

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](#).

Coyote Wash fault (Class A) No. 1015

Last Review Date: 1998-02-13

Compiled in cooperation with the Arizona Geological Survey

citation for this record: Pearthree, P.A., compiler, 1998, Fault number 1015, Coyote 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 02:21 PM.

Synopsis

The Coyote Wash fault zone is a generally northwest-trending, discontinuous system of probable sinistral and oblique-slip faults that are at the northeastern margin of the Pliocene-Pleistocene Springerville volcanic field in east-central Arizona. The faults are on the erosion surface cut on Mesozoic rocks that slopes northeast from the Colorado Plateaus margin to the Little Colorado River. Faults displace Mesozoic bedrock and upper Pliocene to lower Pleistocene basalt flows in a down-to-the-southwest sense. Sinistral slip and sinistral/normal slip are inferred for the fault on the basis of structural characteristics and regional relations. The topographic scarp associated with this fault zone evidently is not sharply defined. The faults have probably been active in the

	middle or late Quaternary, but the age of youngest movement is not well constrained.
Name comments	Mapped and named by Crumpler and others (1994 #2101). Faults in the northern part of the zone were mapped and grouped with other faults in the "St. Johns fault set" by Menges and Pearthree (1983 #2073); a portion of the southern part of the Coyote Wash fault zone was called the "Coyote Creek fault" by Menges and Pearthree (1983 #2073).
County(s) and State(s)	APACHE COUNTY, ARIZONA
Physiographic province(s)	COLORADO PLATEAUS
Reliability of location	Good Compiled at 1:250,000 scale. <i>Comments:</i> Mapped at 1:250,000-scale on topographic base map.
Geologic setting	The Coyote Wash fault is a generally northwest-trending, discontinuous system of probable left-lateral and oblique-slip faults that are at the northeastern margin of the Pliocene-Pleistocene Springerville volcanic field in east-central Arizona. The faults are on the Mogollon Slope, an erosion surface cut onto Mesozoic rocks and mantled with Pliocene-Pleistocene volcanic rocks and Miocene to Pliocene sediment. The surface slopes north from the Colorado Plateaus margin to the Little Colorado River. Faults cut Pliocene to lower Pleistocene volcanic rocks and Mesozoic bedrock. Amounts of displacement have not been reported. The Coyote Wash fault and the Concho fault zone to the southwest define an approximately 20-km-wide, northwest-trending structural depression. Small anticlines and synclines in the depression suggest that it has undergone contractional strain.
Length (km)	42 km.
Average strike	N42°W
Sense of movement	Normal <i>Comments:</i> Oblique (sinistral) normal and left-lateral (sinistral) movement is inferred for this fault on the basis of on fault geometry, orientations of subsidiary structures, and regional relations (Crumpler and others, 1994 #2101).

Dip Direction	SW
Paleoseismology studies	
Geomorphic expression	Faulting is expressed as low to moderately high, fairly subdued, southwest-facing scarps formed on Pliocene-Pleistocene basalt flows. The slopes of this scarp have been affected by stream erosion, but no morphologic scarp data has been reported.
Age of faulted surficial deposits	Mesozoic, Pliocene, early Pleistocene
Historic earthquake	
Most recent prehistoric deformation	middle and late Quaternary (<750 ka) <i>Comments:</i> Lower Pleistocene volcanic rocks are displaced by these faults. No faulting of alluvium has been documented.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr <i>Comments:</i> No slip rate data have been reported, but the fault zone likely has a low slip rate owing to the subdued scarps associated with it and the lack of clear late Quaternary offset.
Date and Compiler(s)	1998 Philip A. Pearthree, Arizona Geological Survey
References	#2101 Crumpler, L.S., Aubeler, J.C., and Condit, C.D., 1994, Volcanoes and neotectonic characteristics of the Springerville volcanic field, Arizona, <i>in</i> Chamberlin, R.M., Kues, B.S., Cather, S.M., Barker, J.M., and McIntosh, W.C., eds., Mogollon Slope, west-central New Mexico and east-central Arizona: New Mexico Geological Society, 45th Annual Field Conference, Guidebook, p. 147-164. #2073 Menges, C.M., and Pearthree, P.A., 1983, Map of neotectonic (latest Pliocene-Quaternary) deformation in Arizona: Arizona Geological Survey Open-File Report 83-22, 48 p., scale 1:500,000.

[Questions_or_comments?](#)

[Facebook](#) [Twitter](#) [Google](#) [Email](#)

[Hazards](#)

[Design_Ground_Motions](#)[Seismic_Hazard_Maps_&_Site-Specific_Data](#)[Faults](#)[Scenarios](#)

[Earthquakes](#)[Hazards](#)[Data](#)[Education](#)[Monitoring](#)[Research](#)

[Home](#)[About_Us](#)[Contacts](#)[Legal](#)