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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.

Western Bear Valley faults (Class A) No. 735

Last Review Date: 1994-03-06

citation for this record: **McCalpin, J.P., compiler, 1994, Fault number 735, Western Bear Valley 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 02:01 PM.**

Synopsis	Two short faults were mapped by Gibbons and Dickey (1983 #821) along the western margin of the Bear River floodplain. Little is known about their timing, although they seem to have a low slip rate.
Name comments	Although unnamed by Gibbons and Dickey (1983 #821), the informal name Western Bear Valley faults has been applied by J.P. McCalpin to those faults that bound the western side of the Bear Valley.
County(s) and State(s)	LINCOLN COUNTY, WYOMING
Physiographic province(s)	MIDDLE ROCKY MOUNTAINS
Reliability of location	Good Compiled at 1:250,000 scale.

	Comments: Mapped in reconnaissance (1:100,000 scale) by Gibbons and Dickey (1983 #821). Fault traces recompiled at 1:250,000-scale on map with topographic base.
Geologic setting	These east-dipping normal faults coincide with the bedrock-alluvium contact; they are possibly antithetic to the larger west-dipping Eastern Bear Valley fault [734] on the opposite side of the Bear River.
Length (km)	12 km.
Average strike	N21°E
Sense of movement	Normal
Dip Direction	E
Paleoseismology studies	
Geomorphic expression	Fault forms a somewhat linear bedrock-alluvium contact but no scarps are preserved, thus implying relatively old movement or young burial.
Age of faulted surficial deposits	The compiler considers the broad alluvial fans that lie along the bedrock-alluvial contact in the two fault locations to be of probable middle Pleistocene age. This antiquity explains the general absence of scarps on adjacent alluvial sites along the projection of the fault.
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Timing based on inference that middle Pleistocene age deposits rest against bedrock and are unfaulted.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* Low slip-rate category inferred from lack of fault scarps on deposits believed to middle Pleistocene or younger age.

Date and Compiler(s)	1994 James P. McCalpin, GEO-HAZ Consulting, Inc.
References	#821 Gibbons, A.B., and Dickey, D.D., 1983, Quaternary faults in Lincoln and Uinta Counties, Wyoming, and Rich County, Utah: U.S. Geological Survey Open-File Report 83-288, 1 sheet, scale 1:100,000.

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