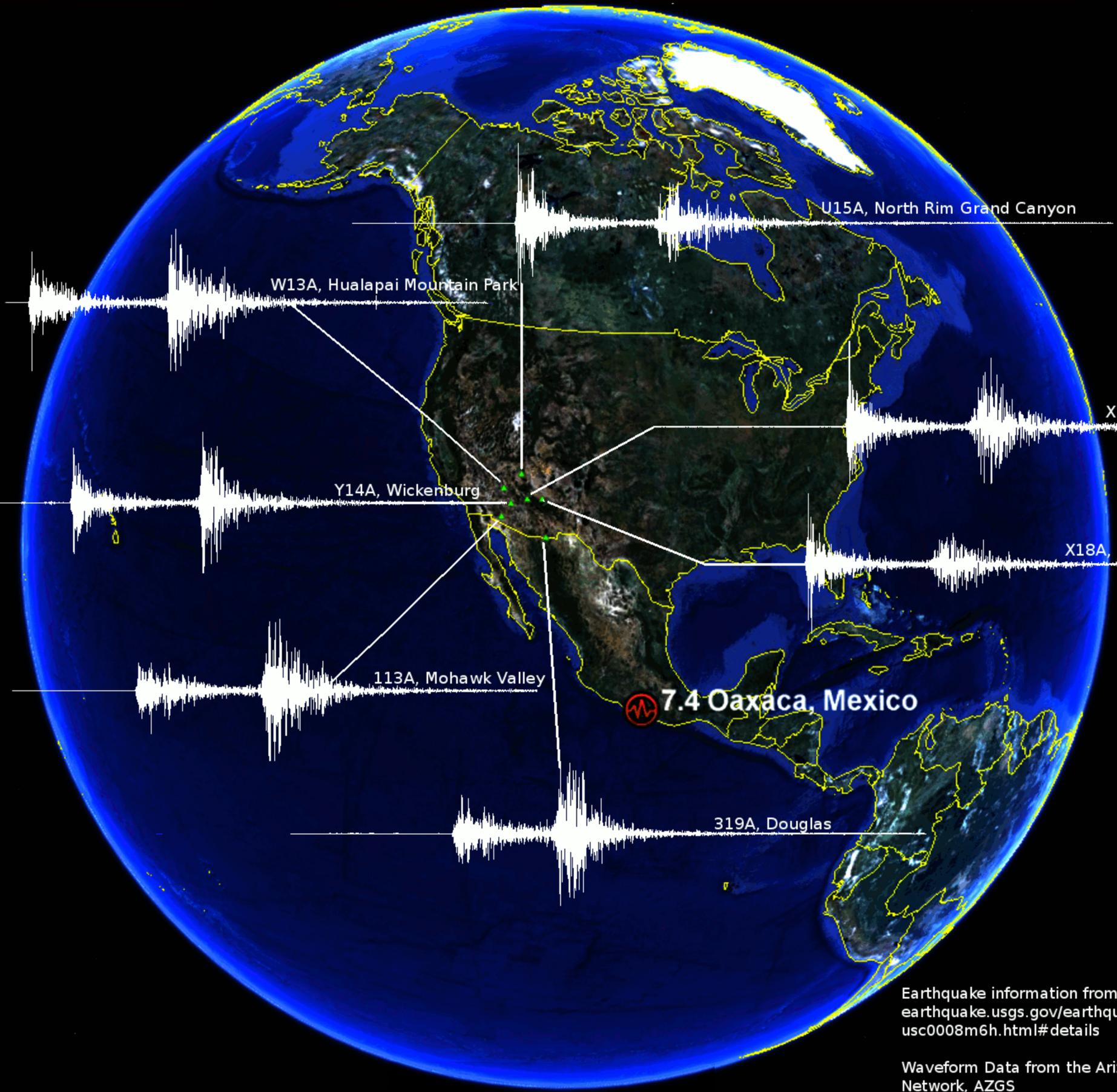


Magnitude 7.4- Oaxaca, Mexico Earthquake Recorded on the Arizona Broadband Seismic Network



Earthquake information from the USGS: <http://earthquake.usgs.gov/earthquakes/recenteqsww/Quakes/usc0008m6h.html#details>

