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## Can This Actually Happen? – Part 2

### San Andreas Movie

**Directions:** As you watch the movie, think about what you've learned in Chemistry about Earth's interior, plate tectonic movements, and natural phenomena that occur due to that movement.

1. When the San Andreas fault moves, city officials are concerned about communication lines, sanitation tunnels, and access to clean water becoming torn apart. How have major cities, such as LA and SF, prepared for this inevitable event?
2. In the movie, how does the daughter get in contact with her father when the communication lines are down?
3. After a major earthquake strikes, there is almost always after shock. When the San Andreas fault line moves California will be susceptible to tons of wildfires. Does the movie do a good job representing after shock and what else can happen after a plate shift.
4. In the movie, San Francisco is predicted to experience a 9.5 earthquake at a transformative boundary. Is that possible? What happens when transformative boundaries slide past each other?
5. As the parents are driving to San Francisco to save their daughter a HUGE chasm appears (tear in earth's surface at the fault line). What type of plate movement would cause this chasm to appear? Is this actually possible?
6. Tsumani's can occur as a byproduct of earthquakes. Good news—a Tsunami would NEVER occur in the Bay, since the plate boundary is a transformative boundary. What kind of boundary could cause a massive tsunami to occur?

[In 2011, The pacific tectonic plate smashed against the North American plate leading to one of the largest fault slips and Tsumani's in Earth's history (9.1 magnitude quake and 82 feet high slip fault). 230,000 people lost their lives in this event]