

# 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](#).

## Little Diamond Creek fault (Class A) No. 2411

Last Review Date: 1999-10-01

### Compiled in cooperation with the Utah Geological Survey

*citation for this record:* Black, B.D., and Hecker, S., compilers, 1999, Fault number 2411, Little Diamond Creek 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 02:56 PM.

<b>Synopsis</b>	Poorly understood fault northwest of Diamond Creek in the Wasatch Range.
<b>Name comments</b>	<b>Fault ID:</b> Refers to fault number 12-13 of Hecker (1993 #642).
<b>County(s) and State(s)</b>	UTAH COUNTY, UTAH
<b>Physiographic province(s)</b>	MIDDLE ROCKY MOUNTAINS BASIN AND RANGE
<b>Reliability of</b>	Good

<b>location</b>	<p>Compiled at 1:100,000 scale.</p> <p><i>Comments:</i> Mapped or discussed by Baker (1976 #4375), Young (1978 #4532), Sullivan and others (1987 #4531), and Sullivan and others (1988 #4508). Fault traces from mapping of Sullivan and others (1987 #4531).</p>
<b>Geologic setting</b>	<p>North-east trending normal fault along the eastern side of Spanish Fork Creek in the Wasatch Range. The fault is in the Wasatch hinterlands, about 5 km east of the Provo section [2351g] of the Wasatch fault zone.</p>
<b>Length (km)</b>	20 km.
<b>Average strike</b>	N16°E
<b>Sense of movement</b>	Normal
<b>Dip Direction</b>	SE
<b>Paleoseismology studies</b>	
<b>Geomorphic expression</b>	<p>Alluvial scarps are not preserved, perhaps due to the steepness of escarpment slopes. Previous workers (Baker, 1976 #4375; Young, 1978 #4532) suggest little or no late Cenozoic displacement on the fault, yet the fault shows striking similarities with other known or inferred late Cenozoic faults in the Wasatch Range (Sullivan and others, 1988 #4508).</p>
<b>Age of faulted surficial deposits</b>	Middle to late Quaternary(?)
<b>Historic earthquake</b>	
<b>Most recent prehistoric deformation</b>	<p>middle and late Quaternary (&lt;750 ka)</p> <p><i>Comments:</i> Timing based on reported displacement of middle to late Quaternary(?) deposits (Sullivan and others, 1988 #4508).</p>
<b>Recurrence interval</b>	<p><i>Comments:</i> For the purpose of seismic-hazard assessment, values for recurrence interval are inferred to be similar to those</p>

	calculated for the Morgan fault [2353], based on similarities in fault length and escarpment morphology.
<b>Slip-rate category</b>	Less than 0.2 mm/yr  <i>Comments:</i> Sullivan and others (1988 #4508) believe slip rates are similar to the Morgan fault [2353], which are <0.2 mm/yr.
<b>Date and Compiler(s)</b>	1999 Bill D. Black, Utah Geological Survey Suzanne Hecker, U.S. Geological Survey
<b>References</b>	#4375 Baker, A.A., 1976, Geologic map of the west half of the Strawberry Valley quadrangle, Utah: U.S. Geological Survey Miscellaneous Investigations Map I-931, 11 p. pamphlet, 1 sheet, scale 1:63,360.  #642 Hecker, S., 1993, Quaternary tectonics of Utah with emphasis on earthquake-hazard characterization: Utah Geological Survey Bulletin 127, 157 p., 6 pls., scale 1:500,000.  #4531 Sullivan, J.T., Foley, L.L., Baltzer, E.M., and C.K., K., 1987, Seismic sources, maximum credible earthquakes, and related seismic hazards for Monks Hollow dams site: U.S. Bureau of Reclamation Seismotectonic Report 87-2, 35 p.  #4508 Sullivan, J.T., Nelson, A.R., LaForge, R.C., Wood, C.K., and Hansen, R.A., 1988, Central Utah regional seismotectonic study for USBR dams in the Wasatch Mountains: Bureau of Reclamation Seismotectonic Report 88-5, 269 p.  #4532 Young, G.H., 1978, Geology of the Billies Mountain quadrangle, Utah County, Utah: Brigham Young University Geology Studies, v. 24, pt.1, p. 205-280.

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