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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 Steptoe Valley (Class A) No. 1273

Last Review Date: 2000-11-27

citation for this record: **Redsteer, M.H., compiler, 2000, Fault number 1273, unnamed faults in Steptoe 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 02:16 PM.**

Synopsis	This unnamed group of faults in the center of the Steptoe Valley is expressed by a series scarps on Quaternary sediment. This fault zone trends northward in the center of the Steptoe Valley in the area surrounding Shallenberger Spring, southeast of Ely, Nevada. Reconnaissance photogeologic mapping is the source of data. Trench investigations and detailed studies of scarp morphology have not been completed.
Name comments	Refers to an unnamed group of faults mapped by Dohrenwend and others (1992 #2480) in the central part of Steptoe Valley, 2-9 km southeast of Ely, Nevada.
County(s) and State(s)	WHITE PINE 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 map of Dohrenwend and others (1992 #2480). Mapping based on photogeologic analysis of 1:24,000-scale color aerial photography supplemented with 1:60,000-scale black-and-white aerial photography, transferred to 1:62,500-scale topographic maps and photographically reduced and transferred to 1:250,000-scale topographic maps, with subsequent 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 unnamed group of faults is located in the center of the Steptoe Valley, which lies between the Schell Creek Range to the east and the Egan Range to the west. It is located east of a very long and prominent range-front fault on the eastern margin of the Egan Range that is referred to as the Steptoe Valley fault system [1272] by dePolo (1998 #2845).
Length (km)	6 km.
Average strike	N11°W
Sense of movement	Normal
Dip Direction	W
Paleoseismology studies	
Geomorphic expression	This unnamed group of faults is mapped by Dohrenwend and others (1992 #2480) as a series of lineaments (not included) and scarps in the Steptoe Valley. The fault zone is located to the west of a marshy depression, and in a region with numerous springs.
Age of faulted surficial deposits	Mapped as Quaternary by Dohrenwend and others (1992 #2480), but no detailed subdivision of units was shown.
Historic earthquake	

Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Dohrenwend and others (1992 #2480) considered the last fault movement to be of Quaternary age.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Low slip-rate category is assigned on the basis of poor geomorphic preservation, lack of mapped fault scarps, and relative inactivity of similar distributed faults in the Basin and Range province.
Date and Compiler(s)	2000 Margaret Hisa Redsteer, U.S. Geological Survey
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. #2480 Dohrenwend, J.C., Schell, B.A., and Moring, B.C., 1992, Reconnaissance photogeologic map of young faults in the Ely 1° by 2° quadrangle, Nevada and Utah: U.S. Geological Survey Miscellaneous Field Studies Map MF-2181, 1 sheet, scale 1:250,000.