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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.

East Tintic Mountains (west side) faults (Class A) No. 2420

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 2420, East Tintic Mountains (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 Quaternary faults on the west side of the East Tintic Mountains in north-central Utah. The faults form scarps are along the western base of the East Tintic Mountains and to the south, and appear as isolated, highly dissected remnants surrounded by different ages of unfaulted alluvium. The scarps appear to be among the oldest in western Utah.
Name comments	**Fault ID:** Refers to fault number 8-16 of Hecker (1993 #642).

County(s) and State(s)	TOOELE COUNTY, UTAH JUAB COUNTY, UTAH
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:250,000 scale. *Comments:* Mapping from Goode (1959 #4493), Morris (1975 #4533) (1987 #4534), Anderson and Miller (1979), Bucknam and Anderson (1979 #517), and unpublished 1989 UGS mapping by Hecker (1:24,000; 1:62,500; and 1:100,000 scales).
Geologic setting	Northwest- to north-trending range-front faults along the west and south sides of the East Tintic Mountains. The East Tintic Mountains border southwestern Utah Valley, and are south of and on line with the Oquirrh Mountains in the Basin and Range. The mountains expose mainly Paleozoic and Tertiary sedimentary rocks on the west side, and Tertiary volcanic rocks on the east side. Unconsolidated deposits in the valley to the west are mainly lake sediments and alluvium.
Length (km)	41 km.
Average strike	N12°W
Sense of movement	Normal
Dip Direction	W
Paleoseismology studies	
Geomorphic expression	Fault scarps are along the western base of the East Tintic Mountains and to the south, and appear on aerial photos as isolated, highly dissected remnants surrounded by different ages of unfaulted alluvium. The scarps appear to be among the oldest in western Utah. Anderson and Miller (1979 #4494) mapped buried Quaternary(?) faults extending to the north and south of the alluvial scarps. At the south end of the East Tintic Mountains, these faults form bedrock-alluvium contacts (Morris, 1987 #4534). On the east side of the Mountain range, Goode (1959 #4493)recognized faults in pre-Bonneville alluvium in a tunnel at the south end of Goshen Valley. Steep faceted bedrock spurs north and south of Silver City (Goode, 1959 #4493) suggest active

	uplift north of the scarps. Goode (1959 #4493) also observed faults on alluvium northwest of Eureka, about 2 km east of the range front.
Age of faulted surficial deposits	Middle to late Pleistocene.
Historic earthquake	
Most recent prehistoric deformation	middle and late Quaternary (<750 ka) *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	#4494 Anderson, L.W., and Miller, D.G., 1979, Quaternary fault map of Utah: Long Beach, California, Fugro, Inc, 35 p. pamphlet, scale 1:500,000. #517 Bucknam, R.C., and Anderson, R.E., 1979, Map of fault scarps on unconsolidated sediments, Delta 1° x 2° quadrangle, Utah: U.S. Geological Survey Open-File Report 79-366, 21 p. pamphlet, 1 sheet, scale 1:250,000. #4493 Goode, H.D., 1959, Surficial deposits, geomorphology, and Cenozoic history of the Eureka quadrangle, Utah: Boulder, University of Colorado, unpublished Ph.D. dissertation, 120 p. #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. #4533 Morris, H.T., 1975, Geologic map and sections of the Tintic Mountain quadrangle and adjacent part of the McIntyre quadrangle, Juab and Utah Counties: U.S. Geological Survey Miscellaneous Investigations Map I-883, scale 1:24,000.

	#4534 Morris, H.T., 1987, Preliminary geologic map of the Delta 2° quadrangle, Tooele, Juab, Millard, and Utah Counties, Utah: U.S. Geological Survey Open-File Report, 87-185 p., 18 p., scale 1:250,000.