

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 along Sahwave Mountains (Class A) No. 1621

Last Review Date: 1999-03-09

citation for this record: Sawyer, T.L., and Adams, K., compilers, 1999, Fault number 1621, unnamed faults along Sahwave Mountains, 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 02:26 PM.

Synopsis	This short linear zone is composed primarily of northeast-striking, range-front faults on the northwestern front of the Sahwave Mountains and short piedmont faults adjacent to the southern part of the range. The Sahwave Mountains are a west-tilted fault block. Range-front faults juxtapose Quaternary alluvium against bedrock and are expressed by the abrupt bedrock front of the Sahwave Mountains. Piedmont faults are marked by northwest-facing scarps apparently 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Name comments	Refers to faults mapped by Slemmons (1974, unpublished Lovelock 1? X 2? sheet), Johnson (1977 #2569), and

	Dohrenwend and others (1991 #285) along northwest side of the Sahwawe Mountains. The range-front faults extend along the northwestern front of the Sahwawe Mountains from near Juniper Mountain northeast to a point about 4 km north of Juniper Pass, and the piedmont faults are adjacent to the southern part of the range front in the southeast part of Kumiva Valley.
County(s) and State(s)	PERSHING 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. Additional fault locations are from 1:250,000-scale photogeologic map of Slemmons (1974, unpublished Lovelock 1? X 2? sheet). Fault locations checked against 1:250,000-scale geologic map of Johnson (1977 #2569).
Geologic setting	This short linear zone is composed primarily of northeast-striking, range-front faults on the northwestern front of the Sahwawe Mountains and short piedmont faults adjacent to the southern part of the range (Slemmons, 1974 unpublished Lovelock 1? X 2? sheet; Johnson, 1977 #2569; Dohrenwend and others, 1991 #285). The uplifted Sahwawe Mountains are a west-tilted fault block (Stewart, 1978 #2866).
Length (km)	14 km.
Average strike	N33°E
Sense of movement	Normal <i>Comments:</i> Not studied in detail; sense of movement is inferred from topography.
Dip Direction	NW
Paleoseismology	

studies	
Geomorphic expression	Range-front faults juxtapose Quaternary alluvium against bedrock and are expressed by the abrupt bedrock front of the Sahwave Mountains. Piedmont faults are marked by northwest-facing scarps apparently on Quaternary alluvium (Johnson, 1977 #2569; Dohrenwend and others, 1991 #285).
Age of faulted surficial deposits	Johnson (1977 #2569) and Dohrenwend and others (1991 #285) reported undifferentiated Quaternary alluvium is faulted.
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) <i>Comments:</i> Although timing of most recent event is not well constrained, a Quaternary time is suggested based on mapping of Dohrenwend and others (1991 #285) and Johnson (1977 #2569).
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr <i>Comments:</i> A low slip rate is inferred from general knowledge of slip rates estimated for other faults in the region.
Date and Compiler(s)	1999 Thomas L. Sawyer, Piedmont Geosciences, Inc. Kenneth Adams, Piedmont Geosciences, Inc.
References	#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. #2569 Johnson, M.G., 1977, Geology and mineral deposits of Pershing County, Nevada: Nevada Bureau of Mines and Geology Bulletin 89, 115 p., scale 1:250,000. #2866 Stewart, J.H., 1978, Basin-range structure in western North America—A review, <i>in</i> Smith, R.B., and Eaton, G.P., eds., Cenozoic tectonics and regional geophysics of the western cordillera: Geological Society of America Memoir 152, p. 1-31,

scale 1:2,500,000.

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