

# 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](#).

## McGee Mountain fault zone (Class A) No. 1488

Last Review Date: 1998-07-19

*citation for this record:* Sawyer, T.L., compiler, 1998, Fault number 1488, McGee Mountain 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 02:50 PM.

### Synopsis

This arcuate northward-widening zone has nearly continuous normal faults that extend northward from the Black Rock Range, northeastward along the flank of Big Mountain and southeast flank of McGee Mountain; they turn abruptly north-northwest along the northeast flank of McGee Mountain. Intra-plateau faults, of probably Tertiary age extend northwest across the mouth of Thousand Creek Gorge, State 140 and Big Spring Table, to the northern border of Nevada (Willden, 1964 #3002; Slemmons, 1967 #156; Dohrenwend and Moring, 1991 #281), but are not included herein. The fault zone roughly bounds the eastern border of a very large volcanic plateau and separates this region of low relief from Basin-and-Range topography to the east. Reconnaissance photogeologic mapping of the fault zone is the source of data. Trench investigations and detailed studies of scarp morphology have not been conducted.

<b>Name comments</b>	<p>Refers to faults mapped by Willden (1964 #3002), Slemmons (1966, unpublished Vya 1:250,000-scale map) and Dohrenwend and Moring (1991 #281); includes the McGee Mountain fault of dePolo (1998 #2845). Fault zone extends from the Black Rock Range generally northward along east side of the Sheldon National Wildlife Refuge, Big Mountain and McGee Mountain.</p> <p><b>Fault ID:</b> Refers to fault V7 (McGee Mountain fault) of dePolo (1998 #2845).</p>
<b>County(s) and State(s)</b>	<p>HUMBOLDT COUNTY, NEVADA</p>
<b>Physiographic province(s)</b>	<p>BASIN AND RANGE</p>
<b>Reliability of location</b>	<p>Good Compiled at 1:100,000 scale.</p> <p><i>Comments:</i> Fault locations based on 1:250,000-scale maps of Dohrenwend and Moring (1991 #281) and Slemmons (1966, unpublished Vya 1:250,000-scale map). Mapping by Dohrenwend and Moring (1991 #281) is from 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 and then reduced and transferred to 1:250,000-scale topographic maps. Mapping by Slemmons (1966, unpublished Vya 1:250,000-scale map) is from analysis of 1:60,000-scale AMS photography transferred to mylar overlaid onto a 1:250,000-scale topographic map using proportional dividers.</p>
<b>Geologic setting</b>	<p>This arcuate northward widening zone has nearly continuous normal faults that extend northward from the Black Rock Range, northeastward along the flank of Big Mountain and southeast flank of McGee Mountain, and abruptly north-northwest along the northeast flank of McGee Mountain. Intra-plateau faults, of probably Tertiary age extend northwest to the northern border of Nevada (Willden, 1964 #3002; Slemmons, 1966, unpublished Vya 1:250,000-scale map; Dohrenwend and Moring, 1991 #281) The fault zone roughly bounds the eastern border of a very large volcanic plateau and separates this region of low relief from Basin-and-Range topography to the east.</p>
<b>Length (km)</b>	<p>34 km.</p>

<b>Average strike</b>	N12°W
<b>Sense of movement</b>	Normal  <i>Comments:</i> Reported as normal faults (Willden, 1964 #3002; Slemmons, 1966, unpublished Vya 1:250,000-scale map).
<b>Dip Direction</b>	E; NE; SW
<b>Paleoseismology studies</b>	
<b>Geomorphic expression</b>	The fault zone is most prominently expressed by abrupt relief along the eastern margin of the Rock Spring Table volcanic plateau and the flanks of McGee Mountain. Young movement is suggested by Slemmons (1966, unpublished Vya 1:250,000-scale map) by the mapped scarps on alluvium. However, dePolo (1998 #2845) indicates that there are possibly no scarps on alluvium and no basal fault facets, suggesting low rates of activity. The northwest-striking mainly intra-plateau faults on and near Big Spring Table shown by Dohrenwend and Moring (1991 #281) are not included herein.
<b>Age of faulted surficial deposits</b>	Quaternary piedmont-slope deposits are faulted and juxtaposed against Tertiary volcanic and sedimentary rocks along the front of McGee Mountain and the east border of Rock Spring Table plateau (Willden, 1964 #3002; Slemmons, 1966, unpublished Vya 1:250,000-scale map; Dohrenwend and Moring, 1991 #281).
<b>Historic earthquake</b>	
<b>Most recent prehistoric deformation</b>	undifferentiated Quaternary (<1.6 Ma)  <i>Comments:</i> The timing of most recent event is not well constrained. Age assignment of Quaternary is based on reconnaissance photogeologic mapping of Dohrenwend and Moring (1991 #281).
<b>Recurrence interval</b>	
<b>Slip-rate category</b>	Less than 0.2 mm/yr  <i>Comments:</i> dePolo (1998 #2845) estimated a reconnaissance vertical displacement rate of 0.01 mm/yr for the range-front fault bounding McGee Mountain and the east border of Rock Spring

	Table plateau 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.
<b>Date and Compiler(s)</b>	1998 Thomas L. Sawyer, Piedmont Geosciences, Inc.
<b>References</b>	<p>#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.</p> <p>#281 Dohrenwend, J.C., and Moring, B.C., 1991, Reconnaissance photogeologic map of young faults in the Vya 1° by 2° quadrangle, Nevada, Oregon, and California: U.S. Geological Survey Miscellaneous Field Studies Map MF-2174, 1 sheet, scale 1:250,000.</p> <p>#3002 Willden, R., 1964, Geology and mineral deposits of Humboldt County, Nevada: Nevada Bureau of Mines and Geology Bulletin 59, 154 p., scale 1:250,000.</p>

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