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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.

Peko Peak fault zone (Class A) No. 1568

Last Review Date: 1998-10-13

citation for this record: **Oswald, J.A., and Sawyer, T.L., compilers, 1998, Fault number 1568, Peko Peak fault zone, 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	Short range-front normal fault bounding the west front of Peko Peak and the southern end of Morgan Hill. The fault forms scarps on possible early to middle Pleistocene alluvium, and juxtaposes Quaternary alluvium against bedrock adjacent to range front. Reconnaissance photogeologic mapping of fault related features is the source of data. Trench investigations and studies of scarp morphology have not been conducted along the fault.
Name comments	Refers to faults mapped by Dohrenwend and others (1991 #290) that bound the west front of Peko Peak and the southern end of Morgan Hill. Named the Peko Peak fault by dePolo (1998 #2845). **Fault ID:** Refers to fault number WE4 (Peko Peak fault zone) of dePolo (1998 #2845).
County(s) and	ELKO COUNTY, NEVADA

State(s)	ELKO COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Location based on 1:250,000-scale map of Dohrenwend and others (1991 #290); 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.
Geologic setting	Short range-front normal fault bounding the west front of Peko Peak and the southern end of Morgan Hill (Dohrenwend and others, 1991 #290).
Length (km)	10 km.
Average strike	N16°E
Sense of movement	Normal *Comments:* (Dohrenwend and others, 1991 #290)
Dip Direction	W
Paleoseismology studies	
Geomorphic expression	The fault is expressed as scarps on early to middle Pleistocene alluvium adjacent to range-front and by range-front faults juxtaposing Quaternary alluvium against bedrock (Dohrenwend and others, 1991 #290).
Age of faulted surficial deposits	Early to middle Pleistocene. The fault displaces alluvium interpreted from photogeologic mapping to be early to middle Pleistocene in age (Dohrenwend and others, 1991 #290).
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Although timing of the most recent event is not well constrained, Dohrenwend and others (1991 #290; 1996 #2846)

	suggested an early to middle Pleistocene time based on reconnaissance photogeologic studies.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* No detailed data exists to determine slip rates for this fault. dePolo (1998 #2845) assigned a reconnaissance vertical slip rate of 0.01 mm/yr for the fault based on the presence of scarps on alluvium and the absence of basal facets. The late Quaternary characteristics of this fault (overall geomorphic expression, continuity of scarps, age of faulted deposits, etc.) support a low slip rate. Accordingly, the less than 0.2 mm/yr slip-rate category has been assigned to this fault.
Date and Compiler(s)	1998 John A. Oswald, Piedmont Geosciences, Inc. Thomas L. Sawyer, Piedmont Geosciences, Inc.
References	#2845 dePolo, C.M., 1998, A reconnaissance technique for estimating the slip rate of normal-slip faults in the Great Basin, and application to faults in Nevada, U.S.A.: Reno, University of Nevada, unpublished Ph.D. dissertation, 199 p. #290 Dohrenwend, J.C., McKittrick, M.A., and Moring, B.C., 1991, Reconnaissance photogeologic map of young faults in the Wells 1° by 2° quadrangle, Nevada, Utah, and Idaho: U.S. Geological Survey Miscellaneous Field Studies Map MF-2184, 1 sheet, scale 1:250,000. #2846 Dohrenwend, J.C., Schell, B.A., Menges, C.M., Moring, B.C., and McKittrick, M.A., 1996, Reconnaissance photogeologic map of young (Quaternary and late Tertiary) faults in Nevada, *in* Singer, D.A., ed., Analysis of Nevada's metal-bearing mineral resources: Nevada Bureau of Mines and Geology Open-File Report 96-2, 1 pl., scale 1:1,000,000.

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