

# 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](#).

## Stinking Springs fault (Class A) No. 2413

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 2413, Stinking Springs 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 02:55 PM.

<b>Synopsis</b>	Poorly understood fault east of the Strawberry fault [2412] on the western edge of the Uinta Basin. The fault has apparent evidence for late Quaternary movement.
<b>Name comments</b>	<b>Fault ID:</b> Refers to fault number 12-5 of Hecker (1993 #642).
<b>County(s) and State(s)</b>	WASATCH COUNTY, UTAH
<b>Physiographic province(s)</b>	COLORADO PLATEAUS

<b>Reliability of location</b>	<p>Good Compiled at 1:250,000 scale.</p> <p><i>Comments:</i> Mapped or discussed by Nelson and Martin (1982 #4360) and Nelson and Van Arsdale (1986 #207). Fault traces from mapping of Nelson and Martin (1982 #4360).</p>
<b>Geologic setting</b>	<p>Generally north-trending normal fault east of the Strawberry fault [2412] on the western edge of the Uinta Basin. The Uinta Basin is a large, elongate bowl-shaped structure south of the Uinta Mountains; geology of the basin is dominated by Eocene rock and younger alluvium and colluvium. The structural axis of the basin trends east-west and is about 16 km north of the topographic low (followed by the Duchesne River).</p>
<b>Length (km)</b>	10 km.
<b>Average strike</b>	N7°E
<b>Sense of movement</b>	Normal
<b>Dip Direction</b>	W
<b>Paleoseismology studies</b>	
<b>Geomorphic expression</b>	<p>Range-front fault along the east side of Soldier Creek Bay. Escarpment morphology and height suggest a movement history that is similar to the Strawberry fault, although the Stinking Springs fault lacks direct evidence for Holocene movement. A prominent topographic escarpment about 11 km long, which Hecker (1993 #642) uses to estimate rupture length, is found along about a third of the fault. This apparent rupture length, which is much less than the Strawberry fault, suggests that displacement may occur in smaller (about magnitude 6.5), more frequent events.</p>
<b>Age of faulted surficial deposits</b>	Late Quaternary
<b>Historic earthquake</b>	
<b>Most recent prehistoric</b>	late Quaternary (<130 ka)

<b>deformation</b>	<i>Comments:</i>
<b>Recurrence interval</b>	
<b>Slip-rate category</b>	Less than 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>	#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.  #4360 Nelson, A.R., and Martin, R.A., Jr., 1982, Seismotectonic study for Soldier Creek Dam, Central Utah Project: U.S. Bureau of Reclamation Seismotectonic Report 82-1, 102 p., 6 pls.  #207 Nelson, A.R., and VanArsdale, R.B., 1986, Recurrent late Quaternary movement on the Strawberry normal fault, Basin and Range—Colorado Plateau transition zone, Utah: Neotectonics, v. 1, p. 7-37.

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