

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](#).

Krum Hills fault zone (Class A) No. 1510

Last Review Date: 1999-02-03

citation for this record: Adams, K., and Sawyer, T.L., compilers, 1999, Fault number 1510, Krum Hills 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 02:50 PM.

Synopsis	This distributed group of short northwest- and east-west-striking intermontane faults is in the Krum Hills at the south end of Silver State Valley. A down-to-the-east, north-striking range-front fault on the east side of Winnemucca Mountain also is included in this group because of its proximity to the other faults. The intermontane faults are expressed as short north- and east-facing scarps on Pleistocene alluvium (Dohrenwend and Moring, 1991 #282; 1991 #284). The range-front fault is expressed as a north trending, east-facing scarp about 3 km long that marks the juxtaposition of Quaternary alluvium against bedrock (Dohrenwend and Moring, 1991 #284). Reconnaissance photogeologic mapping of the faults is the source of data. Trench investigations and detailed studies of scarp morphology have not been completed.
Name	Fault ID: Refers to fault MD3 (Krum Hills fault) of dePolo (1998)

comments	#2845).
County(s) and State(s)	HUMBOLDT COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. <i>Comments:</i> Fault locations are based on 1:250,000-scale map of Dohrenwend and Moring (1991 #282; 1991 #284) 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.
Geologic setting	This distributed group of short northwest and east-west striking intermontane faults is located around the base of the Krum Hills, northwest of Winnemucca. A down-to-the-east, north-striking range-front fault on the east side of Winnemucca Mountain is also included in this group because of its proximity to the other faults.
Length (km)	12 km.
Average strike	N26°E
Sense of movement	Normal
Dip Direction	W; N; E
Paleoseismology studies	
Geomorphic expression	Intermontane faults in the Krum Hills are expressed as short north- and east-facing scarps on Pleistocene alluvium (Dohrenwend and Moring, 1991 #284). The range-front fault on the east side of Winnemucca Mountain is expressed as a north-trending, east-facing scarp about 3 km long that represents Quaternary alluvium being juxtaposed against bedrock (Dohrenwend and Moring, 1991 #284). dePolo (1998 #2845) indicates that there are scarps on alluvium but no basal fault facets.
Age of faulted surficial	Pleistocene. Dohrenwend and Moring (1991 #282; 1991 #284) mapped faults juxtaposing Quaternary alluvium against bedrock

deposits	mapped faults juxtaposing Quaternary alluvium against bedrock.
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 by the photogeologic mapping of Dohrenwend and Moring (1991 #282; 1991 #284).
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr <i>Comments:</i> 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)	1999 Kenneth Adams, 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. #282 Dohrenwend, J.C., and Moring, B.C., 1991, Reconnaissance photogeologic map of young faults in the Winnemucca 1° by 2° quadrangle, Nevada: U.S. Geological Survey Miscellaneous Field Studies Map MF-2175, 1 sheet, scale 1:250,000. #284 Dohrenwend, J.C., and Moring, B.C., 1991, Reconnaissance photogeologic map of young faults in the McDermitt 1° by 2° quadrangle, Nevada, Oregon, and Idaho: U.S. Geological Survey Miscellaneous Field Studies Map MF-2177, 1 sheet, scale 1:250,000.

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