

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 zone east of Trout Creek Mountains (Class A) No. 1503

Last Review Date: 1998-07-19

citation for this record: Sawyer, T.L., compiler, 1998, Fault number 1503, unnamed fault zone east of Trout Creek Mountains, 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 zone of relatively short range-bounding and piedmont normal faults bounds the eastern side of the Trout Creek Mountains in Nevada from Little Riser Creek northward through Little Peak, along the eastern base of Disaster Peak in Nevada. The faults extend to the Nevada/Oregon border, but have not been mapped in Oregon. Although they predominantly displace Tertiary volcanic and sedimentary rocks, young movement is suspected based on their expression as locally prominent topographic escarpments and aligned ridge-crest saddles and hillside benches as determined by Slemmons (1966, unpublished Vya 1:250,000-scale map). The two northernmost the faults are shown as being probable Quaternary structures Dohrenwend and Moring (1991 #281). Reconnaissance photogeologic mapping of the faults is the sources of data. Trench investigations and detailed studies of scarp morphology have not been conducted.

Name comments	Refers to faults mapped by Slemmons (1966, unpublished Vya 1:250,000-scale map) and Dohrenwend and Moring (1991 #281) that bound the eastern side of the Trout Creek Mountains from Little Riser Creek northward through Little Peak, along the eastern base of Disaster Peak and extends to the Nevada/Oregon border.
County(s) and State(s)	HUMBOLDT COUNTY, NEVADA MALHEUR COUNTY, OREGON
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:250,000 scale. <i>Comments:</i> Fault locations based on 1:250,000-scale maps of Slemmons (1966, unpublished Vya 1:250,000-scale map) and Dohrenwend and Moring (1991 #281); mapping compiled by Slemmons (1966, unpublished Vya 1:250,000-scale map) are from analysis of 1:60,000-scale AMS photography transferred to mylar overlay on a 1:250,000-scale topographic map using proportional dividers. Mapping by Dohrenwend and Moring (1991 #281) was 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.
Geologic setting	This zone of relatively short range-bounding and piedmont normal faults bounds the east side of the Trout Creek Mountains in Nevada from Little Riser Creek northward through Little Peak, along the east base of Disaster Peak. The faults extend to the Nevada/Oregon border (Slemmons, 1966, unpublished Vya 1:250,000-scale map Dohrenwend and Moring, 1991 #281), but have not been mapped in Oregon.
Length (km)	14 km.
Average strike	N19°W
Sense of movement	Normal <i>Comments:</i> Not studied in detail; sense of movement is inferred from topography.

Dip Direction	E
Paleoseismology studies	
Geomorphic expression	Although these faults predominantly displace Tertiary volcanic and sedimentary rock, young movement is suspected based on their expression as locally prominent topographic escarpments and aligned ridge-crest saddles and hillside benches. (Slemmons, 1966, unpublished Vya 1:250,000-scale map; Dohrenwend and Moring, 1991 #281).
Age of faulted surficial deposits	Tertiary. The faults displace Tertiary volcanic and sedimentary rock (Dohrenwend and Moring, 1991 #281). The two northernmost the faults are shown as being probable Quaternary structures that place Quaternary sediment against older rocks (Dohrenwend and Moring, 1991 #281).
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) <i>Comments:</i> Although timing of most recent event is not well constrained, a Quaternary time is suspected based on reconnaissance photogeologic mapping by Slemmons (1966, unpublished Vya 1:250,000-scale map) and Dohrenwend and Moring (1991 #281).
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr <i>Comments:</i> 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	#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.

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