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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.

Central Park fault (Class A) No. 670

Last Review Date: 1994-03-14

Compiled in cooperation with the Montana Bureau of Mines and Geology

citation for this record: **Haller, K.M., compiler, 1994, Fault number 670, Central Park 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 02:04 PM.**

Synopsis	Little is known about the Quaternary history of this fault because of its poor surficial expression, and most evidence of its existence and age is circumstantial.
Name comments	Name is probably from Hackett and others (1960 #267). Fault extends from about 0.5 km east of Madison River east-northeastward to parallel the lower reach of Reese Creek. **Fault ID:** Refers to number 100 (Central Park fault) of Johns and others (1982 #259).
County(s) and State(s)	GALLATIN COUNTY, MONTANA

Physiographic province(s)	NORTHERN ROCKY MOUNTAINS
Reliability of location	Poor Compiled at 1:250,000 scale. *Comments:* Location is based on trace from 1:250,000-scale map of Hackett and others (1960 #267), but location is speculative because fault is buried.
Geologic setting	High-angle, down-to-south normal (?) intrabasin fault in Three Forks Basin. Brodowy and others (1991 #257) suggest that the fault follows the Perry line and may accommodate Basin-and-Range-style extension by dextral oblique slip. Vertical slip on fault is about 60 m based on position of Pliocene(?) gravel on either side of fault (Hackett and others, 1960 #267).
Length (km)	30 km.
Average strike	N77°E
Sense of movement	Normal *Comments:* Johns and others (1982 #259) suggest normal(?) slip on this fault; however, cross sections in Hackett and others (1960 #267) indicate reverse slip.
Dip Direction	S
Paleoseismology studies	
Geomorphic expression	Fault is inferred from the presence of an east-trending monoclinal fold in Tertiary strata in the northern part of Gallatin Valley. Folding is thought to be the result of movement on a subjacent fault.
Age of faulted surficial deposits	Pliocene(?) gravels (Hackett and others, 1960 #267)
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Timing of last movement is from Johns and others

	(1982 #259) as suggested by Hackett and others (1960 #267). Bartholomew and Stickney examined several sites along the fault and found no evidence suggesting late Quaternary faulting (M.J. Bartholomew, written commun. 1997).
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Inferred low slip rate is based on absence of scarps on upper Pleistocene deposits and apparent maximum vertical movement of 60 m since Pliocene time (Hackett and others, 1960 #267).
Date and Compiler(s)	1994 Kathleen M. Haller, U.S. Geological Survey
References	#257 Brodowy, J.M., Lageson, D.R., Ryan, C., and Snyder, B., 1991, Structure and neotectonics of the eastern Three Forks Basin, northern Intermountain seismic belt, southwest Montana: Geological Society of America Abstracts with Programs, v. 23, no. 5, p. A233-A234. #267 Hackett, O.M., Visher, F.N., McMurtrey, R.G., and Steinhilber, W.L., 1960, Geology and ground-water resources of the Gallatin Valley, Gallatin County, Montana: U.S. Geological Survey Water Supply Paper 1482, 282 p., 1 pl., scale 1:63,360. #259 Johns, W.M., Straw, W.T., Bergantino, R.N., Dresser, H.W., Hendrix, T.E., McClernan, H.G., Palmquist, J.C., and Schmidt, C.J., 1982, Neotectonic features of southern Montana east of 112°30' west longitude: Montana Bureau of Mines and Geology Open-File Report 91, 79 p., 2 sheets.