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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.

Paragonah fault (Class A) No. 2534

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 2534, Paragonah 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 02:53 PM.**

Synopsis	Poorly exposed range-front fault of middle (?) to late Pleistocene age separating the Hurricane Cliffs from Parowan Valley to the east.
Name comments	**Fault ID:** Refers to fault number 10-22 of Hecker (1993 #642).
County(s) and State(s)	IRON COUNTY, UTAH
Physiographic province(s)	COLORADO PLATEAUS

Reliability of location	Good Compiled at 1:250,000 scale. *Comments:* Mapped or discussed by Hamblin and others (1981 #2191) and Anderson and Christenson (1989 #828). Fault traces from 1:250,000-scale mapping of Anderson and Christenson (1989 #828).
Geologic setting	Comprised of northeast-trending west-dipping normal fault zone that generally separates the Parowan Valley from the Hurricane Cliffs. Parowan Valley is at the southern edge of an area underlain by related extrusive Tertiary volcanic rocks once continuous from near Pioche, Nevada, to Marysvale, Utah, in Piute County. Some volcanic cover has been eroded to expose pre-existing topography of Paleozoic and Mesozoic sedimentary rocks.
Length (km)	27 km.
Average strike	N37°E
Sense of movement	Normal
Dip Direction	NW
Paleoseismology studies	
Geomorphic expression	The fault displaces Quaternary basalt, but lacks recognized scarps on alluvial surfaces. However, a companion fault west of the main Paragonah fault and on-trend with the Cedar City-Parowan monocline [2530] has a poorly preserved 12.5-m-high alluvial scarp (probably representing several surface-faulting events) having a maximum slope angle (23?) suggestive of latest Pleistocene faulting (Anderson and Christenson,1989 #828).
Age of faulted surficial deposits	Quaternary.
Historic earthquake	
Most recent prehistoric deformation	late Quaternary (<130 ka) *Comments:* A companion fault west of the main Paragonah fault has a poorly preserved 12.5-m-high alluvial scarp with a

	maximum slope angle (23?), that was suggestive of latest Pleistocene faulting to Anderson and Christenson (1989 #828).
Recurrence interval	
Slip-rate category	Between 0.2 and 1.0 mm/yr *Comments:* Based on a displaced basalt flow, the displacement rate for the main strand of the fault is 0.30 mm/yr; the rate for the companion fault to the west is 0.16 mm/yr.
Date and Compiler(s)	1999 Bill D. Black, Utah Geological Survey Suzanne Hecker, U.S. Geological Survey
References	#828 Anderson, R.E., and Christenson, G.E., 1989, Quaternary faults, folds, and selected volcanic features in the Cedar City 1° x 2° quadrangle, Utah: Utah Geological and Mineral Survey Miscellaneous Publication 89-6, 29 p., 1 pl., scale 1:250,000. #2191 Hamblin, W.K., Damon, P.E., and Bull, W.B., 1981, Estimates of vertical crustal strain rates along the western margins of the Colorado Plateau: Geology, v. 9, p. 293-298. #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.