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 zone on northwest side of Trinity Range (Class A) No. 1678

Last Review Date: 1999-03-22

citation for this record: **Adams, K., and Sawyer, T.L., compilers, 1999, Fault number 1678, unnamed fault zone on northwest side of Trinity Range, 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 02:25 PM.**

Synopsis	This distributed zone of minor range-front, piedmont, and intrabasin faults on the northwest side of the Trinity Range extends from the north end of Hot Springs Flat northeast to a point northwest of Toulan Peak in the eastern part of Granite Springs Valley. The range-front fault on the northwest side of Ragged Top is expressed as a prominent topographic escarpment and by juxtaposition of Quaternary piedmont-slope deposits against bedrock. Piedmont and intrabasin faults are characterized by short scarps and lineaments on bedrock, piedmont-slope deposits, and intrabasin deposits, suggesting latest Quaternary movement. Reconnaissance photogeologic mapping and regional geologic mapping are the sources of data. Trench investigations and detailed studies of scarp morphology have not been conducted.

Name comments	Refers to faults mapped by Slemmons (1968, unpublished Reno 1? X 2? sheet; 1974, unpublished Lovelock 1? X 2? sheet), Bell (1984 #105), and Dohrenwend and others (1991 #285) on the northwest side of the Trinity Range.
County(s) and State(s)	PERSHING COUNTY, NEVADA CHURCHILL COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Fault locations are primarily based on 1:250,000-scale map of Slemmons (1968, unpublished Reno 1? X 2? sheet; 1974, unpublished Lovelock 1? X 2? sheet) and supplemented by 1:250,000-scale mapping of Bell (1984 #105). Mapping by Slemmons (1968, unpublished Reno 1? X 2? sheet; 1974, unpublished Lovelock 1? X 2? sheet) 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. The mapping of Bell (1984 #105) is from photogeologic analysis of 1:40,000-scale low sun-angle aerial photography, supplemented with 1:12,000-scale aerial photography of selected areas, several low-altitude aerial reconnaissance flights, and field reconnaissance of major structural and stratigraphic relationships.
Geologic setting	This distributed zone of minor range-front, piedmont, and intrabasin faults on northwest side of Trinity Range extends from the north end of Hot Springs Flat northeast to a point northwest of Toulan Peak in the eastern part of Granite Springs Valley.
Length (km)	34 km.
Average strike	N22°E
Sense of movement	Normal *Comments:* Not studied in detail; sense of movement inferred from topography.
Dip Direction	NW; W; S
Paleoseismology studies	

Geomorphic expression	The range-front fault on the northwest side of Ragged Top is expressed as a prominent topographic escarpment and juxtaposes Quaternary piedmont-slope deposits against bedrock (Dohrenwend and others, 1991 #285). Piedmont and intrabasin faults are expressed as short scarps and lineaments on bedrock, piedmont-slope deposits, and intrabasin deposits (Slemmons, 1968, unpublished Reno 1? X 2? sheet; 1974, unpublished Lovelock 1? X 2? sheet), suggesting evidence for young movement.
Age of faulted surficial deposits	Quaternary deposits and Tertiary volcanic rocks are displaced by some of these faults (Dohrenwend and others, 1991 #285).
Historic earthquake	
Most recent prehistoric deformation	latest Quaternary (<15 ka) *Comments:* Although timing of most recent event is not well constrained, Slemmons (1968, unpublished Reno 1? X 2? sheet; 1974, unpublished Lovelock 1? X 2? sheet) reported a latest Quaternary time for some faults in western part of the group. In general, most of the faults are only known to have Quaternary movement.
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 and low height of topographic lineaments on Tertiary rock.
Date and Compiler(s)	1999 Kenneth Adams, Piedmont Geosciences, Inc. Thomas L. Sawyer, Piedmont Geosciences, Inc.
References	#105 Bell, J.W., 1984, Quaternary fault map of Nevada—Reno sheet: Nevada Bureau of Mines and Geology Map 79, 1 sheet, scale 1:250,000. #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. #285 Dohrenwend, J.C., McKittrick, M.A., and Moring, B.C., 1991, Reconnaissance photogeologic map of young faults in the Lovelock 1° by 2° quadrangle, Nevada and California: U.S. Geological Survey Miscellaneous Field Studies Map MF-2178, 1 sheet, scale 1:250,000.