Waveform Data from the Arizona Broadband Seismic Network, AZGS

Imagery compliments of GoogleEarth

Tectonic Summary

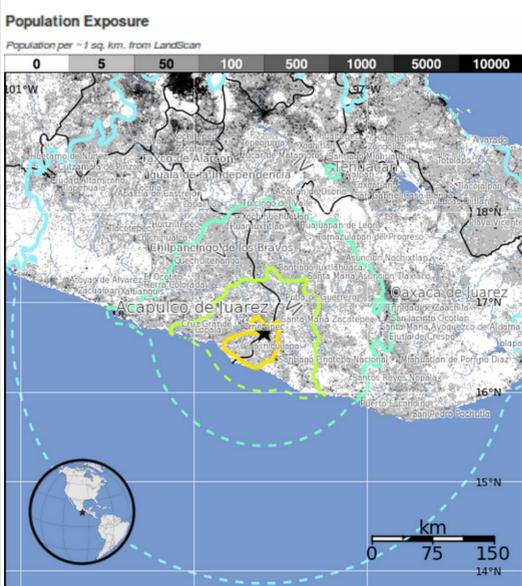
The March 20, 2012 earthquake occurred as a result of thrust-faulting on or near the plate boundary interface between the Cocos and North America plates. The focal mechanism and depth of the earthquake are consistent with its occurrence on the subduction zone interface between these plates, approximately 100 km northeast of the Middle America Trench, where the Cocos plate begins its descent into the mantle beneath Mexico. In the region of this earthquake, the Cocos plate moves approximately northeastwards at a rate of 60 mm/yr.

Historically, there have been several significant earthquakes along the southern coast of Mexico. In 1932, a magnitude 8.4 thrust earthquake struck in the region of Jalisco, several hundred kilometers to the northwest of today's event. On October 9, 1995 a magnitude 8.0 earthquake struck in the Colima-Jalisco region, killing at least 49 people and leaving 1,000 homeless. The deadliest nearby earthquake occurred in the Michoacan region 470 km to the northwest of today's event, on September 19, 1985. This magnitude 8.0 earthquake killed at least 9,500 people, injured about 30,000, and left 100,000 people homeless. More recently, a 2003 magnitude 7.6 Colima, Mexico earthquake 640 km to the northwest of today's event killed 29 people, destroyed more than 2,000 homes and left more than 10,000 homeless.

Estimated Population Exposed to Earthquake Shaking

Estimated Modified Mercalli Intensity	I	II-III	IV	V	VI	VII	VIII	IX	X
Est. Population Exposure	---	1,026k*	32,198k*	2,736k	596k	182k	0	0	0
Perceived Shaking	Not Felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
Potential Structure Damage	Resistant: none	Resistant: none	Resistant: none	Resistant: V. Light	Resistant: Light	Resistant: Moderate	Resistant: Moderate/Heavy	Resistant: Heavy	Resistant: V. Heavy
Potential Structure Damage	Vulnerable: none	Vulnerable: none	Vulnerable: none	Vulnerable: Light	Vulnerable: Moderate	Vulnerable: Moderate/Heavy	Vulnerable: Heavy	Vulnerable: V. Heavy	Vulnerable: V. Heavy

*Estimated exposure only includes population within calculated shake map area



Structure Information Summary

Overall, the population in this region resides in structures that are a mix of vulnerable and earthquake resistant construction. The predominant vulnerable building types are mud wall and adobe block with concrete bond beam construction.

Historical Earthquakes (with MMI)

Date (UTC)	Dist (km)	Mag	Max MMI (#)	Shaking Deaths
1985-09-21	387	7.5	VII (249k)	0
1980-10-24	168	7.1	VIII (11k)	65
1973-08-28	242	7.2	VII (847k)	600

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

Selected Cities Exposed

from GeoNames Database of Cities with 1,000 or more residents

MMI	City	Population
VII	San Juan Cacahuatepec	4k
VII	San Pedro Amuzgos	4k
VII	Cuajinicuilapa	9k
VII	San Pedro Jicayan	4k
VII	Xochistlahuaca	4k
VII	Santa Maria Zacatepec	4k
IV	Mexico City	11,286k
IV	Ciudad Nezahualcoyotl	1,232k
IV	Puebla de Zaragoza	1,392k
IV	Naucalpan de Juarez	846k
IV	Tlalnepantla	716k

(k = x1,000)