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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.

Eastern Columbus Salt Marsh fault (Class A) No. 1328

Last Review Date: 1998-07-19

citation for this record: **Sawyer, T.L., compiler, 1998, Fault number 1328, Eastern Columbus Salt Marsh 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 02:15 PM.**

Synopsis	These northerly striking normal faults bounds southwest margin of the Monte Cristo Range, an apparently east-tilted uplift. Several faults juxtapose Quaternary alluvium against bedrock at the range front and some of these cut Quaternary valley-fill deposits. Scarps and lineaments on Quaternary piedmont-slope surfaces extend discontinuously along the southeast margin of Columbus Salt Marsh to near Coaldale. The easternmost fault appears to extend southward into the range as a prominent topographic lineament on bedrock that crosses a broad topographic-saddle on crest of spur; although, along most of its length, this fault only displaces bedrock, it has suspected Quaternary movement.
Name	Refers to a group of faults mapped by Dohrenwend and others

comments	(1996 #2846) north of Coaldale along southwest margin of the Monte Cristo Range north to east of Rock Hill. dePolo (1998 #2845) referred to it as the Eastern Columbus Salt Marsh fault. **Fault ID:** Refers to fault T6 of dePolo (1998 #2845).
County(s) and State(s)	ESMERALDA COUNTY, NEVADA
Physiographic province(s)	BASIN AND RANGE
Reliability of location	Good Compiled at 1:100,000 scale. *Comments:* Location primarily based on unpublished map of the Tonopah 1?x2? sheet by J.C. Dohrenwend published at 1:100,000-scale by Dohrenwend and others (1996 #2846) from photogeologic analysis of 1:58,000-nominal-scale color-infrared photography transferred directly to 1:100,000-scale topographic quadrangle maps enlarged to scale of the photographs.
Geologic setting	These northerly striking normal faults bound the southwest margin of the Monte Cristo Range, an apparently east-tilted uplift. Easternmost fault appears to extend southward into the range as a prominent topographic lineament on bedrock that crosses a broad topographic-saddle on crest of spur; although majority of this fault only displaces bedrock it has suspected Quaternary movement.
Length (km)	12 km.
Average strike	N12°W
Sense of movement	Normal *Comments:* (Dohrenwend and others, 1996 #2846)
Dip Direction	W
Paleoseismology studies	
Geomorphic expression	These faults juxtaposes Quaternary alluvium against bedrock along irregular southwest front of the Monte Cristo Range, which lacks basal fault facets. Some of these faults and the piedmont faults north of Coaldale are marked by scarps on Quaternary

	deposits, possibly late Pleistocene alluvium (Kleinhampl and Ziony, 1985 #2851; dePolo, 1998 #2845; Dohrenwend and others, 1996 #2846). Easternmost fault extends southward into the range as a prominent topographic lineament on bedrock that crosses a broad topographic-saddle on crest of spur; although majority of this fault only displaces bedrock it has suspected Quaternary movement.
Age of faulted surficial deposits	Quaternary and Tertiary. Scarps have been mapped on Quaternary piedmont-slope deposits (Dohrenwend and others, 1996 #2846) that may be as young as late Pleistocene in age (Kleinhampl and Ziony, 1985 #2851; .
Historic earthquake	
Most recent prehistoric deformation	undifferentiated Quaternary (<1.6 Ma) *Comments:* Although timing of most recent prehistorical event is not well constrained, a Quaternary time, is suggested from reconnaissance photogeologic mapping by Dohrenwend and others (1996 #2846) and Kleinhampl and Ziony (1985 #2851).
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. Accordingly, the less than 0.2 mm/yr slip-rate category has been assigned to this fault.
Date and Compiler(s)	1998 Thomas L. Sawyer, Piedmont Geosciences, Inc.
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. #2846 Dohrenwend, J.C., Schell, B.A., Menges, C.M., Moring,

	B.C., and McKittrick, M.A., 1996, Reconnaissance photogeologic map of young (Quaternary and late Tertiary) faults in Nevada, *in* Singer, D.A., ed., Analysis of Nevada's metal-bearing mineral resources: Nevada Bureau of Mines and Geology Open-File Report 96-2, 1 pl., scale 1:1,000,000. #2851 Kleinhampl, F.J., and Ziony, J.I., 1985, Geology of Northern Nye County, Nevada: Nevada Bureau of Mines and Geology Bulletin 99A, 172 p.