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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.

Pittville fault (Class A) No. 7

Last Review Date: 1995-10-01

Compiled in cooperation with the California Geological Survey

citation for this record: **Sawyer, T.L., compiler, 1995, Fault number 7, Pittville 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 02:02 PM.**

Synopsis	Fault is poorly understood, no detailed studies have been complete at time of this compilation. Principal sources of data are Peterson and Martin (1980 #5108) and unpublished reconnaissance studies of Woodward-Clyde Consultants (1987 #5105) and Wills (1990 #5107).
Name comments	Fault first mapped by Gay and Aune (1958 #4890) and named by Woodward-Clyde Consultants (1987 #5105). **Fault ID:** Refers to number 27 (Pittville fault) of Jennings (1994 #2878) and NE02 of Working Group on Northern California Earthquake Potential (1996 #1216).
County(s) and	MODOC COUNTY, CALIFORNIA

State(s)	SHASTA COUNTY, CALIFORNIA LASSEN COUNTY, CALIFORNIA
Physiographic province(s)	CASCADE-SIERRA MOUNTAINS
Reliability of location	Good Compiled at 1:62,500 scale. *Comments:* Location based on digital revisions to Jennings (1994 #2878) using original mapping by Wills (1990 #5107) at 1:62,500 scale.
Geologic setting	High-angle, down-to-west, normal fault that bounds the eastern side of Fall River Valley on the Modoc Plateau.
Length (km)	36 km.
Average strike	N16°W
Sense of movement	Normal
Dip Direction	SW
Paleoseismology studies	
Geomorphic expression	The Pittville fault forms low, west-facing escarpment on basalt and locally controls the course of the Pit River.
Age of faulted surficial deposits	Holocene basalt and alluvium, late Pleistocene basalt, Pleistocene lacustrine deposits, and Tertiary basalt.
Historic earthquake	
Most recent prehistoric deformation	latest Quaternary (<15 ka) *Comments:* Timing of the most recent paleoevent is based on offset basalt believed to be Holocene in age and on soil development that indicates faulted or ponded alluvial deposits are also Holocene in age (1990 #5107).
Recurrence interval	

Slip-rate category	Between 0.2 and 1.0 mm/yr *Comments:* The escarpment along the Pittville fault is lower and less prominent than the escarpments along either the Mayfield fault [6] to the north or the Hat Creek fault [9] to the south, which have slip rates of 1 mm/yr or more. Hence, this fault is inferred to have a slip rate of <1 mm/yr, and is herein categorized as probably 0.2-1 mm/yr.
Date and Compiler(s)	1995 Thomas L. Sawyer, Piedmont Geosciences, Inc.
References	#4890 Gay, T.E., and Aune, Q.A., 1958, Alturas Sheet: California Division of Mines and Geology Geologic Atlas of California, GAM001, scale 1:250,000. #2878 Jennings, C.W., 1994, Fault activity map of California and adjacent areas, with locations of recent volcanic eruptions: California Division of Mines and Geology Geologic Data Map 6, 92 p., 2 pls., scale 1:750,000. #4860 Petersen, M.D., Bryant, W.A., Cramer, C.H., Cao, T., Reichle, M.S., Frankel, A.D., Lienkaemper, J.J., McCrory, P.A., and Schwartz, D.P., 1996, Probabilistic seismic hazard assessment for the State of California: California Department of Conservation, Division of Mines and Geology Open-File Report 96-08 (also U.S. Geological Open-File Report 96-706), 33 p. #5108 Peterson, J.A., and Martin, L.M., 1980, Geologic map of the Baker-Cypress BLM roadless area and Timbered Crater Rare II areas, Modoc, Shasta, and Siskiyou Counties, California: U.S. Geological Survey Miscellaneous Filed Studies Map MF-1214-A, 1 sheet, scale 1:62,500. #5107 Wills, C.J., 1990, Hat Creek, McArthur and related faults, Shasta, Lassen, Modoc and Siskiyou Counties, California: California Division of Mines and Geology Fault Evaluation Report FER-209, 14 p. #5105 Woodward-Clyde Consultants, 1987, Pit 1 Forebay Dam (97-110)—Evaluation of seismic geology, seismicity, and earthquake ground motion: Technical report to Pacific Gas and Electric Company, p. 2-7-2-10. #1216 Working Group on Northern California Earthquake

	Potential (WGNCEP), 1996, Database of potential sources for earthquakes larger than magnitude 6 in northern California: U.S. Geological Survey Open-File Report 96-705, 40 p.