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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.

Jay Creek fault (Class A) No. 1596

Last Review Date: 2016-10-06

citation for this record: **Oswald, J.A., and Sawyer, T.L., compilers, 1998, Fault number 1596, Jay Creek fault, 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 02:36 PM.**

Synopsis	This short down-to-the-east, range front normal fault bounds east side of unnamed ridge, 19 km northwest of Judd Mountain and 12 km northeast of Sugar Loaf Peak. The fault is not known to extend northward across the Nevada-Idaho state line. The fault juxtaposes Quaternary alluvium against bedrock. 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) and named the Jay Creek fault by dePolo (1998 #2845). Fault located 19 km northwest of Judd Mountain and 12 km northeast of Sugar Loaf Peak. **Fault ID:** Refers to fault number WE14 of dePolo(1998 #2845).
County(s) and	ELKO COUNTY, NEVADA

State(s)	CASSIA COUNTY, IDAHO
Physiographic province(s)	COLUMBIA PLATEAU
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	This short down-to-the-east, range front normal fault bounds east side of unnamed ridge, 19 km northwest of Judd Mountain and 12 km northeast of Sugar Loaf Peak (Coats, 1987 #2861; Dohrenwend and others, 1991 #290).
Length (km)	9 km.
Average strike	N7°W
Sense of movement	Normal *Comments:* (dePolo, 1998 #2845)
Dip Direction	E
Paleoseismology studies	
Geomorphic expression	The fault juxtaposes Quaternary alluvium against bedrock (Dohrenwend and others, 1991 #290).
Age of faulted surficial deposits	Quaternary. The fault displaces alluvium interpreted from photogeologic mapping to be Quaternary 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 a Quaternary time based on reconnaissance

	photogeologic studies. No recognized Quaternary fault extends north of the state line into Idaho.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* 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	#2861 Coats, R.R., 1987, Geology of Elko County, Nevada: Nevada Bureau of Mines and Geology Bulletin 101, 112 p., 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. #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.

Questions or comments?

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