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SCALE 1:24,000  
5000 2500 0 5000 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 data (2006) data from the Utah Automated Geographic Reference Center State Geographic Information Database, Datum: NAD 1983 Spheroid: Clarke 1866

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1	2	3
4	5	
6	7	8

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

ADJOINING 7.5' QUADRANGLE NAMES

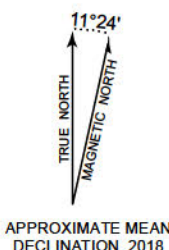


## FLOOD HAZARD MAP OF THE TICKVILLE SPRING QUADRANGLE, SALT LAKE AND UTAH COUNTIES, UTAH

by

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### EXPLANATION

- Not Mapped** – Area not mapped due to significant and ongoing human disturbance.
- National Hydrography Dataset (NHD)** – The NHD delineates streams in drainages using GIS modeling based on 30-meter NED data (USGS, 2016). These data indicate a high flood potential in drainages. Determining the actual extent of flooding is beyond the scope of this map and should be conducted as part of site-specific geologic hazard investigations.
- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Zones**
- Special Flood Hazard Areas (SFHAs) Subject to Inundation by the 1% Annual Chance Flood** – The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The SFHA is the area subject to flooding by the 1% annual chance flood. SFHA Zones: A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood (FEMA, map number 49035C0575G, effective September 2009). Not all SFHAs may exist in the quadrangle. The SFHAs mapped by FEMA in the quadrangle are defined below.
- Mandatory flood insurance purchase requirements and floodplain management standards apply.
- Zone A** – No base flood elevations determined.
- Other Areas**
- Zone X** – Areas determined to be outside the 0.2% annual chance floodplain. Mapped for Salt Lake County. The county boundary is indicated by a solid black line on the map.

### USING THIS MAP

This map shows drainages covered by the 2009 Flood Insurance Rate Maps (FIRMs) and other potential flood-hazard areas identified using geologic data. However, because intense cloudburst storms can create a potential for flash floods, debris flows, and sheetfloods anywhere in the study area, even locations outside of identified potential flood-hazard areas could be subject to periodic flooding. This map is designed for use in general planning to indicate the need for site-specific investigations and identify areas where the FIRMs can be consulted to determine the potential requirement of obtaining flood insurance. This map also shows where existing developments are within potential flood-hazard areas and therefore may require remedial flood-hazard-reduction measures. This map is based on limited geological, geotechnical, and hydrological data. The quality of the map depends on the quality of these data, which vary throughout the study area. The mapped boundaries of the flood-hazard categories are approximate and subject to change with additional information. The flood hazard at any particular site may be different than shown because of geological and hydrological variations within a map unit, gradational and approximate map-unit boundaries, and the generalized map scale. This map is not intended for use at scales other than 1:24,000, and is designed for use in general planning and design to indicate the need for site-specific geotechnical/geologic-hazard investigations, which are required to produce more detailed flood-hazard information. For additional information about the flood hazard in the Tickville Spring quadrangle, refer to the accompanying report.

### FLOOD-HAZARD CATEGORIES BASED ON GEOLOGIC DEPOSITS MAPPED BY THE UTAH GEOLOGICAL SURVEY

Hazard Category	Geologic Units <sup>1</sup>	Description	Hazard Type	Comments
Very High (VHFLH)	Qut1, Qut1, Qut1, Qut1, Qut1, Qut1	Active floodplains, active alluvial fans, and low terraces along perennial streams (large drainage basins) and rivers subject to periodic riverine and flash flooding and debris flows.	Riverine flood, flash flood, debris flow	Wetlands, young alluvium along the Colorado river and in smaller drainages, young alluvial fans.
High (HFLH)	Qut2, Qac, Qac, Qut1	Stream channels, floodplains, and low terraces along normally dry ephemeral streams (smaller drainage basins) and level 2 fan deposits that are periodically inundated by flash floods and debris flows during cloudburst storms. Alluvial and colluvial deposits and talus in incised stream channels.	Riverine, flash flood, sheetflood, debris flow	Normally dry streams and alluvial fans with comparatively small drainage basins subject to flooding during cloudburst storms. Level 2 alluvial fan deposits.
Moderate (MFLH)	Qut1, Qut1, Qac, Qac, Qut1, Qut1, Qut1, Qut1, Qut1, Qut1	Active pediments and sloping depositional surfaces flanking ridges and other upland areas that are inundated by sheetfloods, but possibly by flash floods and debris flows during cloudburst storms.	Sheetflood, possible flash flood and debris flow	Active depositional surfaces on the flanks and at the base of upland areas subject to flooding during cloudburst storms.
Low (LFLH)	Qut2, Qut2, Qut2, Qut2, Qut2, Qut2, Qut2, Qut2, Qut2, Qut2	Valley bottom lake Bonneville deposits, older pediments and stream-terrace deposits, minor ephemeral drainages, and over-stepped and incised tertiary volcanics subject to possible	Sheetflood, minor flash flood	Valley bottoms subject to infrequent flooding from adjacent upland areas during cloudburst storms.
Very Low (VLFLH)	Qut3, Qut3, Qut3, Qut3, Qut3, Qut3, Qut3, Qut3, Qut3, Qut3	Bedrock that is highly weathered and incised and may be subject to flood hazards during cloudburst storms, landslide deposits surrounded by very low hazard.	Sheetflood, minor flash flood	Landslide deposits surrounded by a very low hazard, highly weathered and incised tertiary volcanics. Tertiary volcanics with steep, highly incised
Undetermined	Bedrock	Bedrock that may be subject to flood hazards during cloudburst storms, but could not be classified due to a lack of alluvial deposits. Elevated alluvial terraces.	Possible sheetflood, flash flood, and debris flow	Areas of active erosion in which flood hazards are undetermined due to a lack of mappable alluvial deposits.

<sup>1</sup>Refer to the Geologic Map of the Tickville Spring Quadrangle, Salt Lake and Utah Counties, Utah (Bick and others, 2005) for descriptions of map units.