

# 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](#).

## Price River area faults (Class B) No. 2457

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 2457, Price River area faults, 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 Quaternary faults in a zone along the Price River, west of the Book Cliffs. Some faults within the zone displace pre-Wisconsin-age pediments less than 2 m. Structural relations indicate that the fault zone forms the crest of a broad, collapsed anticline. Owing to their relation to salt-cored anticlines, we consider these faults to be Class B structures.
<b>Name comments</b>	<b>Fault ID:</b> Refers to fault number 13-19 of Hecker (1993 #642).
<b>County(s) and State(s)</b>	EMERY COUNTY, UTAH

<b>Physiographic province(s)</b>	COLORADO PLATEAUS
<b>Reliability of location</b>	Poor Compiled at 1:250,000 scale.  <i>Comments:</i> Mapped or discussed by Howard and others (1978 #312), Witkind and others (1978 #5024), and Osterwald and others (1981#5005). Fault traces from mapping of Witkind and others (1978 #5024).
<b>Geologic setting</b>	Generally east-west striking faults along the Price River west of the Book Cliffs. The fault zone is similar in trend, pattern, and length to faults along the crest of the Moab-Spanish Valley anticline [2476], although it is not as strongly developed. The faults are inferred to be related to a salt anticline at the northern margin of the Paradox basin. The faults are in a long, sinuous area along the base of the Book Cliffs termed the Mancos Shale Lowlands, which are characterized by sloping pediments, rugged badlands, and narrow flat-bottomed alluvial valleys in Cretaceous rock.
<b>Length (km)</b>	51 km.
<b>Average strike</b>	N81°W
<b>Sense of movement</b>	Normal  <i>Comments:</i> Most faults are normal.
<b>Dip Direction</b>	N; S  <i>Comments:</i> Most faults dip steeply or vertically
<b>Paleoseismology studies</b>	
<b>Geomorphic expression</b>	Some faults within the zone displace pre-Wisconsin-age pediments less than 2 m. Structural relations indicate that the fault zone forms the crest of a broad, collapsed anticline. Early to middle Pleistocene pediments north of the fault zone steepen sharply at the base of the Book Cliffs, and may be warped due to elastic rebound of the Mancos Shale during erosional unloading and/or monoclinical folding. The ancestral course of Whitmore Canyon (near Sunnyside) also appears to be warped. Owing to

	their relation to salt cored anticlines, we consider these faults to be Class B structures.
<b>Age of faulted surficial deposits</b>	Quaternary(?), specifically pre-Wisconsin-age pediments.
<b>Historic earthquake</b>	
<b>Most recent prehistoric deformation</b>	undifferentiated Quaternary (<1.6 Ma) <i>Comments:</i> Based on geomorphic position, structural setting, and the presence of lineaments.
<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.  #312 Howard, K.A., Aaron, J.M., Brabb, E.E., Brock, M.R., Gower, H.D., Hunt, S.J., Milton, D.J., Muehlberger, W.R., Nakata, J.K., Plafker, G., Prowell, D.C., Wallace, R.E., and Witkind, I.J., 1978, Preliminary map of young faults in the United States as a guide to possible fault activity: U.S. Geological Survey Miscellaneous Field Studies Map MF-916, 2 sheets, scale 1:5,000,000.  #5005 Osterwald, F.W., Maberry, J.O., and Dunrud, C.R., 1981, Bedrock, surficial, and economic geology of the Sunnyside coal-mining district, Carbon and Emery Counties, Utah: U.S. Geological Survey Professional Paper 1166, 68 p.  #5024 Witkind, I.J., Lidke, D.J., and McBroome, L.A., compilers, 1978, Preliminary geologic map of the Price 1° x 2° quadrangle, Utah: U.S. Geological Survey Open-File Report 78-465, 2 sheets, scale 1:250,000.

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