



Cal OES

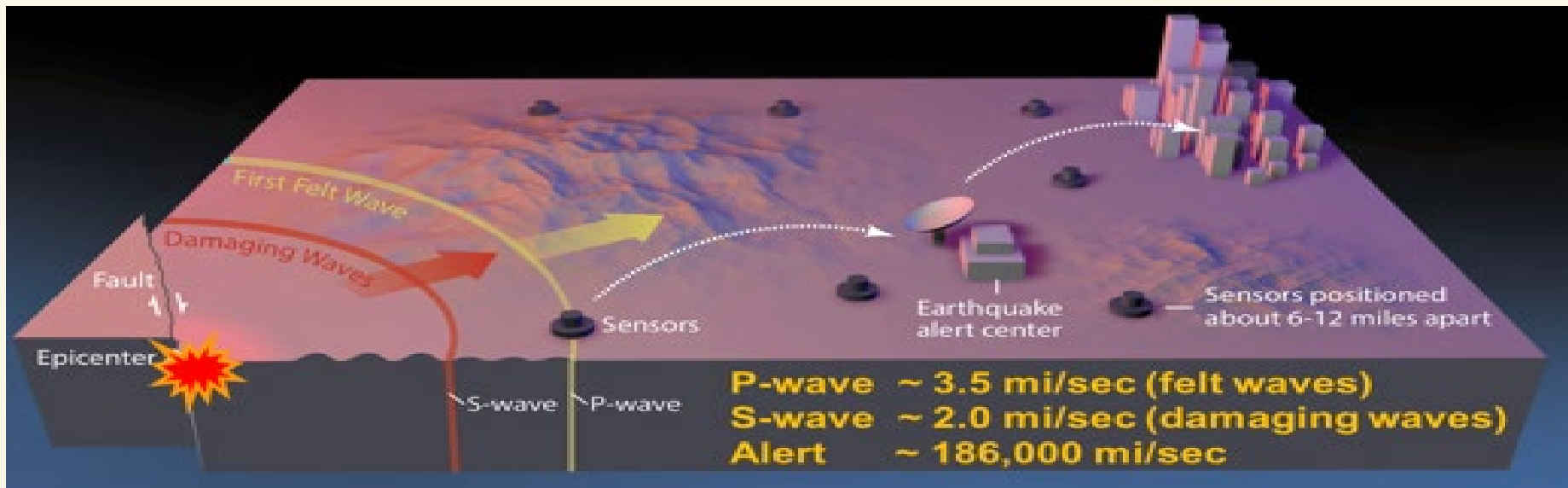
GOVERNOR'S OFFICE
OF EMERGENCY SERVICES

California Earthquake Early Warning Program

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What is Earthquake Early Warning

- Not earthquake prediction
- Sensors detect the fast moving P-waves of an earthquake.
- The sensor data is sent to an earthquake alert center which uses an algorithm to predict magnitude and intensity.
- Alerts are then distributed to the public.
- This process takes seconds.

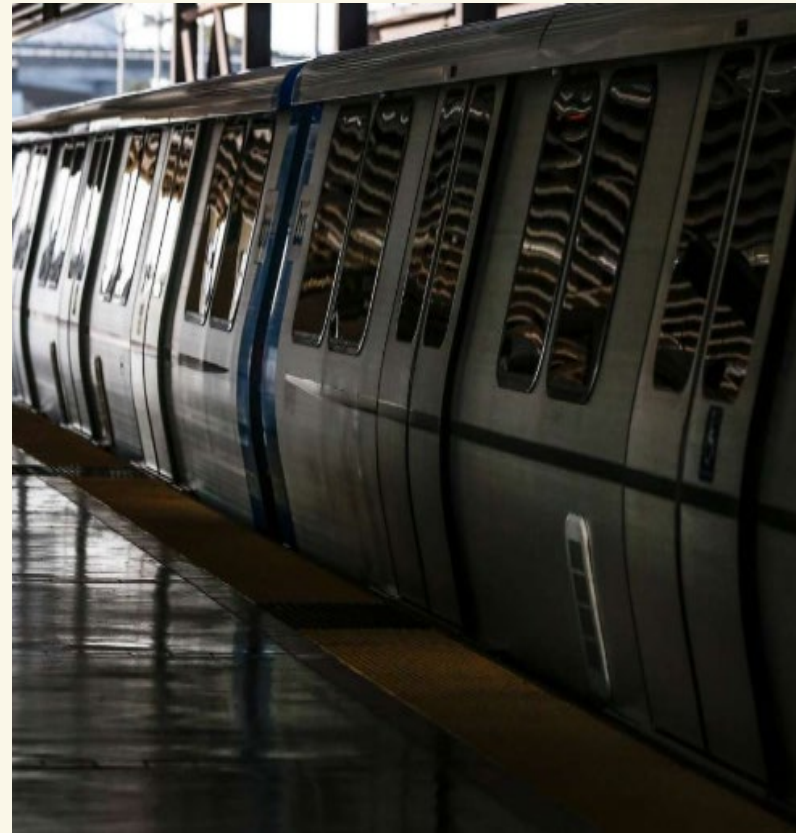


EEW in California

- Senate Bill 135 (2013):
 - Directed Cal OES to develop a comprehensive statewide earthquake early warning system in California through a public/private partnership.
- Senate Bill 438 (2016):
 - Established the California Earthquake Early Warning Program and the California Earthquake Early Warning Advisory Board to support the development of the statewide earthquake early warning system.
- Funding:
 - FY 16-17: \$10m
 - FY 18-19: \$15m
 - FY 19-20: \$16m
- Sensor Network:
 - 1,115 sensors statewide when complete

