

**M 4.2, 3.1 km (1.9 mi) ENE of Obsidian Butte, CA**

Origin Time: Wed 2014-12-24 05:51:51 UTC (21:51:51 local)

Location: 33.19°N 115.61°W Depth: 1 km

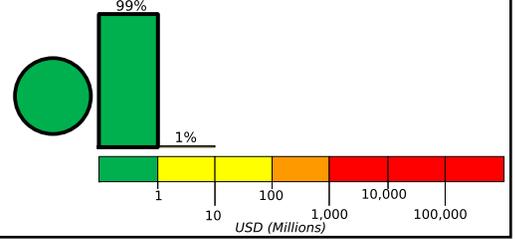
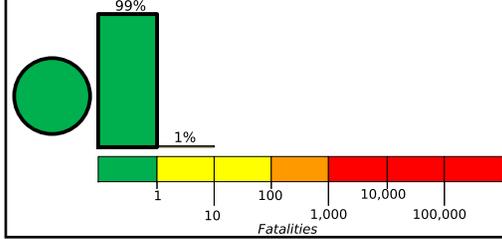
Created: 1 day, 0 hours after earthquake

**PAGER**  
**Version 6**

**Estimated Fatalities**

Green alert for shaking-related fatalities and economic losses. There is a low likelihood of casualties and damage.

**Estimated Economic Losses**



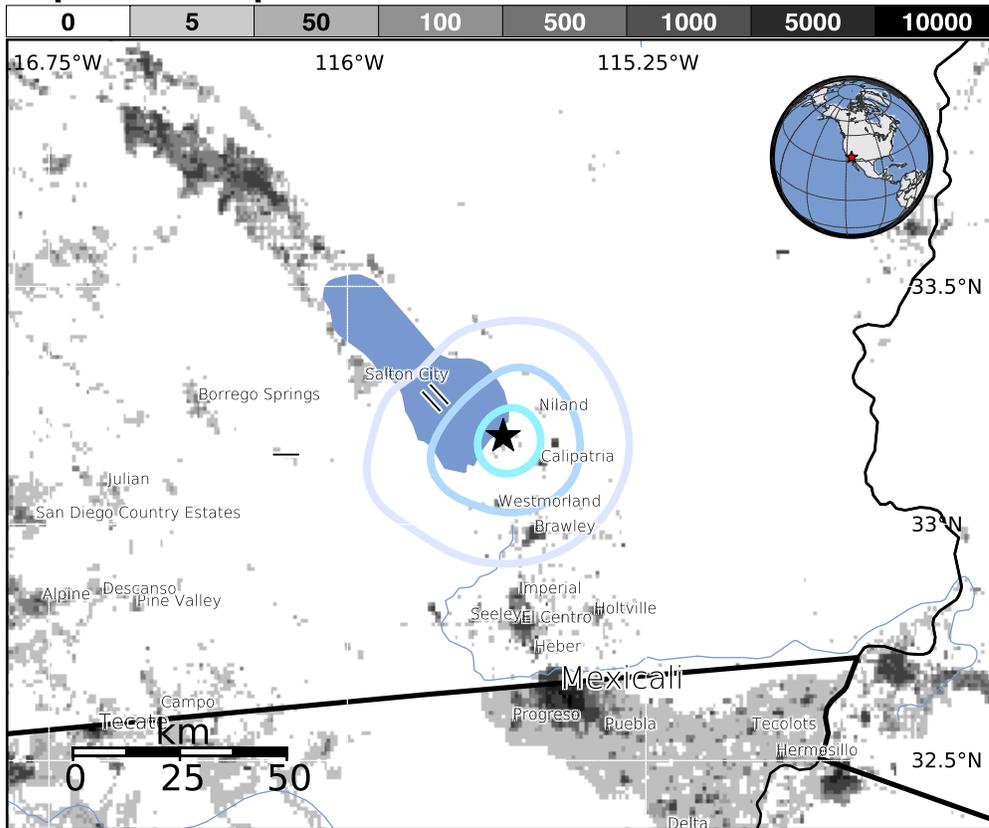
**Estimated Population Exposed to Earthquake Shaking**

<b>ESTIMATED POPULATION EXPOSURE (k = x1000)</b>		2,016k	39k	0	0	0	0	0	0	0
<b>ESTIMATED MODIFIED MERCALLI INTENSITY</b>		I	II-III	IV	V	VI	VII	VIII	IX	X+
<b>PERCEIVED SHAKING</b>		Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
<b>POTENTIAL DAMAGE</b>	<b>Resistant Structures</b>	none	none	none	V. Light	Light	Moderate	Moderate/Heavy	Heavy	V. Heavy
	<b>Vulnerable Structures</b>	none	none	none	Light	Moderate	Moderate/Heavy	Heavy	V. Heavy	V. Heavy

\*Estimated exposure only includes population within the map area.

**Population Exposure**

population per ~1 sq. km from Landsat



**Structures:**

Overall, the population in this region resides in structures that are highly resistant to earthquake shaking, though some vulnerable structures exist.

**Historical Earthquakes (with MMI levels):**

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
1986-07-13	210	5.8	V(9,528k)	0
1991-06-28	251	5.6	VII(8k)	1
1994-01-17	295	6.7	IX(181k)	33

Recent earthquakes in this area have caused secondary hazards such as landslides and liquefaction that might have contributed to losses.

**Selected City Exposure**

from GeoNames.org

MMI	City	Population
III	Calipatria	8k
III	Niland	1k
III	Westmorland	2k
II	Brawley	25k
I	Progreso	5k
I	Delta	6k
I	Mexicali	597k
I	Yuma	93k
I	Indio	76k
I	Tecate	58k

bold cities appear on map

(k = x1000)

PAGER content is automatically generated, and only considers losses due to structural damage. Limitations of input data, shaking estimates, and loss models may add uncertainty.

<http://earthquake.usgs.gov/pager>

Event ID: ci37298672