

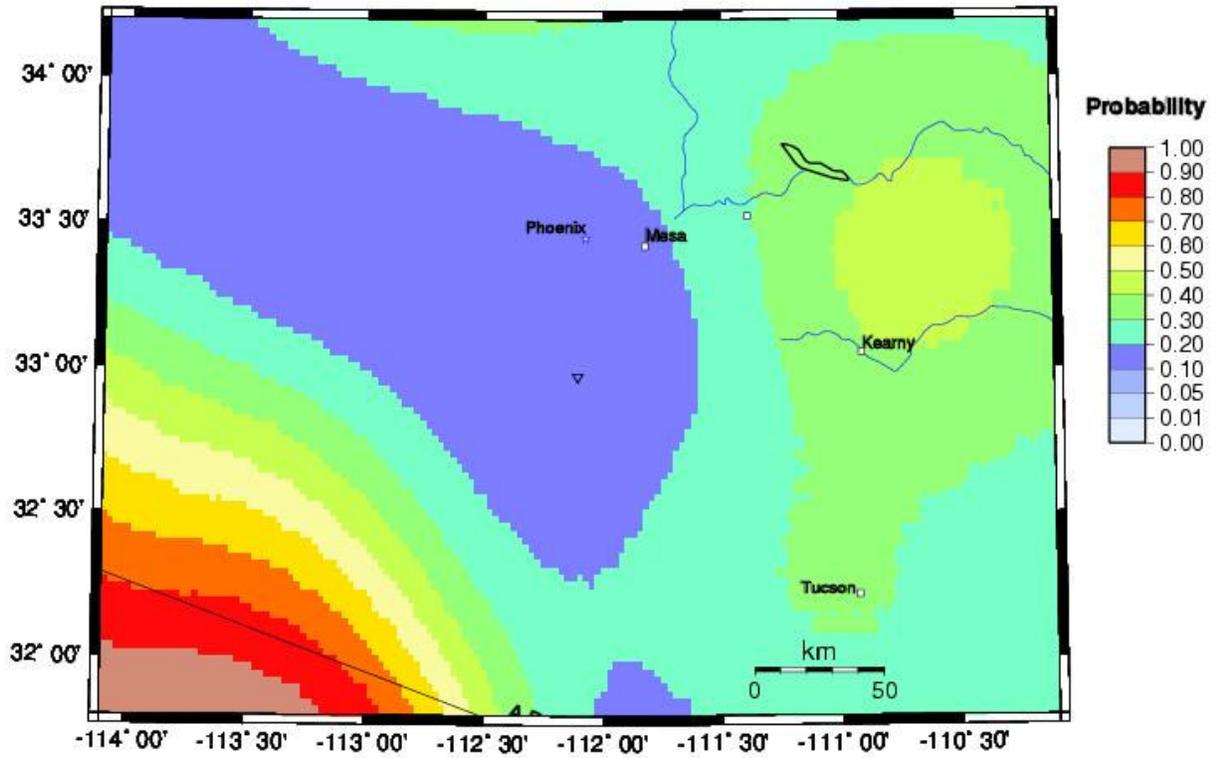
1 **Appendix E**

2 **GEOLOGIC MAPS**

Probability of earthquake with $M \geq 5.0$ within 100 years & 50 km

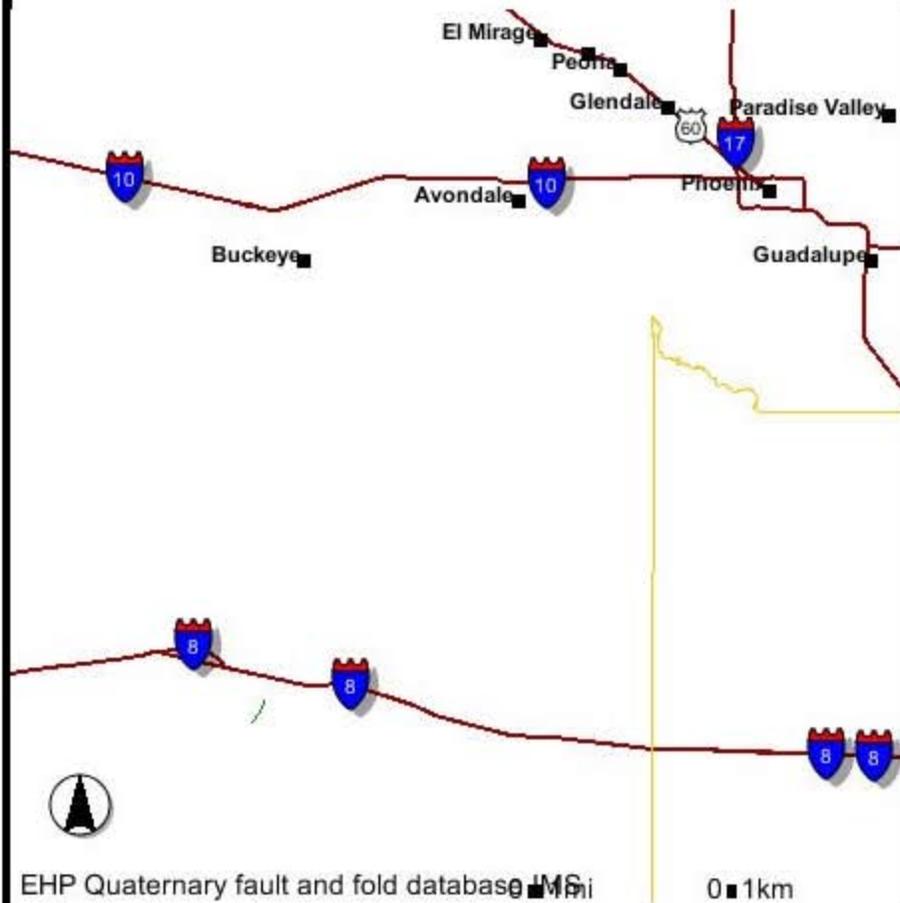
U.S. Geological Survey PSHA Model

Site: MARICOPA AZ . .



GMT 2009 Jul 28 19:20:29 Earthquake probabilities from USGS OFR_02-420 PSHA. 50 km maximum horizontal distance. Site of Interest: Triangle. Fault traces are white; rivers blue. Epicenters M=5.0 circles.

Quaternary Faults and Folds



Legend

Faults

- Historic
- <15,000 - latest Quaternary
- <130,000 - late Quaternary
- <750,000 - mid and late Quaternary
- <1,600,000 - Quaternary
- Class B

Fault areas

- Central Virginia seismic zone
- Cooked Creek fault (Class B)
- Fluorspar Area fault complex
- Gulf Coast normal faults, AL and FL (Class B)
- Gulf Coast normal faults, LA and AR (Class B)
- Gulf Coast normal faults, MS (Class B)
- Gulf Coast normal faults, TX (Class B)
- Kentucky River fault system (Class B)
- Meers fault
- Monroe uplift (Class B)
- Newbury Massachusetts liquefaction features
- Overlap area
- Pembroke faults (Class B)
- Reelfoot scarp and New Madrid seismic zone
- Saline River fault zone (Class B)
- South Carolina liquefaction features
- St. Louis-Cape Girardeau liquefaction features
- Thebes Gap faults
- Wabash Valley liquefaction features
- Western Lowlands liquefaction features
- Wiggins uplift (Class B)

Counties

- Large Towns
- Major Roads
- Cities
- Interstate Highways_
- States



EHP Quaternary fault and fold database MSi

0 1km

Map Introduction

Map Introduction

This is earth fissure map prepared by the Arizona Geological Survey (“AZGS”) in accordance with Ariz. Rev. Stat. § 27-152.01(3). AZGS collected location information from previously conducted earth fissure studies, reviewed available remote-sensing aerial and satellite imagery, and conducted surface site investigations throughout the study area. A reasonable effort was made to identify all earth fissures in each study area. Nonetheless, some fissures may remain unmapped as a result of one or more of the following:

- (1) Existing fissures may have been masked by construction or agricultural activities;
- (2) Incipient fissures may lack clear surface expression; and
- (3) The surface expression of fissures changes constantly as new earth fissures develop and old earth fissures fill in.

