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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.

San Francisco Mountains (west side) fault (Class A) No. 2486

Last Review Date: 2004-07-01

Compiled in cooperation with the Utah Geological Survey

citation for this record: **Black, B.D., Hylland, M.D., and Hecker, S., compilers, 2004, Fault number 2486, San Francisco Mountains (west side) 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 02:54 PM.**

Synopsis	Poorly understood middle to late Pleistocene fault zone on the western side of the San Francisco Mountains.
Name comments	**Fault ID:** Refers to fault number 9-27 of Hecker (1993 #642).
County(s) and State(s)	BEAVER COUNTY, UTAH MILLARD COUNTY, UTAH
Physiographic	

Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:250,000 scale. *Comments:* Mapped or discussed by Anderson and Bucknam (1979 #518), Ertec Western, Inc. (Schell, 1981 #2843), Smith and Bruhn (1984 #4561), and Hintze and Davis (2002 #6740, 2003 #6741). Fault traces from 1:250,000-scale mapping of Schell (1981 #2843).
Geologic setting	This north- to northeast-trending normal fault zone along the western side of the San Francisco Mountains bounds the eastern margin of Wah Wah Valley. The San Francisco Mountains are in a transitional geologic area between the Tertiary extrusive volcanic rocks to the south and Paleozoic sedimentary rocks of the Confusion Basin to the north. Surficial valley-fill deposits in both areas are commonly lake sediments and alluvium.
Length (km)	42 km.
Average strike	N23°E
Sense of movement	Normal
Dip Direction	W
Paleoseismology studies	
Geomorphic expression	Short, discontinuous scarps as much as 13 m high are preserved on old dissected fan surfaces and, from their appearance on aerial photos, they may be among the oldest in the Richfield 1? x 2? quadrangle. Shorelines of Lake Bonneville to the north of the mapped fault are not displaced. The fault is inferred from seismic-reflection data to intersect a subhorizontal detachment at a depth of 10 km (Smith and Bruhn, 1984 #4561).
Age of faulted surficial deposits	Pleistocene
Historic earthquake	
Most recent	middle and late Quaternary (<750 ka)

prehistoric deformation	*Comments:*
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr
Date and Compiler(s)	2004 Bill D. Black, Utah Geological Survey Michael D. Hylland, Utah Geological Survey Suzanne Hecker, U.S. Geological Survey
References	#518 Anderson, R.E., and Bucknam, R.C., 1979, Map of fault scarps in unconsolidated sediments, Richfield 1° x 2° quadrangle, Utah: U.S. Geological Survey Open-File Report 79-1236, 15 p. pamphlet, 1 sheet, scale 1:250,000. #642 Hecker, S., 1993, Quaternary tectonics of Utah with emphasis on earthquake-hazard characterization: Utah Geological Survey Bulletin 127, 157 p., 6 pls., scale 1:500,000. #6740 Hintze, L.F., and Davis, F.D., 2002, Geologic map of the Wah Wah Mountains North 30' x 60' quadrangle and part of the Garrison 30' x 60' quadrangle, southwest Millard County and part of Beaver County, Utah: Utah Geological Survey Map 182, 1 sheet, scale 1:100,000. #6741 Hintze, L.F., and Davis, F.D., 2003, Geology of Millard County, Utah: Utah Geological Survey Bulletin 133, 305 p. #2843 Schell, B.A., 1981, Faults and lineaments in the MX Sitting Region, Nevada and Utah, Volume I: 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, 77 p. #4561 Smith, R.B., and Bruhn, R.L., 1984, Intraplate extensional tectonics of the western U.S. Cordillera-Inferences on structural style from seismic-reflection data, regional tectonics and thermal-mechanical models of brittle-ductile deformation: Journal of Geophysical Research, v. 89, no. B7, p. 5733-5762.

Questions or comments?