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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.

unnamed faults in White River Valley (Class A) No. 1397

Last Review Date: 1998-06-29

citation for this record: **Sawyer, T.L., compiler, 1998, Fault number 1397, unnamed faults in White River 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	This highly distributed group of northeast-striking subparallel scarps that are near the axis of the White River Valley. Reconnaissance photogeologic mapping of these features is the source of data. Trench investigations and studies of scarp morphology have not been completed.
Name comments	Refers to echelon fault scarps mapped by Schell (1981 #2844) and Dohrenwend (1991 #287) on the floor of White River Valley. Fault zone extends from Hot Creek Butte, across the White River, to a prominent salient of the Egan Range across the valley from The Cove.
County(s) and State(s)	NYE COUNTY, NEVADA
Physiographic	

Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Location based on 1:250,000-scale maps of Schell (1981 #2844) and of Dohrenwend and others (1991 #287). Original mapping by Schell (1981 #2843; 1981 #2844) based on photogeologic analysis of primarily 1:24,000-scale color aerial photography supplemented with 1:60,000-scale black-and-white aerial photography, transferred by inspection to 1:62,500-scale topographic maps and photographically reduced and directly transferred to 1:250,000-scale topographic maps, and field verification. Mapping by Dohrenwend and others (1991 #287) based on 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	This distributed group of northeast-striking faults are confined to the floor of White River Valley.
Length (km)	40 km.
Average strike	N35°E
Sense of movement	Normal *Comments:* (Schell, 1981 #2844)
Dip Direction	NW; SW
Paleoseismology studies	
Geomorphic expression	The fault is marked by lineaments and scarps on Quaternary alluvium and one trace is marked by a scarp juxtaposing Quaternary alluvium against the bedrock of Hot Creek Butte (Dohrenwend and others, 1991 #287).
Age of faulted surficial deposits	Late Quaternary (<30 ka), to late Pleistocene (10-130 ka).
Historic earthquake	

Most recent prehistoric deformation	late Quaternary (<130 ka) *Comments:* Although timing of most recent prehistorical event is not well constrained, Dohrenwend and others (1991 #287; 1996 #2846) suggested a Holocene to late Pleistocene (0-30 ka) time based on photogeologic interpretation.
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.
Date and Compiler(s)	1998 Thomas L. Sawyer, Piedmont Geosciences, Inc.
References	#287 Dohrenwend, J.C., Schell, B.A., and Moring, B.C., 1991, Reconnaissance photogeologic map of young faults in the Lund 1° by 2° quadrangle, Nevada and Utah: U.S. Geological Survey Miscellaneous Field Studies Map MF-2180, 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. #2843 Schell, B.A., 1981, Faults and lineaments in the MX Sitting Region, Nevada and Utah, Volume I: Technical report to U.S. Department of [Defense] the Air Force, Norton Air Force Base, California, under Contract FO4704-80-C-0006, November 6, 1981, 77 p. #2844 Schell, B.A., 1981, Faults and lineaments in the MX Siting Region, Nevada and Utah, Volume II: Technical report to U.S. Department of [Defense] the Air Force, Norton Air Force Base, California, under Contract FO4704-80-C-0006, November 6, 1981, 29 p., 11 pls., scale 1:250,000.

Questions or comments?