A blank area on the map does not guarantee earth fissures are not present. However, blank areas within a study area boundary have been investigated, and no surface evidence of fissures was found as of the date of publication for that particular study area. Determining the presence or absence of a fissure at any specific site may require additional mapping and/or geotechnical analysis.

Map Index

Earth Fissure Key

- Continuous earth fissure
- Discontinuous earth fissure
- - - Reported, unconfirmed earth fissure

Solid black lines represent the location of **continuous earth fissures** manifested as open cracks or gullies.

Solid red lines represent the location of **discontinuous earth fissures** manifested as elongated to circular depressions or as abbreviated or irregular linear depressions. These discontinuous surface features frequently represent an incipient surface expression of an earth fissure.

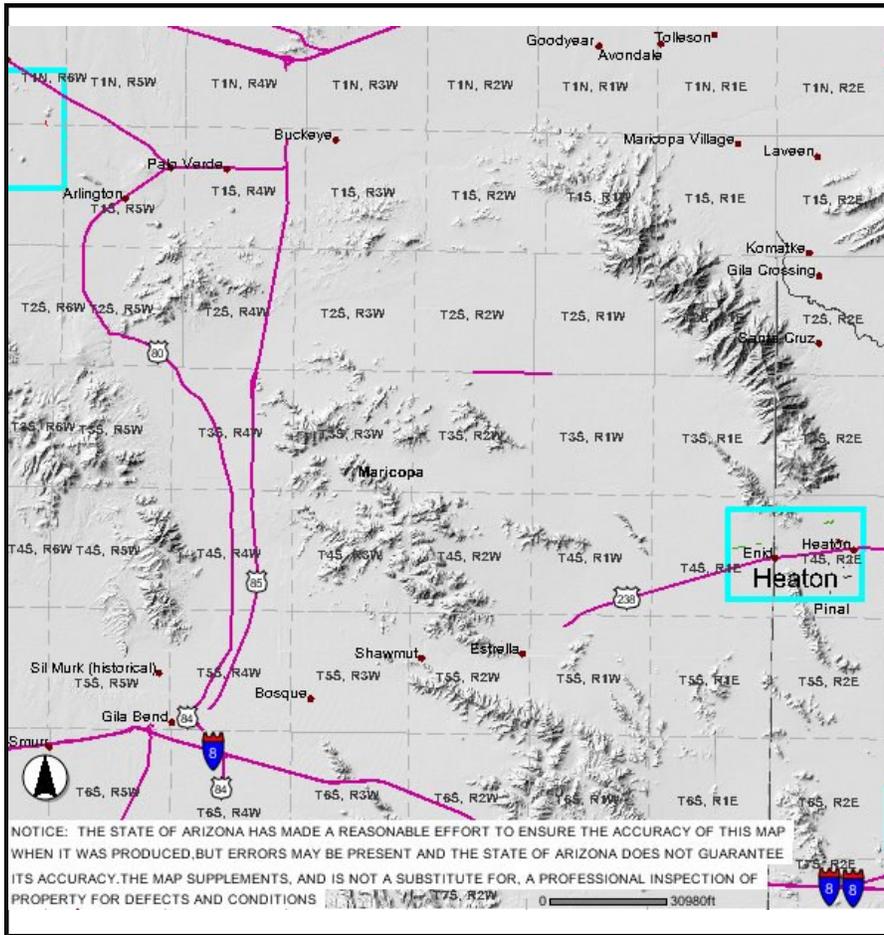
Dashed green lines represent the approximate locations of **unconfirmed earth fissures**, defined as fissures which could not be confirmed by surface investigations by AZGS geologists, but which have been previously reported by Professional Geologists in published documents or

maps.

The blue borders outline study areas inspected for earth fissures. Historical and modern aerial photos taken of each study area were searched for anomalous lineaments. Lineaments were then investigated in the field to determine if there was any evidence of earth fissures

The brown shaded areas represent Indian Communities. No effort was made to identify or confirm earth fissures within these areas, however reported earth fissures within these areas are shown on the map as dashed green lines.

