

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](#).

Double Spring Flat fault zone (Class A) No. 1727

Last Review Date: 1998-07-19

citation for this record: Sawyer, T.L., and Adams, K., compilers, 1998, Fault number 1727, Double Spring Flat 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 02:24 PM.

Synopsis	The fault zone is comprised of predominately northwest-striking, west-dipping faults that bound the east side of Double Springs Flat This fault zone is poorly understood, and reconnaissance photogeologic mapping and bedrock mapping of the faults are the sources of data. Trench investigations and detailed studies of scarp morphology of the fault group have not been completed.
Name comments	The fault along the northeast side of Double Springs Flat were mapped by Dohrenwend (1981 #2882; 1982 #2481; 1982 #2870) Stewart and others (1982 #2873). dePolo (1998 #2845) refers to northwest-striking faults that bound the northeast side of Double Springs Flat as the Double Springs Flat fault zone. Fault ID: Refers to fault numbers WL3 (Double Spring Flat fault

	zone) of dePolo (1998 #2845).
County(s) and State(s)	DOUGLAS COUNTY, NEVADA
Physiographic province(s)	CASCADE-SIERRA MOUNTAINS
Reliability of location	<p>Good Compiled at 1:100,000 scale.</p> <p><i>Comments:</i> Locations primarily based on 1:62,500 maps of Dohrenwend (1981 #2884). Fault locations checked against 1:250,000-scale maps of Dohrenwend (1982 #2481; 1982 #2870) which 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 scale of the photographs.</p>
Geologic setting	This group of high-angle down-to-west normal faults form the eastern border of Double Springs Flat, a probable downdropped half-graben (Dohrenwend, 1982 #2481; 1982 #2870).
Length (km)	8 km.
Average strike	N31°W
Sense of movement	<p>Normal</p> <p><i>Comments:</i> dePolo (1998 #2845) states that the fault is strike-slip, but does not indicate whether it is right or left lateral.</p>
Dip Direction	V
Paleoseismology studies	
Geomorphic expression	In southern Double Springs Flat, the fault zone is bifurcated and bounds both sides of linear northwest-trending bedrock hills and then forms a small right step to the eastern side of Double Springs Flat where faults bound narrow bedrock slivers and juxtapose Holocene alluvium against older alluvium and bedrock (Dohrenwend, 1981 #2882). A short intermontane fault north of Double Springs Flat continues this trend, but only displaces bedrock and is defined by aligned drainages and saddles.
Age of faulted	

Age of faulted surficial deposits	In many localities, the faults place Quaternary sediment against bedrock (Dohrenwend, 1981 #2481).
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) <i>Comments:</i> The timing of most recent event is not well constrained, Quaternary movement is indicated on the basis of mapping by Dohrenwend (1981 #2481).
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr <i>Comments:</i> No age or displacement data are reported that could constrain the slip rate. 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 Thomas L. Sawyer, Piedmont Geosciences, Inc. Kenneth Adams, 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. #2481 Dohrenwend, J.C., 1982, Map showing late Cenozoic faults in the Walker Lake 1° by 2° quadrangle, Nevada-California: U.S. Geological Survey Miscellaneous Field Studies Map MF-1382-D, 1 sheet, scale 1:250,000. #2870 Dohrenwend, J.C., 1982, Surficial geologic map of the Walker Lake 1° by 2° quadrangle, Nevada-California: U.S. Geological Survey Miscellaneous Field Studies Map MF-1382-C, 1 sheet, scale 1:250,000. #2873 Stewart, J.H., Carlson, J.E., and Johannesen, D.C., 1982, Geologic map of the Walker Lake 1° by 2° quadrangle, California and Nevada: U.S. Geological Survey Miscellaneous Field Studies

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