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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 west of Buena Vista (Class A) No. 2310

Last Review Date: 1997-06-10

Compiled in cooperation with the Colorado Geological Survey

citation for this record: **Widmann, B.L., compiler, 1997, Fault number 2310, unnamed fault west of Buena Vista, 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 03:00 PM.**

Synopsis	This fault is perpendicular to the southern section of the Sawatch fault [2308b],which forms the western margin of the upper Arkansas Valley graben, a Neogene west-tilted structure that forms the northernmost topographically prominent expression of the Rio Grande rift. The graben developed along the axial crest of the Laramide age Sawatch anticline. Tweto and others (1976 #2774) mapped pre-Bull Lake gravel deposits as abutting the fault.
Name	This unnamed fault is perpendicular to the north end of southern

comments	section of the Sawatch fault [2308b]. The fault is north of and parallel to Cottonwood Creek and is west of Buena Vista. **Fault ID:** Fault number Q58 of Widman and others (1998 #3441).
County(s) and State(s)	CHAFFEE COUNTY, COLORADO
Physiographic province(s)	SOUTHERN ROCKY MOUNTAINS
Reliability of location	Good Compiled at 1:250,000 scale. *Comments:* The fault was mapped at a scale of 1:250,000 by Tweto and others (1976 #2774).
Geologic setting	The Sawatch fault is a high-angle, down-to-the-east normal fault. It forms the eastern margin of the Collegiate Peaks and is on the west margin of the upper Arkansas River valley graben, a Neogene west-tilted structure that forms the northernmost topographically prominent expression of the Rio Grande rift. The graben developed along the axial crest of the Laramide age Sawatch anticline. This unnamed fault is is down to the south and perpendicular to the Sawatch fault.
Length (km)	3 km.
Average strike	N85°E
Sense of movement	Normal
Dip Direction	S
Paleoseismology studies	
Geomorphic expression	No information is reported about the faults geomorphic expression.
Age of faulted surficial deposits	Tweto and others (1976 #2774) mapped pre-Bull Lake gravel deposits as offset by the fault. The western two-thirds of the fault is in Precambrian bedrock and the eastern one-third is in pre-Bull Lake gravel deposits.
Historic	

earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Tweto and others (1976 #2774) mapped Quaternary pre-Bull Lake deposits as offset by the fault. Without better age constraints the most recent movement on the fault is herein considered to have occurred during the Quaternary.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Widmann and others (1998 #3441) placed this fault in the <0.2 mm/yr slip-rate category.
Date and Compiler(s)	1997 Beth L. Widmann, Colorado Geological Survey
References	#2774 Tweto, O., Steven, T.A., Hail, W.J., Jr., and Moench, R.H., 1976, Preliminary geologic map of the Montrose 1° x 2° quadrangle, southwestern Colorado: U.S. Geological Survey Miscellaneous Field Studies Map MF-761. #3441 Widmann, B.L., Kirkham, R.M., and Rogers, W.P., 1998, Preliminary Quaternary fault and fold map and database of Colorado: Colorado Geological Survey Open-File Report 98-8, 331 p., 1 pl., scale 1:500,000.