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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.

West Dry Lake fault (Class A) No. 1125

Last Review Date: 1999-07-16

citation for this record: **Anderson, R.E., compiler, 1999, Fault number 1125, West Dry Lake 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 02:17 PM.**

Synopsis	The West Dry Lake fault is marked by a group of discontinuous north to north-northeast trending low east-facing scarps located west and northwest of Dry Lake in central Dry Lake Valley. It is not obvious whether the fault marks the location of the west structural margin of the basin beneath Dry Lake Valley or is simply a relatively short mid-basin structure. It lies 2.5-4 km east of the most easterly exposed bedrock of the North Pahroc Range to the west, suggesting it may be a small mid-basin structure. Scarps are low (<1 m) and formed on gently sloping piedmont deposits. Most of the scarps are developed on alluvium of early Holocene and late Pleistocene age, whereas the fault is buried in many places by late Holocene alluvium. One fault directly west of the playa deposits of Dry Lake cuts late Holocene alluvium, and displacement on the entire fault may be Holocene. No information is available on recurrence or slip rate.

Name comments	Name taken from Schell (1981 #2844) who applied it to a group of discontinuous north to north-northeast striking faults located west and northwest of Dry Lake in central Dry Lake Valley. **Fault ID:** Refers to fault #35 of Schell (1981 #2844, Table A2).
County(s) and State(s)	LINCOLN COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:50,000 scale. *Comments:* Location based on mapping at 1:50,000 scale by Swadley (1995 #2621) who compiled using fault traces for the central and south parts that were mapped originally at 1:24,000 by Swadley and Simonds (1994 #3845).
Geologic setting	Discontinuous, northerly striking, down-to-the-east, normal fault within the late-Tertiary, closed, structural basin occupied by Dry Lake Valley. It is not obvious whether the fault marks the location of the west structural margin of the basin beneath Dry Lake Valley or is simply a relatively short mid-basin structure. It lies 2.5-4 km east of the most easterly exposed bedrock of the North Pahroc Range to the west, suggesting it may be a small mid-basin structure.
Length (km)	16 km.
Average strike	N9°E
Sense of movement	Normal *Comments:* Shown as dip slip by Swadley and Simonds (1994 #3845) and Swadley (1995 #2621).
Dip Direction	E *Comments:* Probably steep
Paleoseismology studies	
Geomorphic	Fault trace marked by discontinuous, low (<1 m), east-facing

expression	scarps on gently sloping piedmont deposits (Swadley and Simonds, 1994 #3845). These low scarps apparently were not formed at the site of pre existing scarps.
Age of faulted surficial deposits	Most of the scarps are on alluvium of early Holocene and late Pleistocene age, whereas the fault is buried in many places by late Holocene alluvium. One fault directly west of the playa deposits of Dry Lake cuts late Holocene alluvium (Swadley and Simonds, 1994 #3845).
Historic earthquake	
Most recent prehistoric deformation	latest Quaternary (<15 ka) *Comments:* Swadley (1995 #2621) estimates the last displacement event on the entire fault to be Holocene. Apparently, only one strand had late Holocene displacement.
Recurrence interval	*Comments:* No detailed description of the low scarps is reported, but with scarp heights <1 m, they are not likely to be multiple-event features.
Slip-rate category	Less than 0.2 mm/yr *Comments:* If the scarps were single-event features with no prior Quaternary history, it would not be possible to establish a slip rate. Low slip rate is inferred based on the comparison of this fault with similar faults in the Basin and Range province.
Date and Compiler(s)	1999 R. Ernest Anderson, U.S. Geological Survey, Emeritus
References	#2844 Schell, B.A., 1981, Faults and lineaments in the MX Siting Region, Nevada and Utah, Volume II: 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, 29 p., 11 pls., scale 1:250,000. #2621 Swadley, W.C., 1995, Map showing modern fissures and Quaternary faults in the Dry Lake Valley area, Lincoln County, Nevada: U.S. Geological Survey Miscellaneous Investigations Map I-2501, 1 sheet.

	#3845 Swadley, W.C., and Simonds, W.F., 1994, Geologic map of the Pahroc Spring NE quadrangle, Lincoln County, Nevada: U.S. Geological Survey Geologic quadrangle Map GQ-1746, 1 sheet, scale 1:24,000.