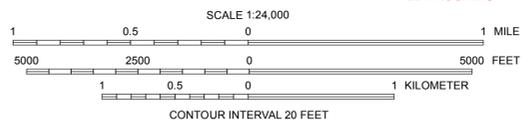
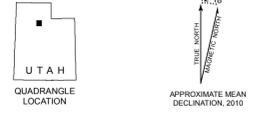


Although this product represents the work of professional scientists, the Utah Department of Natural Resources, Utah Geological Survey, makes no warranty, expressed or implied, regarding its suitability for a particular use. The Utah Department of Natural Resources, Utah Geological Survey, shall not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



Base from USGS Magna 7.5' quadrangle (1999)  
Hillshade derived from 2-meter bare earth LIDAR (2006) data from the Utah Automated Geographic Reference Center  
State Geographic Information Database  
Projection: UTM Zone 12  
Datum: NAD 1983  
Spheroid: Clarke 1886

GIS and Cartography: Jessica J. Castleton and Corey D. Unger  
Utah Geological Survey  
1594 West North Temple, Suite 3110  
P.O. Box 146100, Salt Lake City, UT 84114-6100  
(801) 537-5300  
[geology.utah.gov](http://geology.utah.gov)



## LIQUEFACTION SUSCEPTIBILITY MAP OF THE MAGNA QUADRANGLE, SALT LAKE COUNTY, UTAH

by  
**Jessica J. Castleton, Ashley H. Elliott, and Greg N. McDonald**  
2011

|   |   |                    |                          |
|---|---|--------------------|--------------------------|
| 1 | 2 | 3                  | 1. Antelope Island South |
| 4 | 5 | 4. Farnsworth Peak |                          |
| 6 | 7 | 7. Copperton       |                          |
| 8 | 8 | 8. Midvale         |                          |

ADJOINING 7.5' QUADRANGLE NAMES

### EXPLANATION

- Not Mapped** - Areas not mapped due to significant and ongoing human disturbance.
- LIQUEFACTION SUSCEPTIBILITY CATEGORIES**
- High** - Geologic units that consist of well-sorted sands, silty sands, and gravels where depth to ground water is less than or equal to 50 feet (15 m) below the ground surface.
- Moderate** - Geologic units that consist of moderately to poorly sorted sands and gravels where depth to ground water is less than or equal to 50 feet (15 m) below the ground surface.
- Low** - Geologic units that consist of moderately to poorly sorted sands and gravels where depth to ground water is greater than or equal to 50 feet (15 m) below the ground surface.
- Very Low** - Geologic units that consist of poorly sorted sands and gravels where depth to ground water is greater than 50 feet (15 m). Liquefaction susceptibility is considered very low in these units because of their textural characteristics, age, and/or degree of cementation.
- Not Susceptible** - Bedrock units not susceptible to liquefaction.

### USING THIS MAP

This map shows areas of liquefaction susceptibility in the Magna quadrangle. The map is intended for general planning purposes to indicate where liquefaction susceptibility may exist and to assist in the design of liquefaction-hazard investigations. The map does not integrate earthquake ground motions with soil characteristics and depth to ground water, which is required to determine relative liquefaction potential (potential is equal to susceptibility plus opportunity) in susceptible soils. This map is based on limited geological, geotechnical, and hydrological data. The quality of the map depends on the quality of these data, which varies throughout the study area. The mapped boundaries between liquefaction susceptibility categories are approximate and subject to change with additional information. The liquefaction susceptibility at any particular site may be different than shown because of geologic and hydrologic variations within a map unit, gradational and approximate map unit boundaries, and the generalized map scale. Small, localized areas of higher or lower liquefaction susceptibility may exist anywhere within the study area, but their identification is precluded due to limitations of either data or map scale. Seasonal and long-term fluctuations in groundwater levels can alter liquefaction susceptibility at any given site. The map is not intended for use at scales other than 1:24,000, and is designed for use in general planning to indicate the need for site-specific geotechnical/geologic hazard investigations. Site-specific geotechnical/geologic-hazard investigations are required to produce more detailed information.

For land-use planning recommendations relative to the different susceptibility categories as well as additional information about the liquefaction hazard in the Magna quadrangle, refer to chapter 2 in the accompanying report.