Jump to Navigation

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 fault eastern Hot Creek Valley (Class B) No. 1361

Last Review Date: 1998-08-01

citation for this record: **Sawyer, T.L., compiler, 1998, Fault number 1361, unnamed fault eastern Hot Creek 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 02:13 PM.**

Synopsis	This left-stepping zone of north-striking normal faults bounds west edge of several hills (e.g., Heart Hills, Squaw Hills, Confusion Hills) and a spur ridge of the southernmost Park Range, and has parallel to orthogonal piedmont faults in Hot Creek Valley. Reconnaissance photogeologic mapping of these faults and bedrock mapping are the sources of data. Trench investigations and detailed studies of scarp morphology have not been completed.
Name comments	Refers to faults mapped by Dixon and others (1972 #2937) and also mapped by Dohrenwend and others (1996 #2846). The fault extends from Heart Hills (south), along the east side of northernmost Hot Creek Valley, into the southern Park Range (north).

County(s) and State(s)	NYE COUNTY, NEVADA
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 (1996 #2846); 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 left-stepping zone of north-striking normal faults bounds west edge of several hills (e.g., Heart Hills, Squaw Hills, Confusion Hills) and a spur ridge of the southernmost Park Range, and has parallel to orthogonal piedmont faults in Hot Creek Valley.
Length (km)	31 km.
Average strike	N8°W
Sense of movement	Normal *Comments:* Not studied in detail; sense of movement from Dixon and others (1972 #2937) on northernmost faults and inferred from topography elsewhere.
Dip Direction	W *Comments:* The fault is expressed by scarps, some abrupt and well-defined, juxtaposing Quaternary alluvium against bedrock, and by scarps and lineaments on Tertiary rocks (Dohrenwend and others, 1996 #2846).
Paleoseismology studies	
Geomorphic expression	The fault is expressed by scarps, some abrupt and well-defined, juxtaposing Quaternary alluvium against bedrock, and by scarps and lineaments on Tertiary rocks (Dohrenwend and others, 1996 #2846).

Age of faulted surficial deposits	Quaternary alluvium (Dohrenwend and others, 1996 #2846)
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Although timing of most recent prehistorical event is not well constrained, Dohrenwend and others (1996 #2846) suggested a Quaternary time based on reconnaissance photogeologic studies.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* A low slip rate is inferred from general knowledge of slip rates estimated for other faults in the region.
Date and Compiler(s)	1998 Thomas L. Sawyer, Piedmont Geosciences, Inc.
References	#2937 Dixon, G.L., Hedlund, D.C., and Ekren, E.B., 1972, Geologic map of the Pritchards Station quadrangle, Nye County, Nevada: U.S. Geological Survey Miscellaneous Investigations Map I-728, scale 1:48,000. #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.