

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](#).

Central Big Sand Springs fault (Class A) No. 1369

Last Review Date: 1998-07-11

citation for this record: Sawyer, T.L., compiler, 1998, Fault number 1369, Central Big Sand Springs 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 02:14 PM.

Synopsis	Small group of several normal faults bounding the north, southeast, and west fronts of a group of low hills in Big Sand Springs Valley. Reconnaissance photogeologic mapping of tectonic geomorphic features is the source of data. Trench investigations and studies of scarp morphology have not been completed.
Name comments	Refers to the Central Big Sand Springs fault mapped and named by Schell (1981 #2844) and also mapped by Dohrenwend and others (1991 #287) on the Lund 1? x 2? sheet. Refers to several faults bounding low hills in east-central Big Sand Springs Valley, west of Red Hills. Fault ID: Refers to fault 6 on Plates A6 and A7 of Schell (1981

	#2844).
County(s) and State(s)	NYE COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	<p>Good Compiled at 1:100,000 scale.</p> <p><i>Comments:</i> Location based on 1:250,000-scale maps of Schell (1981 #2844) and 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.</p>
Geologic setting	Small group of several normal faults bounding the north, southeast, and west fronts of a group of low hills in Big Sand Springs Valley.
Length (km)	10 km.
Average strike	N38°E
Sense of movement	<p>Normal</p> <p><i>Comments:</i> From Schell (1981 #2844) and inferred from topography.</p>
Dip Direction	N; W
Paleoseismology studies	
Geomorphic expression	Faults are marked by scarps juxtaposing Quaternary deposits against bedrock, lineaments on Quaternary surfaces, and topographic lineaments on Tertiary deposits Schell (1981 #2844; Dohrenwend and others, 1991 #287).

Age of faulted surficial deposits	Quaternary and Tertiary Schell (1981 #2844; Dohrenwend and others, 1991 #287).
Historic earthquake	
Most recent prehistoric deformation	late Quaternary (<130 ka) <i>Comments:</i> Although timing of most recent prehistorical event is not well constrained and the two map sources differ greatly, Schell (1981 #2844) suggested late Quaternary based on the estimated age of alluvial deposits (15 to 700 k.y., probably <200 k.y.) for the north trending faults; Dohrenwend and others (1996 #2846) did not map faults in that location. Dohrenwend and others (1991 #287) show the east trending faults as Quaternary. We assign herein the most conservative age as suggested by reconnaissance photogeologic mapping of Dohrenwend and others (1991 #287) due to the considerable lack of agreement.
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.
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, <i>in</i> 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 Siting 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.

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