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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.

Elsinore fault (fold) (Class A) No. 2470

Last Review Date: 1999-10-01

Compiled in cooperation with the Utah Geological Survey

citation for this record: **Black, B.D., and Hecker, S., compilers, 1999, Fault number 2470, Elsinore fault (fold), 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 fault(?) and/or monoclinal fold along the eastern flank of the Pavant Range.
Name comments	**Fault ID:** Refers to fault number 9-7 of Hecker (1993 #642).
County(s) and State(s)	SEVIER COUNTY, UTAH
Physiographic province(s)	COLORADO PLATEAUS
Reliability of	Good

location	Compiled at 1:250,000 scale. *Comments:* Mapped or discussed by Callaghan and Parker (1961 #4558), Anderson and others (1992 #612), Willis (1988 #4560), and Anderson and Barnhard (1992 #612). Fault traces from mapping of Cunningham and others (1983 #4495), Willis (1988 #4560), and Steven and others (1990 #4559).
Geologic setting	Northeast-trending range-front fault and/or monoclinal fold along the eastern flank of the Pavant Range. Orientations and slip directions of bedrock faults along the Pavant Range front between Joseph and Richfield are incompatible with the existence, as has been inferred from physiography and geology, of a major range-front fault (identified as the Elsinore fault by Callaghan and Parker, 1961 #4558). Instead, a mapped southeast-facing monocline (which may overlie a major buried fault) appears to be the principal range-front structure (Anderson and Barnhard, 1992 #612).
Length (km)	28 km.
Average strike	N33°E
Sense of movement	Normal
Dip Direction	SE
Paleoseismology studies	
Geomorphic expression	A short, 12-m-high fault scarp at the south end of the monoclinal structure (Anderson and others, 1978 #4548) is within an area of local late Quaternary (<130 ka) deformation at the juncture with the Dry Wash fault. On trend with the north end of the structure, Tertiary to Quaternary pediments appear to be unfaulted but are tilted (as much as 20-25 degrees) eastward, showing progressively more tilt with age (Willis, 1988 #4560). Willis (1988 #4560) believes the tilting is primarily related to a concealed fault.
Age of faulted surficial deposits	Quaternary.
Historic	

earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:*
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr
Date and Compiler(s)	1999 Bill D. Black, Utah Geological Survey Suzanne Hecker, U.S. Geological Survey
References	#612 Anderson, R.E., and Barnhard, T.P., 1992, Neotectonic framework of the central Sevier Valley area, Utah, and its relationship to seismicity, *in* Gori, P.L., and Hays, W.W., eds., Assessment of regional earthquake hazards and risk along the Wasatch front, Utah: U.S. Geological Survey Professional Paper 1500, p. F1-F47. #4548 Anderson, R.E., Bucknam, R.C., and Hamblin, W.K., 1978, Road log to the Quaternary tectonics of the Intermountain seismic belt between Provo and Cedar City, Utah: Geological Society of America, Rocky Mountain Section Annual Meeting, Provo, Utah, Field Trip no. 8, 50 p. #4558 Callaghan, E., and Parker, R.L., 1961, Geologic map of the Monroe quadrangle, Utah: U.S. Geological Survey Geologic quadrangle Map GQ-155, scale 1:62,500. #4495 Cunningham, C.G., Steven, T.A., Rowley, P.D., Glassgold, L.B., and Anderson, J.J., 1983, Geologic map of the Tushar Mountains and adjoining areas, Marysvale volcanic field, Utah: U.S. Geological Survey Miscellaneous Investigations Map I-1430, scale 1:50,000. #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. #4559 Steven, T.A., Morris, H.T., and Rowley, P.D., 1990, Geologic map of the Richfield 1° x 2° quadrangle, west-central Utah: U.S. Geological Survey Miscellaneous Investigations Map

	I-1901, scale 1:250,000. #4560 Willis, G.C., 1988, Geologic map of the Aurora quadrangle, Sevier County, Utah: Utah Geological and Mineral Survey Map 112, 21 p. pamphlet, scale 1:24,000.