

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](#).

Dolphin Island fracture zone (Class A) No. 2367

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 2367, Dolphin Island fracture zone, 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 02:57 PM.

Synopsis	Poorly understood zone of late Quaternary (?) faulting characterized by two prominent parallel lineaments paralleled by sinkholes produced by dissolution or springs beneath Great Salt Lake.
Name comments	Named for proximity to Dolphin Island in Great Salt Lake. Fault ID: Refers to fault number 6-9 of Hecker (1993 #642).
County(s) and State(s)	BOX ELDER COUNTY, UTAH
Physiographic	

Physiographic province(s)	BASIN AND RANGE
Reliability of location	Poor Compiled at 1:250,000 scale. <i>Comments:</i> Mapping from air-photo interpretation by Currey (1980 #4490).
Geologic setting	Northeast-trending faults beneath Great Salt Lake northwest of the East Great Salt Lake fault zone [2369].
Length (km)	19 km.
Average strike	N18°E
Sense of movement	Normal
Dip Direction	Unknown
Paleoseismology studies	
Geomorphic expression	Two prominent parallel lineaments are paralleled by sinkholes produced by dissolution or springs. The lineaments appear at Great Salt Lake levels within a few feet of the historic low of 4,193 feet (1,288 m).
Age of faulted surficial deposits	Middle to late Quaternary (?)
Historic earthquake	
Most recent prehistoric deformation	middle and late Quaternary (<750 ka) <i>Comments:</i> The fault-line features have been modified by, and thus predate, Holocene shore-zone processes.
Recurrence interval	
Slip-rate category	Less than 0.2 mm/yr <i>Comments:</i> Lack of significant scarps indicate a low slip rate.
Date and	1999

Compiler(s)	Bill D. Black, Utah Geological Survey Suzanne Hecker, U.S. Geological Survey
References	#4490 Currey, D.R., 1980, Coastal geomorphology of Great Salt Lake and vicinity, <i>in</i> Gwynn, J.W., ed., Great Salt Lake—A scientific, historical, and economic overview: Utah Geological and Mineral Survey Bulletin 116, p. 69-82. #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.

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