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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.

Taylor Peak fault zone (Class A) No. 1707

Last Review Date: 2000-06-27

citation for this record: **Rowley, P.C., Anderson, R.E., and Redsteer, M.H., compilers, 2000, Fault number 1707, Taylor Peak fault zone, 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 02:26 PM.**

Synopsis	This distributed zone of partly aligned, mostly north-striking, down-to-the-west normal faults bounds the western front of the Cherry Creek Range. It extends from just north of Taylor Canyon in south to Flint Spring Canyon. The block-bounding faults juxtapose bedrock against Quaternary alluvium and have moderately well defined scarps. Based on the age of displaced deposits or surfaces along a short parts of the fault at the north end and at the south end, the latest movement on the fault zone is considered late Pleistocene (<130 ka).
Name comments	This fault zone was named by Schell (1981 #2843); it juxtapose the western Cherry Creek Range and the basin beneath Butte Valley on the west. The fault zone consists of discontinuous but partly aligned and partly en-echelon, mostly north-striking faults that are separated by surficial deposits that form "intermediate-age alluvial fans" (15-700 ka). The zone extends from just north of

	Taylor Canyon southward to Flint Spring Canyon. Schell (1981 #2843) showed several dozen short lineaments about 3-8 km west of the main scarp, but for simplicity these are not shown in the present compilation, which instead follows that shown by Dohrenwend and others (1991 #286). **Fault ID:** Referred to as fault 16 by Schell (1981 #2843).
County(s) and State(s)	ELKO COUNTY, NEVADA WHITE PINE COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Compiled at 1:250,000 scale by Schell (1981 #2843) and Dohrenwend and others (1991 #286; 1992 #2480). The fault locations of Dohrenwend and others (1991 #286; 1992 #2480), which are used herein, were produced by analysis of 1:58,000-nominal-scale color-infrared photography transferred directly to 1:100,000-scale topographic quadrangle maps enlarged to the scale of the photographs.
Geologic setting	Dohrenwend and others (1991 #286; 1992 #2480) mapped the fault as a down-to-the-west block-bounding structure rather than a major range-bounding structure The eastern side of the Cherry Creek Range is controlled by the Steptoe Valley fault system [1272]. The northern part of the fault separates the western side of the Cherry Creek Range from a basin beneath Butte Valley. At its southern end, the fault extends along the eastern margin of Butte Valley but terminates within the Cherry Creek Range to the east. The Cherry Creek Range is a complexly faulted horst that generally dips westward (Stewart and Carlson, 1978 #3413).
Length (km)	33 km.
Average strike	N3°E
Sense of movement	Normal
Dip Direction	W
Paleoseismology studies	

Geomorphic expression	According to Schell (1981 #2843), the fault zone is marked by a "well-developed bedrock . . . scarp" that separates bedrock on the east from an "intermediate-age alluvial fan" (15-700 ka) on the west. The surface on this fan material is apparently not cut by the fault. At its southern end, the fault marks an abrupt change in topographic relief between the Johnson Spring Basin and the Cherry Creek Range. Dohrenwend and others (1991 #286) classified the faults as block-bounding faults that juxtapose bedrock against Quaternary sediment, with most scarps moderately well defined.
Age of faulted surficial deposits	According to Schell (1981 #2843), the fault places Paleozoic rock in the Cherry Creek Range against Quaternary alluvium of the Johnson Spring Basin to the west. The youngest alluvium not cut by the fault is that of an "intermediate-age alluvial fan" (15-700 ka). Dohrenwend and others (1991 #286; 1992 #2480) show short parts of the fault at the north and south end as expressed on deposits or surfaces of questionable late Pleistocene age (10-130 ka).
Historic earthquake	
Most recent prehistoric deformation	late Quaternary (<130 ka) *Comments:* Because the fault zone juxtaposes faulted Paleozoic rock on the east against unfaulted "intermediate-age alluvial fan" deposits on the west, Schell (1981 #2843) acknowledged that the age of last movement on the zone is "indeterminate." However, based on the freshness of the scarp, he interpreted that the latest movement occurred in the late Pleistocene (<130 ka). Dohrenwend and others (1991 #286; 1992 #2480) suggested that the fault deforms some deposits or surfaces of late Pleistocene age (10-130 ka).
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* This category is the lowest slip rate assigned and is based on the similarity of these faults to other relatively inactive faults in the province.
Date and Compiler(s)	2000 Peter C. Rowley, U.S. Geological Survey, Retired

	R. Ernest Anderson, U.S. Geological Survey, Emeritus Margaret Hisa Redsteer, U.S. Geological Survey
References	#286 Dohrenwend, J.C., Schell, B.A., and Moring, B.C., 1991, Reconnaissance photogeologic map of young faults in the Elko 1° by 2° quadrangle, Nevada and Utah: U.S. Geological Survey Miscellaneous Field Studies Map MF-2179, 1 sheet, scale 1:250,000. #2480 Dohrenwend, J.C., Schell, B.A., and Moring, B.C., 1992, Reconnaissance photogeologic map of young faults in the Ely 1° by 2° quadrangle, Nevada and Utah: U.S. Geological Survey Miscellaneous Field Studies Map MF-2181, 1 sheet, scale 1:250,000. #2843 Schell, B.A., 1981, Faults and lineaments in the MX Sitting Region, Nevada and Utah, Volume I: Technical report to U.S. Department of [Defense] the Air Force, Norton Air Force Base, California, under Contract FO4704-80-C-0006, November 6, 1981, 77 p. #3413 Stewart, J.H., and Carlson, J.E., 1978, Geologic map of Nevada: U.S. Geological Survey, Special Geologic Map, 1, scale 1:500,000.