topographic maps.
Geologic setting	Two faults within a highly distributed poorly defined zone is in northwestern Nevada.
Length (km)	15 km.
Average strike	N20°E
Sense of movement	Normal
Dip Direction	E; SE
Paleoseismology studies	
Geomorphic expression	The faults southeast of Mosquito Valley juxtapose piedmont-slope deposits against Tertiary basalt (Dohrenwend, 1991 #281; Bonham, 1969 #2999) and thus are considered to be Quaternary.
Age of faulted surficial deposits	Quaternary; Tertiary. These faults displace Tertiary basalt and sedimentary rocks and a few faults southeast of Mosquito Valley juxtapose piedmont-slope deposits against Tertiary basalt (Dohrenwend, 1991 #281; Bonham, 1969 #2999).

Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Although timing of most recent event is not well constrained, a Quaternary time is suspected based on reconnaissance photogeologic mapping of Dohrenwend and Moring (1991 #281).
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* A low slip rate is inferred from general knowledge of slip rates estimated for other faults in the region and from height of topographic escarpments on Tertiary basalt.
Date and Compiler(s)	1998 Thomas L. Sawyer, 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. #281 Dohrenwend, J.C., and Moring, B.C., 1991, Reconnaissance photogeologic map of young faults in the Vya 1° by 2° quadrangle, Nevada, Oregon, and California: U.S. Geological Survey Miscellaneous Field Studies Map MF-2174, 1 sheet, scale 1:250,000.