Post-ShakeAlert® Message Summary

Earthquake:

Advanced National Seismic System (ANSS):
M 4.5 - 4.4 km (2.7 mi) SW of Isleton

ANSS location:	38.126, -121.632
ANSS depth:	10.8 km (6.7 mi)
ANSS origin (Local):	2023-10-18 09:29:14.9
ANSS origin (UTC):	2023-10-18 16:29:14.9
ShakeAlert first Message (UTC):	2023-10-18 16:29:19.9
ShakeAlert Event ID:	ew1697646550

ShakeAlert Messages Issued (after origin time):

Initial:	5.0 sec
Peak magnitude:	5.0 sec
Final:	21.0 sec

ShakeAlert System Magnitude Estimates:

Initial:	M 5.7
Peak:	M 5.7
Final:	M 4.4

ShakeAlert System Location Accuracy:

Initial:	3.5 km (2.2 mi) N
At peak mag.:	3.5 km (2.2 mi) N
Final:	1.0 km (0.6 mi) S

Wireless Emergency Alert:

This alert was distributed over the WEA system.
WEA alerts are distributed to the MMI 4+ area if ShakeAlert Peak M>=5.0

Number of Stations Reporting:

0 within 10 km of epicenter
77 within 100 km of epicenter
115 used in final ShakeAlert Message

Nearby Cities:

City	Distance km / (mi)	Time* sec	Shaking (MMI**)
Isleton	4 / (3)	~0	Light (4)
Stockton	35 / (22)	--	V. Weak (2)
Sacramento	52 / (32)	--	V. Weak (2)
Vallejo	55 / (34)	--	V. Weak (2)

Radius shaken before message release: 14 km (9 mi)

Footnotes:

** Time -- Time from message release to predicted S-wave arrival at the location. "--" for weak or imperceptible shaking.*
*** MMI -- Modified Mercalli Intensity - a numeric shaking severity scale*
**** For earthquakes deeper than ~15 km, the ShakeAlert Message may be available before peak shaking reaches the surface.*

*Figure 1. ShakeAlert initial earthquake location (black dot). Star is ANSS earthquake epicenter. Polygon approximates the outer range for felt ground motion. If shown, red circle is front of peak shaking when the Message was released***. Shaking takes 10 s to expand from circle to circle.*

Figure 2. Polygons show shaking intensity contours for the peak magnitude estimate. Shaking of MMI 3 or less is often not felt. Star shows the ANSS earthquake epicenter.

Disclaimer:

This information is provisional and subject to revision. It is being provided to meet the need for timely best science. The information has not received final approval by the U.S. Geological Survey (USGS) and is provided on the condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from the authorized or unauthorized use of the information.

To learn more about ShakeAlert®, visit www.shakealert.org/FAQ

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