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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.

Round Valley faults (Class A) No. 2400

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 2400, Round Valley 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 02:55 PM.**

Synopsis	Poorly understood late Quaternary(?) faults bounding the northeastern and southwestern sides of Round Valley. For the purpose of seismic-hazard assessment, values for slip rate, recurrence interval, and single-event displacement are inferred to be similar to those calculated for the Morgan fault [2353], based on similarities in escarpment morphology.
Name comments	**Fault ID:** Refers to fault number 12-12 of Hecker (1993 #642).
County(s) and State(s)	WASATCH COUNTY, UTAH

Physiographic province(s)	MIDDLE ROCKY MOUNTAINS
Reliability of location	Good Compiled at 1:250,000 scale. *Comments:* Mapped or discussed by Sullivan and others (1988 #4508) and Hylland and others (1995 #4527). Fault traces from mapping of Sullivan and others (1988 #4508).
Geologic setting	Northwest- to east-trending normal faults bounding the northeastern and southwestern margins of Round Valley in the Wasatch Range. Round Valley is one of several "back valleys of the Wasatch," a line of discontinuous valleys in the Wasatch hinterlands east of the Wasatch Range.
Length (km)	11 km.
Average strike	N40°W
Sense of movement	Normal
Dip Direction	SW; NE
Paleoseismology studies	
Geomorphic expression	Range-front escarpments. Scarps on alluvial fans at the base of the escarpments are not preserved, perhaps due to the steepness of escarpment slopes. For the purpose of seismic-hazard assessment, values for slip rate, recurrence interval, and single-event displacement are inferred to be similar to those calculated for the Morgan fault [2353], based on similarities in escarpment morphology.
Age of faulted surficial deposits	Middle and late Quaternary (?)
Historic earthquake	
Most recent prehistoric deformation	middle and late Quaternary (<750 ka) *Comments:* Based on range-front morphology.

Recurrence interval	*Comments:* For the purpose of seismic-hazard assessment, values for recurrence interval are inferred to be similar to those calculated for the Morgan fault [2353], based on similarities in escarpment morphology.
Slip-rate category	Less than 0.2 mm/yr *Comments:* Sullivan and others (1988 #4508) believe slip rates are similar to the Morgan fault [2353], which are <0.2 mm/yr.
Date and Compiler(s)	1999 Bill D. Black, Utah Geological Survey Suzanne Hecker, U.S. Geological Survey
References	#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. #4527 Hylland, M.D., Lowe, M., and Bishop, C.E., 1995, Engineering geologic map folio, western Wasatch County, Utah: Utah Geological Survey Open-File Report 319, 12, scale 1:24,000. #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.