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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.

Wildcat Wash fault (Class A) No. 1062

Last Review Date: 1998-03-27

citation for this record: **Anderson, R.E., compiler, 1998, Fault number 1062, Wildcat Wash 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 02:19 PM.**

Synopsis	The Wildcat Wash fault is a range-bounding structure at the western base of the southern Meadow Valley Mountains. West-facing scarps are formed on late Quaternary deposits or surfaces along the southern, central, and northern parts of its approximately 18-km-long trace. Elsewhere, Quaternary deposits are faulted against bedrock. No paleoseismic data are available.
Name comments	Name given by Schell (1981 #2843) to a north-striking fault at the western base of the southern Meadow Valley Mountains. **Fault ID:** Refers to the northern part of LV5 of dePolo (1988 #2845).
County(s) and State(s)	CLARK COUNTY, NEVADA LINCOLN COUNTY, NEVADA
Physiographic	BASIN AND RANGE

province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:250,000 scale. *Comments:* Fault trace is taken from Schell (1981 #2843) who compiled it at 1:250,000-scale from 1:25,000-scale aerial photos following field studies. Fault also shown by Dohrenwend and others (1991 #288) at 1:250,000 scale as compiled from 1:60,000-scale photos.
Geologic setting	The northerly striking Wildcat Wash fault is one of several north-trending Basin and Range faults north and northeast of Las Vegas Valley. Displacement is down to the west, and the fault separates the basin beneath Coyote Spring Valley from the southern Meadow Valley Mountains. It probably terminates to the north against the northeast-striking Kane Spring Wash fault [1123]. To the south, it projects toward the northernmost Arrow Canyon Range but is conspicuously misaligned with the Arrow Canyon Range fault [1061], a similarly oriented down-to-the-west range-front fault.
Length (km)	21 km.
Average strike	N4°E
Sense of movement	Normal *Comments:* Displacement is down to the west as indicated by west-facing scarps (Schell, 1981 #2843; Dohrenwend and others, 1991 #288).
Dip Direction	W
Paleoseismology studies	
Geomorphic expression	Fault marked by several discontinuous short traces mostly at the bedrock alluvial contact (Dohrenwend and others, 1991 #288). Divided into two parts separated by a northeast-striking fault that juxtaposes Quaternary alluvium down to the northwest against bedrock (Dohrenwend and others, 1991 #288). The southern part (about 12 km long) is mapped mostly as a main range-front fault characterized by juxtaposition of Quaternary alluvium against bedrock and abrupt piedmont-hillslope transition (Dohrenwend and others, 1991 #288). It extends southward into the area

	between the Meadow Valley Mountains and Arrow Canyon Range where it veers away (westward) from bedrock and its trace is marked by scarps on Quaternary surficial deposits or Quaternary surfaces. The northern part is mapped as a mixture of range-front juxtapositioning of bedrock and alluvium and scarps on Quaternary deposits and surfaces (Dohrenwend and others, 1991 #288).
Age of faulted surficial deposits	Schell (1981 #2843) mapped the southernmost part (about 4 km) of the fault, where the trace veers toward the Arrow Canyon Range into the alluvium of Coyote Spring Valley, as Pleistocene (15 ka-1.6 Ma). He mapped most of the remainder as Tertiary or younger (probably Quaternary). Where the fault cuts surficial deposits, Dohrenwend and others (1991 #288) mapped it mostly as early to middle (130 ka to 1.6 Ma) and (or) possibly late Pleistocene (10-130 ka). On this basis, we show the fault as being middle Quaternary or younger (<750 ka).
Historic earthquake	
Most recent prehistoric deformation	middle and late Quaternary (<750 ka) *Comments:* Although timing of most recent event is not well constrained, a middle Quaternary or younger (<750 ka) time is suspected based on reconnaissance photogeologic mapping of Dohrenwend and others (1991 #288) and Schell (1981 #2843).
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr *Comments:* No detailed data exists to determine slip rates for this fault. dePolo (1998 #2845) assigned a reconnaissance vertical slip rate of 0.01 mm/yr for the fault based on the presence of scarps on alluvium and the absence of basal facets. The late Quaternary characteristics of this fault (overall geomorphic expression, continuity of scarps, age of faulted deposits, etc.) support a low slip rate. No data available on offset amounts or height or shape of scarps to guide slip-rate estimate. Accordingly, the less than 0.2 mm/yr slip-rate category has been assigned to this fault.
Date and Compiler(s)	1998 R. Ernest Anderson, U.S. Geological Survey, Emeritus

References	#2845 dePolo, C.M., 1998, A reconnaissance technique for estimating the slip rate of normal-slip faults in the Great Basin, and application to faults in Nevada, U.S.A.: Reno, University of Nevada, unpublished Ph.D. dissertation, 199 p. #288 Dohrenwend, J.C., Menges, C.M., Schell, B.A., and Moring, B.C., 1991, Reconnaissance photogeologic map of young faults in the Las Vegas 1° by 2° quadrangle, Nevada, California, and Arizona: U.S. Geological Survey Miscellaneous Field Studies Map MF-2182, 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.