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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.

Western Huntington Valley fault zone (Class A) No. 1716

Last Review Date: 2000-06-28

citation for this record: **Rowley, P.C., and Anderson, R.E., compilers, 2000, Fault number 1716, Western Huntington Valley 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 02:26 PM.**

Synopsis	The Western Huntington Valley fault zone is comprised of a short zone of aligned and parallel, mostly down-to-the-east, block-bounding normal faults in the southeastern part of the Pinion Range. The faults apparently have weak geomorphic expression, and no data or prior descriptions were available. Sediments cut by the faults were shown as of questionable early to middle and (or) late Pleistocene age.
Name comments	Name taken from dePolo (1998 #2845) who applied it to a fault zone in the southeast part of the Pinion Range as shown by Dohrenwend and others (1991 #286). Expressed as a series of generally north-striking, aligned and parallel faults that extends for a distance of about 16 km from Toole Springs on the north nearly to Red Rock Summit on the south.

	Fault ID: Referred to as fault EK4 by dePolo (1998 #2845)
County(s) and State(s)	ELKO COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Compiled at 1:250,000 scale by Dohrenwend and others (1991 #286). The fault locations of Dohrenwend and others (1991 #286), which are followed here, were produced by analysis of 1:58,000-nominal-scale color-infrared photography transferred directly to 1:100,000-scale topographic quadrangle maps enlarged to the scale of the photographs.
Geologic setting	As mapped by Dohrenwend and others (1991 #286), these are highly discontinuous north-striking, generally east-facing block-bounding faults (not range-bounding) in the southeastern part of the Pinion Range. There is apparently no major range-front fault or no expression of a range front fault that bounds the Pinion Range and basin beneath the Huntington Valley. A short (<2 km) fault at the southwestern base of Bailey Mountain is apparently down to the west.
Length (km)	17 km.
Average strike	N4°W
Sense of movement	Normal
Dip Direction	E
Paleoseismology studies	
Geomorphic expression	Barnhard (1985 #428) did not recognize scarps on alluvium, possibly suggesting the fault's weak geomorphic expression. There is no continuous bedrock escarpment along the main trace. Dohrenwend and others (1991 #286) mapped the discontinuous traces as block-bounding faults that juxtapose bedrock and Quaternary sediment, with very limited traces expressed as scarps; there is no description of the geomorphic expression of the scarps.

Age of faulted surficial deposits	Quaternary deposits or surfaces cut by the scarps were considered to be of possible early to middle and (or) late Pleistocene age by Dohrenwend and others (1991 #286).
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Based on inferred age of sediments, the latest faulting is probably Quaternary (Dohrenwend and others, 1991 #286).
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)	2000 Peter C. Rowley, U.S. Geological Survey, Retired R. Ernest Anderson, U.S. Geological Survey, Emeritus
References	#428 Barnhard, T.P., 1985, Map of fault scarps formed in unconsolidated sediments, Elko 1° x 2° quadrangle, Nevada and Utah: U.S. Geological Survey Miscellaneous Field Studies Map MF-1791, 1 sheet, scale 1:250,000. #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. #286 Dohrenwend, J.C., Schell, B.A., and Moring, B.C., 1991, Reconnaissance photogeologic map of young faults in the Elko 1° by 2° quadrangle, Nevada and Utah: U.S. Geological Survey Miscellaneous Field Studies Map MF-2179, 1 sheet, scale 1:250,000.