Use Cases

- **Workforce** can move to safe locations; elevators can stop at the nearest floor; place sensitive equipment in safe mode; secure chemicals and hazardous materials; halt production lines to reduce damage.
- Automatically **slow or stop trains**; stop oncoming bridge traffic; divert inbound aircraft.
- **General Public** can drop, cover, and hold on; safely stop vehicles.



Public Alert Pathways

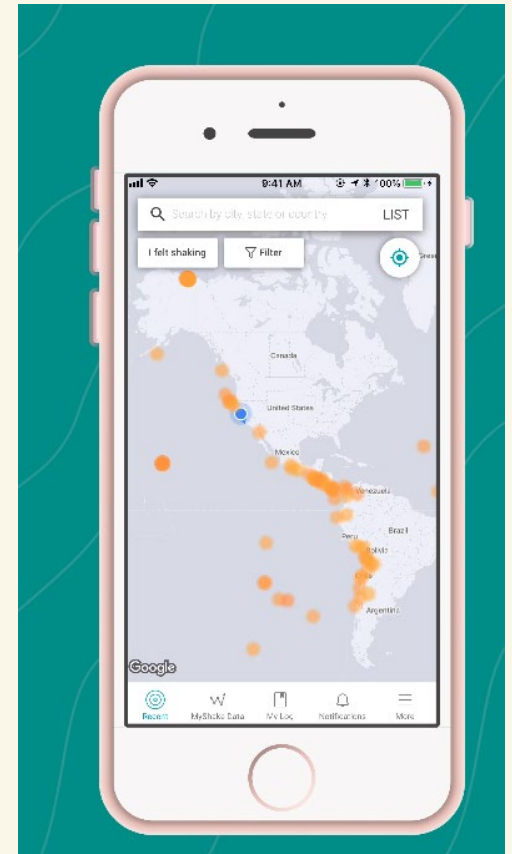


- By November 2019:
 - MyShake App
 - Wireless Emergency Alerts (WEA):
 - Greater Bay Area and SoCal.



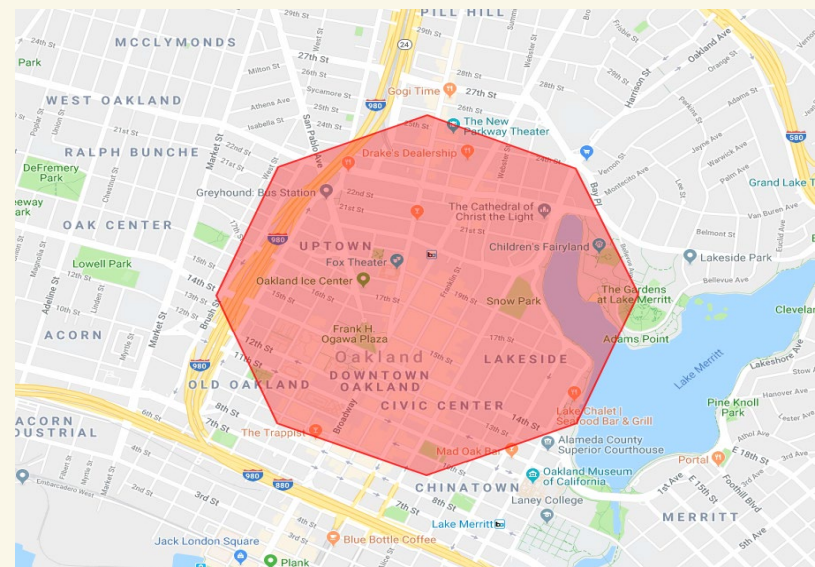
Mobile Phone App

- Cal OES is working with UC Berkley to test a statewide EEW App called MyShake.
- Fund research to determine whether or not cell phones can be crowdsourced to supplement the traditional seismic network to reduce latency.
- MyShake is currently in testing and should be released to the public in Oct/Nov 2019.
- Free to all users



Wireless Emergency Alerts

- Oakland Test:
 - Approximately 40,000 persons live/work within the target zone.
- San Diego Countywide Test:
 - Approximately 3.4 million persons live/work within the county.
- Results:
 - 1/3 received alert within 10 seconds
 - 2/3 received alert within 60 seconds
 - 1/3 did not receive alert



How You Can Help

- Join the test group for the MyShake app
- Amplify messaging for public roll out
- Explore automated actions similar to BART or other new use cases

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