

# M 4.1, 2.3 km (1.4 mi) SW of Anderson Springs, CA

Origin Time: Wed 2013-08-28 04:43:05 UTC (21:43:05 local)

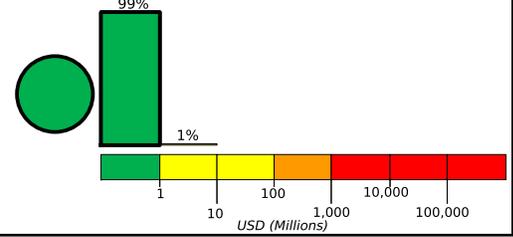
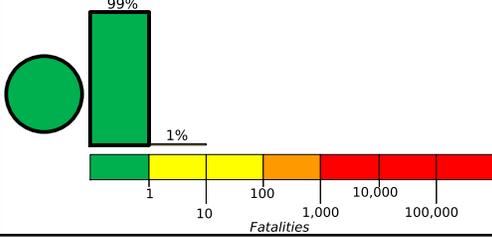
Location: 38.76°N 122.71°W Depth: 1 km

Created: 17 minutes, 24 seconds after earthquake

## Estimated Fatalities

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

## Estimated Economic Losses



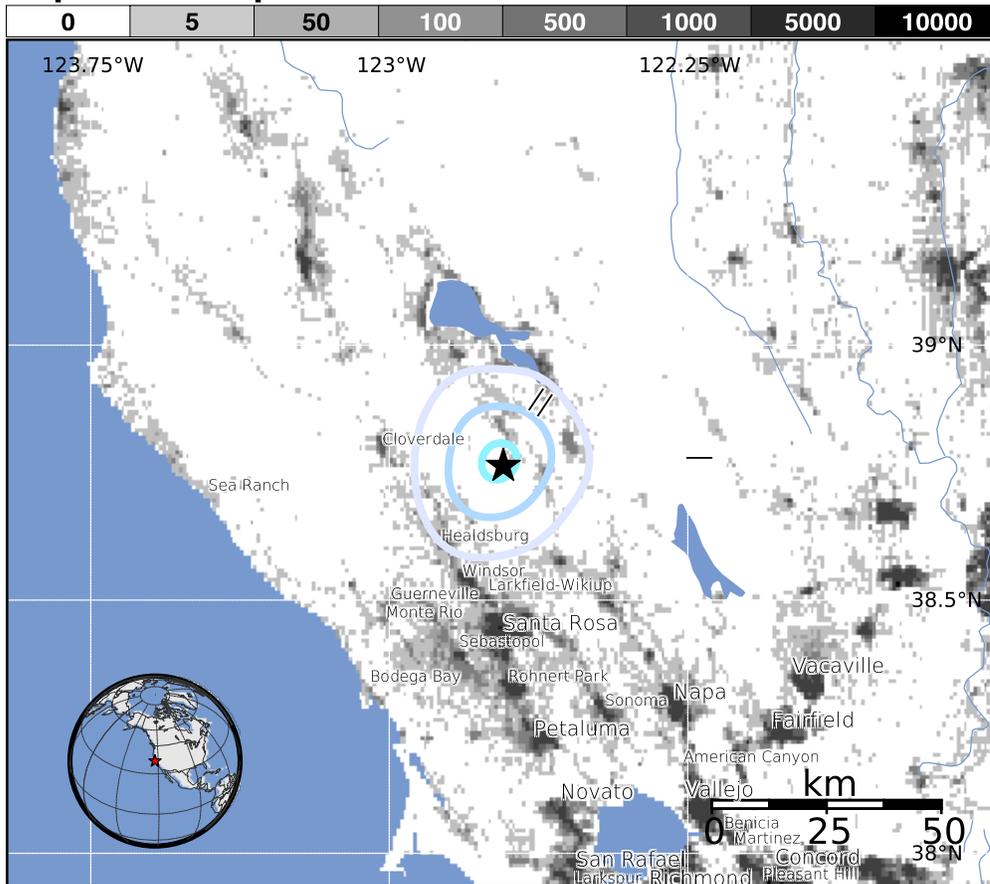
## Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k = x1000)		2,419k	28k	1k	0	0	0	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		I	II-III	IV	V	VI	VII	VIII	IX	X+
PERCEIVED SHAKING		Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	Resistant Structures	none	none	none	V. Light	Light	Moderate	Moderate/Heavy	Heavy	V. Heavy
	Vulnerable Structures	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
1984-11-26	383	5.1	V(17k)	0
2003-12-22	378	6.6	VII(213)	2
1989-10-18	201	6.9	IX(3k)	62

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
IV	Cobb	2k
III	Middletown	1k
II	Hidden Valley Lake	6k
II	Lower Lake	1k
II	Clearlake	15k
II	Healdsburg	11k
I	Sacramento	466k
I	<b>Santa Rosa</b>	<b>168k</b>
I	<b>Concord</b>	<b>122k</b>
I	<b>Vallejo</b>	<b>116k</b>
I	<b>Fairfield</b>	<b>105k</b>

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: nc72057971