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.

Central Monitor Valley fault (Class A) No. 1345

Last Review Date: 1998-07-16

citation for this record: **Sawyer, T.L., compiler, 1998, Fault number 1345, Central Monitor Valley 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	This short distributed zone of intrabasin, generally down-to-the-west normal faults crosses piedmont slope of the Monitor Range and the floor of central Monitor Valley. This zone may be northward continuation of a fault within the Western Monitor Range fault zone [1346] that splays northward from Haystack Canyon, but the inferred connection is covered by basin-fill sediments, to the north the fault may connect with the Toquima Range fault zone [1344] along an inferred fault that extends north-northeastward from near Dry Lake along the west edge of a group of low volcanic hills. Reconnaissance photogeologic mapping of these faults and limited analysis of scarp morphology are the sources of data. Trench investigations and detailed studies of scarp morphology have not been completed.
Name comments	Refers to Central Monitor Valley fault mapped and named by Schell (1981 #2844), and also mapped by Dohrenwend and others

	(1996 #2846). Faults extend on floor and piedmont slope of east-central Monitor Valley from south of Morgan Creek north to east of Dry Lake. **Fault ID:** Refers to fault 72 on Plate A7 of Schell (1981 #2844).
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 *Comments:* Location based on unpublished (1:250,000-scale) map of the Tonopah 1?x2? sheet by J.C. Dohrenwend published at 1:100,000-scale by 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 short distributed zone of intrabasin, generally down-to-the-west normal faults crosses piedmont slope of the Monitor Range and the floor of central Monitor Valley. This zone may be northward continuation of a fault within the Western Monitor Range fault zone [1346] that splays northward from Haystack Canyon, but the inferred connection is covered by basin-fill sediments.
Length (km)	12 km.
Average strike	N9°E
Sense of movement	Normal *Comments:* (Schell, 1981 #2844)
Dip Direction	W
Paleoseismology studies	
Geomorphic expression	The fault zone is expressed by a distributed series of discontinuous scarps and lineaments of Quaternary alluvium (Schell, 1981 #2844; Dohrenwend and others, 1996 #2846).

	Schell (1981 #2844) reported Holocene scarps up to 3 m high and slope angles of 22? or less.
Age of faulted surficial deposits	Holocene to latest Pleistocene; Quaternary; middle Tertiary. Schell (1981 #2844) mapped scarps on Holocene to latest Pleistocene alluvial fan deposits and mapped faulted middle Tertiary rocks. Dohrenwend and others (1996 #2846) mapped short lineaments and possible lineaments on Quaternary surfaces near north end of the fault.
Historic earthquake	
Most recent prehistoric deformation	latest Quaternary (<15 ka) *Comments:* Although timing of most recent prehistorical event is not well constrained, Schell (1981 #2844) suggested a Holocene time based on photogeologic mapping and field reconnaissance of scarp morphology. This agrees with the Holocene and (or) late Pleistocene time suggested by Dohrenwend and others (1996 #2846) based on reconnaissance photogeologic mapping.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* 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	#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. #2851 Kleinhampl, F.J., and Ziony, J.I., 1985, Geology of Northern Nye County, Nevada: Nevada Bureau of Mines and

	Geology Bulletin 99A, 172 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.