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U.S. House of Representatives
Committee on Natural Resources
Washington, DC 20515

Opening Statement of
Chairman Doug Lamborn
Tuesday, June 10th, 2014 at 10:00 a.m.
1334 Longworth House Office Building

Subcommittee on Energy and Mineral Resources Oversight Hearing on

***"Whole Lotta Shakin': An Examination of America's Earthquake Early Warning System
Development and Implementation"***

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"I would like to thank our witnesses for being here today.

In March we held a hearing on the fiftieth anniversary of the Good Friday Great Alaska Earthquake to look at advances in earthquake science over the ensuing half century. The Great Alaska Earthquake was a massive 9.2 magnitude quake making it the second largest earthquake ever recorded with 'modern' seismic equipment, and the largest in the US. As a result, it is one of the most studied natural disasters in history.

Today, the committee will focus on the development and implementation of an Earthquake Early Warning System for the Western United States.

You might be surprised to learn that an earthquake early warning system was proposed for San Francisco back in 1868. The suggestion that as shaking occurred in Hollister, CA a telegram could be sent to City Hall in San Francisco where an alarm – bells – could be rung to alert residents that imminent shaking was about to start so they might take measures to protect themselves. Hollister is about 74 miles southeast of San Francisco. Even back in the 1860s scientists knew that an electric signal transmits more quickly than seismic waves caused by an earthquake.

It's during the lag time between the reception of a signal and the impact of the seismic waves that allows early warning, giving anywhere from a few seconds to minutes for people to take cover, stop or slow trains, halt elevators, open firehouse doors, and other steps to prepare for the effects of sustained shaking.

Even though the understanding of earthquake early warning has been around America has not implemented a large scale earthquake early warning system. More than 100 years after Mr. Cooper first suggested an earthquake early warning system for the Bay area, TH Heaton, a geoscientist with the USGS, proposed a seismic computerized network for Southern California.

However, it wasn't until 1994 that an early earthquake warning system was implemented in parts of Southern California to deal with the aftershocks of the 1989 Loma Prieta earthquake. The system was similar to Cooper's vision but relied on the benefit of modern technology.

By 1994, Mexico had already implemented an earthquake early warning system for Mexico City, which had suffered through a devastating earthquake in 1985 that killed more than

10,000 people. This system recently provided Mexico City more than a minute warning in advance of the April 18th 7.2 Magnitude Guerrero, Mexico quake.

Japan is the only country that has a Nation-Wide earthquake early warning System. The system allowed the Japanese transit system to shut down every train so not a single derailment occurred as a result of the Great 9.0 magnitude Honshu quake in 2011.

In light of this proven record of success, the question is why isn't America there yet. While recent developments in the U.S. illustrate that we are finally moving in the right direction:

- On April 25, 2014 the first regional earthquake early warning system was launched in the United States. The system is a public-private partnership between Imperial County and Seismic Warning Systems; and,
- The United States Geological Survey (USGS) and a coalition of Universities are currently developing an earthquake early warning system for the Western United States. The research is funded by the Gordon and Betty Moore Foundation and the USGS.

We simply aren't there. I have had deep concerns for a number of years over the breadth of responsibility and lack of focus by the USGS. While this Administration has expanded many of the programs at USGS over the last few years, the lack of focus and investment in Earthquake Early Warning is a deep concern.

I would like to thank our witnesses for being here today and I look forward to hearing their thoughts on earthquake early warning system in the United States."

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