AZMap Earth Fissures Viewer 07/28/09



Legend

- Towns
- Continuous Earth Fissure
- Discontinuous Earth Fissure
- Reported, Unconfirmed Earth Fissure
- Interstates
- Highways
- Township and Range
- Study Areas
- Counties

This Map Graphic Created on: 7/28/2009 10:09:41 AM

NOTICE: THE STATE OF ARIZONA HAS MADE A REASONABLE EFFORT TO ENSURE THE ACCURACY OF THIS MAP WHEN IT WAS PRODUCED, BUT ERRORS MAY BE PRESENT AND THE STATE OF ARIZONA DOES NOT GUARANTEE ITS ACCURACY. THE MAP SUPPLEMENTS, AND IS NOT A SUBSTITUTE FOR, A PROFESSIONAL INSPECTION OF PROPERTY FOR DEFECTS AND CONDITIONS.

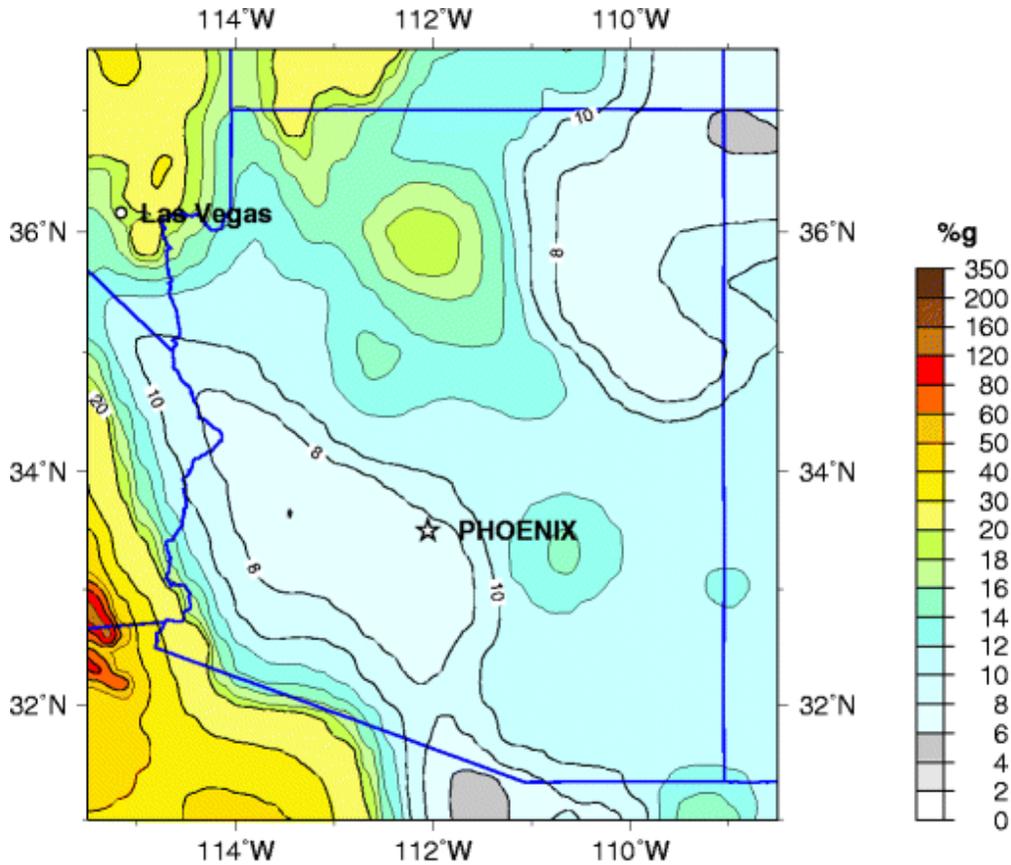
0 30980ft



Earthquake Hazards Program

Arizona

Seismic Hazard Map



**Peak Acceleration (%g) with 2% Probability of Exceedance in 50 Years
site: NEHRP B-C boundary
National Seismic Hazard Mapping Project (2008)**

[USGS National Seismic Hazard Maps](#)

