

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](#).

Juab Valley (west side) faults (Class B) No. 2423

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 2423, Juab Valley (west side) faults, 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 02:55 PM.

Synopsis	Poorly understood late Quaternary faults (Class B) on the western side of Juab Valley. The related scarps show a cumulative displacement of about 1 m and are either possibly related to lateral spreading (non seismic) or tectonic but antithetic to the Wasatch fault zone [2351].
Name comments	Fault ID: Refers to fault number 13-2 of Hecker (1993 #642).
County(s) and State(s)	JUAB COUNTY, UTAH
Physiographic	

Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:24,000 scale. <i>Comments:</i> Mapped by Sullivan and Baltzer (1986 #5014). Fault traces from unpublished mapping of R.M. Robison (Utah-Juab County Geologist), scale 1:24,000.
Geologic setting	Short, generally-north-trending range-front faults along the eastern side of Long Ridge in western Juab Valley. Long Ridge is in the eastern Basin and Range Province in a transitional area between the Basin and Range and Colorado Plateaus Provinces characterized by Cenozoic normal faulting superimposed on older thrust faulting. Long Ridge exposes both Paleozoic and Mesozoic strata and is likely underlain by the thrust-fault system.
Length (km)	13 km.
Average strike	N8°E
Sense of movement	Normal
Dip Direction	E
Paleoseismology studies	
Geomorphic expression	Scarps on alluvium. Hecker (1993 #642) notes the scarps show a cumulative displacement of about 1 m and are either tectonic or possibly related to lateral spreading (non seismic). Although not defined by a bedrock escarpment, an east-dipping fault is inferred along the western side of Juab Valley near the contact between Tertiary volcanic rocks and unconsolidated valley fill sediment. The east-dipping fault is thought to intersect the Wasatch fault zone [2351] well above the seismogenic crust, and thus may be antithetic to the Wasatch fault zone and not an independent seismic source. For these reasons, we categorize the fault as a Class B structure.
Age of faulted surficial deposits	Late Quaternary.
Historic	

earthquake	
Most recent prehistoric deformation	middle and late Quaternary (<750 ka) <i>Comments:</i> Hecker (1993 #642).
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	#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. #5014 Sullivan, J.T., and Baltzer, E.M., 1986, Seismotectonic study for Mona Dam and Reservoir: U.S. Bureau of Reclamation Seismotectonic Report 86-4, 17 p.

[Questions or comments?](#)

[Facebook](#) [Twitter](#) [Google](#) [Email](#)

[Hazards](#)

[Design Ground Motions](#)[Seismic Hazard Maps & Site-Specific Data](#)[Faults](#)[Scenarios](#)

[Earthquakes](#)[Hazards](#)[Data](#)[Education](#)[Monitoring](#)[Research](#)

[Home](#)[About Us](#)[Contacts](#)[Legal](#)