Post-ShakeAlert® Message Summary

Earthquake:
Advanced National Seismic System (ANSS):
M 4.0 - 53.7 km (33.4 mi) SE of Avalon
ANSS location: 33.000, -117.923
ANSS depth: 17.9 km (11.1 mi)
ANSS origin (Local): 2023-08-29 01:05:33.6
ANSS origin (UTC): 2023-08-29 08:05:33.6
ShakeAlert first Message (UTC): 2023-08-29 08:05:45.5
ShakeAlert Event ID: ew 1693296340

ShakeAlert Messages Issued (after origin time):
Initial: 12.0 sec
Peak magnitude: 15.6 sec
Final: 28.0 sec

ShakeAlert System Magnitude Estimates:
Initial: M 3.6
Peak: M 3.9
Final: M 3.8

ShakeAlert System Location Accuracy:
Initial: 5.0 km (3.1 mi) N
At peak mag.: 3.1 km (1.9 mi) N
Final: 4.2 km (2.6 mi) NE

Wireless Emergency Alert:
Magnitude below threshold for 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
55 within 100 km of epicenter
114 used in final ShakeAlert Message

Nearby Cities:

<table>
<thead>
<tr>
<th>City</th>
<th>Distance</th>
<th>Time*</th>
<th>Shaking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avalon</td>
<td>54 / (33)</td>
<td>--</td>
<td>Not felt</td>
</tr>
<tr>
<td>Oceanside</td>
<td>55 / (34)</td>
<td>--</td>
<td>Not felt</td>
</tr>
<tr>
<td>Irvine</td>
<td>77 / (48)</td>
<td>--</td>
<td>Not felt</td>
</tr>
<tr>
<td>San Diego</td>
<td>78 / (49)</td>
<td>--</td>
<td>Not felt</td>
</tr>
</tbody>
</table>

Radius shaken before message release: 39 km (24 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.

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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