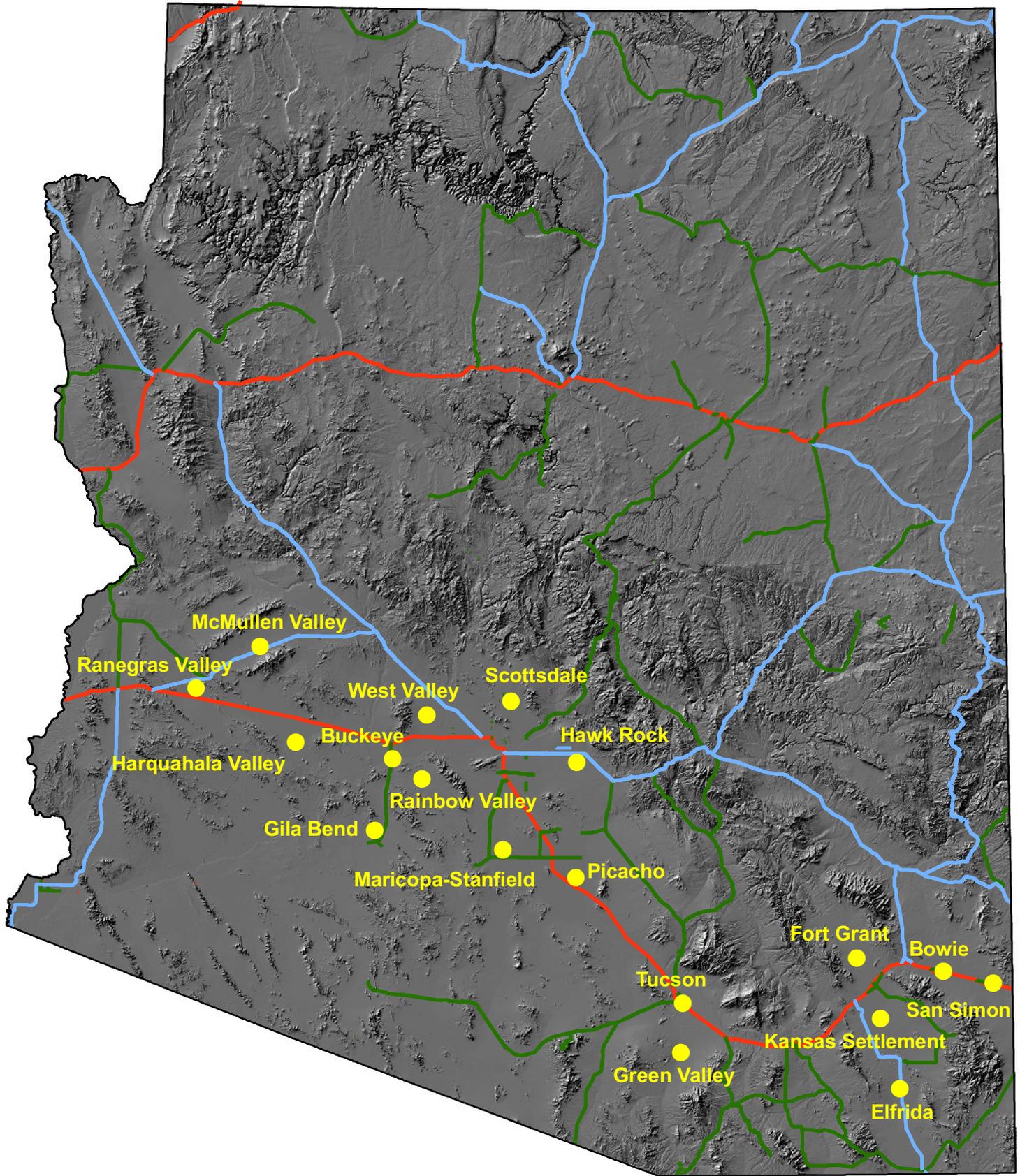
[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

URL: <http://earthquake.usgs.gov/regional/states/arizona/hazards.php>

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Active Land Subsidence Areas in Arizona Based on ADWR InSAR Data
 InSAR Data is Processed and Analyzed By the Geophysics/Surveying Unit of the Hydrology Division

● Arizona Land Subsidence Areas

Arizona Highways and Interstates

- Interstate
- US
- State

1:2,832,259

