Although this product represents the work of professional scientists, the Utah Department of Natural Resources, Utah Geological Survey, makes no warranty, expressed or implied, regarding its suitability for a particular use. The Utah Department of Natural Resources, Utah Geological Survey, shall not be liable under any circumstances for any direct, indirect, special, incidental, or consequential damages with respect to claims by users of this product.

SCALE 1:24,000

1 0.5 0 1 MILE

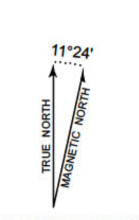
4900 2450 0 4900 FEET

1 0.5 0 1 KILOMETER

CONTOUR INTERVAL 40 FEET

Base from USGS Tickville Spring 7.5' quadrangle (1997).
The USGS topographic map published in 1997 conforms to the North American Datum of 1983 (NAD 83). However, the boundary of this base map conforms to the North American Datum of 1927 (NAD 27) resulting in a slight offset in boundaries and a gap on the west edge of the map with no topographic data. Imagery base from National Agriculture Imagery Program (NAIP, 2012) and hillshade derived from 2-meter bare earth lidar (2006) data from the Utah Automated Geographic Reference Center
State Geographic Information Database.
Datum: NAD 1983
Spheroid: Clarke 1866

GIS and Cartography: Jessica J. Castleton, Sofia Agopian, and Adam Hiscock



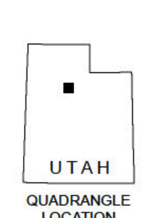
APPROXIMATE MEAN DECLINATION, 2018

SURFACE FAULT RUPTURE HAZARD MAP OF THE TICKVILLE SPRING QUADRANGLE, SALT LAKE AND UTAH COUNTIES, UTAH

by

Jessica J. Castleton, Ben A. Erickson, and Greg N. McDonald

2018



QUADRANGLE LOCATION

Utah Geological Survey
1594 West North Temple, Suite 3110
P.O. Box 146100, Salt Lake City, UT 84114-6100
(801) 537-3300
geology.utah.gov

1	2	3
4	·	5
6	7	8

1. Bingham Canyon
2. Copperton
3. Midvale
4. Lowe Peak
5. Jordan Narrows
6. Mercur
7. Cedar Fort
8. Saratoga Springs

ADJOINING 7.5' QUADRANGLE NAMES

9 781557 919502

EXPLANATION

SURFACE FAULT RUPTURE HAZARD CATEGORIES

Well-located fault with an unknown activity class (bar and ball on downdropped side) – Surface-fault-rupture hazard investigations recommended for all structures intended for human occupancy and all critical facilities.

Approximately located or concealed fault with an unknown activity class (bar and ball on downdropped side) – Activity class unknown; paleoseismic data are lacking; dashed where approximately located, dotted where concealed and approximately located. The UGS recommends investigators consider all possible Quaternary faults to be Holocene unless data are adequate to preclude Holocene displacement; preliminary investigations should be conducted to make this determination. If the fault is determined to be Holocene investigations should be conducted according to that activity class (Lund and others, 2016). If the fault is determined not to be Holocene in preliminary investigations, but is determined to be a Quaternary fault then surface-fault-rupture hazard investigations are recommended for all essential and critical facilities. Investigations for other structures intended for human occupancy are optional (but recommended) because of the low likelihood of surface fault rupture, although surface fault rupture is still possible.

Surface-fault-rupture hazard special-study zone – Surface-fault-rupture-hazard special-study area. The special-study areas established for well-defined faults extend for 500 feet on the downthrown side and 250 feet on the upthrown side of each fault. Normal faults are classified as well defined if Utah Geological Survey 1:24,000-scale mapping shows them as solid lines, indicating they are recognizable as faults at the ground surface. Because their location is uncertain, the special-study areas around buried or approximately located faults are broader, extending 1000 feet on each side of the suspected trace of the faults (in accordance with Lund and others, 2016).

USING THIS MAP

This map shows potentially active faults in the Tickville Spring quadrangle along which surface faulting may occur. A special-study zone is shown around each fault, within which the UGS recommends a site-specific surface-fault-rupture hazard investigation be performed prior to development. Site-specific geotechnical/geologic-hazard investigations can resolve uncertainties inherent in the generalized map scale and help ensure safety by identifying the need for fault setbacks. This map is not intended for use at scales other than 1:24,000; it is our opinion that the inventory of potentially active faults shown on this map is likely complete at this scale. However, smaller faults may not have been detected during mapping or are concealed beneath young geologic deposits. Additionally, concealed and approximately located faults by definition lack a clearly identifiable surface trace; therefore, their locations are approximate. Site-specific fault-trenching investigations should be preceded by a careful field evaluation of the site to identify the surface trace of the fault as well as other faults and fault-related features not evident at 1:24,000 scale.

For additional information about the surface-fault-rupture hazard in the Tickville Spring quadrangle, refer to the accompanying report.