Could San Andreas destroy Hoover Dam?

Gary Robbins, San Diego Union Tribune, 12-10-14

I know, I know, it's just a movie.

But I yelled, 'Hey, wait a minute' when I saw the Hoover Dam being destroyed by seismic shaking in the new trailer for the disaster movie "San Andreas," which opens next May. The collapse of the dam doesn't seem plausible. I called San Diego State seismologist Tom Rockwell to check.

"You should talk with a structural engineer, but my gut feeling is that the dam is too far away to be destroyed by a quake on the San Andreas," said Rockwell, who has done a lot of research on the fault. "Shaking gets weaker the further you get from an earthquake. And the dam is 195 miles (east) of the San Andreas. The ground acceleration would be very low by the point."

The Hoover Dam is a 726-foot tall concrete arch-gravity dam that's located on the border of Arizona and Nevada. It impounds water from Lake Mead, some of which is released for use in San Diego. The dam is considered to be an engineering masterpiece. That doesn't mean it is indestructible. But shaking from a distant quake isn't a major threat.

At least, not the kind of shaking that you'd expect. Scientists say the largest earthquake on the San Andreas would be in the 8.0 to 8.1 magnitude range. That could topple high-rise buildings in Los Angeles (which does happen in 'San Andreas'). The fictional shaking in the movie could be far larger. The trailer doesn't reveal that much.