

ShakeAlert Post-Alert Summary

An overview of the performance of ShakeAlert during this event

Earthquake

M5.9 - 29 miles SW of Rio Dell
ANSS origin (Local): 2019-06-22 20:53:02.9
ANSS origin (UTC): 2019-06-23 03:53:02.9
ShakeAlert alert (UTC): 2019-06-23 03:53:11.0
ShakeAlert Event ID ew285

Summary Report

Speed of Alert:

Initial alert after origin time: 8.2 s
Final alert update after origin time: 45.7 s

Magnitude Accuracy:

Initial ShakeAlert: M 6.3
Final ShakeAlert: M 5.9
ANSS report: 255 s after origin, M5.5

Distance From Alert to Reviewed Location

Initial alert: 1.3 km, 0.8 miles S
Final alert: 2.1 km, 1.3 miles SW

Number of stations reporting

1 within 10 km of epicenter
7 within 100 km of epicenter
54 used in final ShakeAlert update

Performance for Nearby Cities

City	Distance	Warning Time*	MMI*
Rio Dell	29 km	~0.5 sec	5
Ferndale	32 km	~1.5 sec	5
Fortuna	37 km	~2.7 sec	4
Sacramento	306 km	~78.1 sec	2

Zone Shaken by S-wave Before Alert: 29 km (18 mi)

Footnotes

- 1) *MMI -- Modified Mercalli Intensity: a scale to measure ground shaking.
- 2) "Warning Time": Time between alert production and arrival of the S-wave at a chosen site.
- 3) For moderate earthquakes, the 'final' alert area may be little changed from the initial.

Disclaimer

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Figure 1. ShakeAlert earthquake location (red dot). Star is regional network epicenter. MMI 4 polygon is the estimated initial alert area. Red circle is locus of peak shaking when the alert was released. Shaking takes 10 s to expand from circle to circle.



Figure 2. Polygons show shaking intensity contours for the final ShakeAlert. Shaking of intensity 3 or less often is not felt. Star shows the regional network epicenter.