

<p align="center"><u>Northern California Earthquake (2012/2013 THIRA)</u></p> <p>A magnitude 7.8 Earthquake along the San Andreas Fault in Northern California occurring at approximately 2:00 PM on a weekday with ground shaking and damage expected in 19 California counties, extending from Monterey County in the south to Humboldt County in the north, and into the San Joaquin Valley.</p>	<p align="center"><u>Southern California Earthquake (2012/2013 THIRA)</u></p> <p>A magnitude 7.8 earthquake along a southern stretch of the San Andreas Fault, occurring at approximately 10:00 AM PST on a weekday for 90 seconds along a 270 kilometer segment of the fault extending from the Salton Sea north to Lancaster, CA and spreading into Los Angeles County to include the Cajon Pass. Multiple magnitude 7.0+ aftershocks occur for several days after the initial incident.</p>	<p align="center"><u>Earthquake (Proposed)</u></p> <p>A magnitude 6.7 earthquake along a stretch of the Hayward fault in the East Bay region of Northern California, occurring at approximately 10 AM PST on a weekday</p>
<p align="center"><u>Flood (2012/2013 THIRA)</u></p> <p>After a three week period of near continuous, increasing precipitation throughout Northern California leaves much of the central valley floor saturated with water and the snow pack at 120% of normal at lower elevations, a storm brings heavy, warm rains to the area. The warm rain triggers a rapid melting of the heavy snow pack. Key reservoirs make significant releases to prevent overtopping. Multiple levees fail on the Sacramento and American rivers. Several Delta islands are threatened with levee failure as the response begins to the earlier levee failures on both rivers. <u>Other river systems throughout California are at near flood stage and/or facing potential levee failure.</u></p>	<p align="center"><u>Wildfire (2012/2013 THIRA)</u></p> <p>A mix of eight named human and naturally-caused Wild land/Urban Interface (WUI) fires ignite during a Santa Ana wind event within hours of each other across multiple counties from San Diego through Orange County and Los Angeles to Ventura and inland to Riverside and San Bernardino The <u>fires cut across</u> FRA (Federal Responsibility Area), SRA (State Responsibility Area) and LRA (Local Responsibility Area) regions. The fires occur In the third year of a severe drought in Southern California. Fire resources have already seen heavy use due to a significantly higher than average number of wildfires <u>for a period of several months. Local and regional resources are already deployed to contain several named fires when the eight additional fires ignite.</u></p>	<p align="center"><u>Drought (Proposed)</u></p> <p>Statewide period of reduced precipitation lasting five years. The first two years of the period bring approximately 60%-70% of average precipitation with rainfall/snowfall distribution and timing patterns generally corresponding to the historically average since 1950. The third year sees only 30%-40% of precipitation with distribution slightly skewed toward rainfall in Southern California and a majority of the precipitation falling late in the rain season. The fourth and fifth year average approximately 50%-60% of the precipitation rates with patterns once again corresponding to the historical average.</p>

<p><u>Epidemic/Pandemic</u> (Proposed)</p> <p>An outbreak of novel virus subtype influenza leads to a pandemic consisting of three distinct waves over an eighteen month period with a 30%-35% infection rate and a 2.5%-3% mortality rate. The initial detection of the novel flu virus occurs outside the normal flu season and originates outside of California. The novel flu virus appears in California within two weeks of the initial detection of the novel flu variety. At the time of the appearance of the novel virus subtype in California the World Health Organization pandemic alert is at phase 3 (humans have been infected with a novel virus subtype, but human-to-human spread has not occurred, or it has occurred in only rare instances of close contact).</p>	<p><u>Agricultural Pests and Diseases</u> (Proposed)</p> <p>Foot-and-Mouth Disease is introduced into a large dairy herd (2,000+ Cows) in California's central valley belonging to a farm split between two locations in a single county. One of the locations is adjacent to a farm holding a number of pigs recently purchased from several sources. The disease is not detected until seven days after its introduction at one of the two locations in non-lactating milk cows. The farm has sold non-lactating replacement cows in the past month to several farms located in adjacent counties.</p>	<p><u>Tsunami</u> (Proposed)</p> <p>A magnitude 9.0 earthquake occurs along the Cascadia fault approximately 95 miles west of Eugene, Oregon. A large tsunami is triggered with vertical run-ups exceeding 5.0 meters near the source zone along the U.S. and Canadian Pacific coasts. The earthquake occurs at 10AM PST on a weekday.</p>
<p><u>Volcano One</u> (Proposed) <u>Defer until next review</u></p> <p>A Lassen Peak event sends an avalanche of hot rock down the north flank of the volcano at mid-day during summer. A week later, a vertical column of ash explodes from the vent created by the avalanche. The column reaches an altitude of 30,000 feet. Ash from the top of the column drifts downwind at least 200 miles. Melting snow fuels mudflows, flooding drainages 20-30 miles away. The ash column is accompanied by a high-speed ground flow of hot gas and fragmented lava that reaches distances of 6 to 9 miles.</p>	<p><u>Volcano Two</u> (Proposed) <u>Defer until next review</u></p> <p>A Long Valley Caldera eruption proceeded by a greater than magnitude 5 earthquake approximately six months prior to the eruption. The earthquake is followed by a persistence deformation rate of greater than 5mm a day. Upon eruption ash fall exceeds 2 inches at a distance of approximately 55 miles. Areas up to 12 miles from the caldera are affected by a combination of pyroclastic flows, hot ash clouds, pyroclastic surges, and lava flows.</p>	<p><u>Hazardous Material Release One</u> (2012/2013 THIRA)</p> <p>The derailment of a 90-Ton Chlorine tank car leads to the immediate release of approximately 9,000 pounds of gaseous chlorine in a downtown urban area at 11 AM PST during a work day in March. Additional tank cars derailed, but do not rupture.</p>

<p style="text-align: center;"><u>Hazardous Material Release</u> <u>Two</u> (Proposed)</p> <p>A train derails as it enters a major California rail yard at approximately 5 AM PST in May. The derailed train contained a number of cars carrying shale oil crude oil. Oil leaks from a tank car and ignites. Derailed cars collide with several tank cars parked in the yard. A number of different hazardous materials are released from the damage tank cars.</p>	<p style="text-align: center;"><u>Cyber-terrorism Directed</u> <u>Against Critical Infrastructure</u> <u>One</u> (Proposed)</p> <p>A hacktivist group initiates a campaign to deny access to a broad swath of California government sites offering a variety of services and information. The campaign is due to a disagreement with California government policy or government response to an event of interest to the hacktivist group. This event is initiated during an election, tax season, or some other high traffic period. The group claims responsibility and declares its intent to force a change in government policy or procedures through its actions.</p>	<p style="text-align: center;"><u>Cyber-terrorism Directed</u> <u>Against Critical Infrastructure</u> <u>Two</u> (Proposed)</p> <p>A terrorist organization launches a sustained cyber-attack against several regional power grids across the nation to include two major California-based distribution systems during a summer heat wave. The near simultaneous attacks at multiple locations are capable of destroying critical components that are in limited supply.</p>
<p style="text-align: center;"><u>Vehicle-borne Improvised</u> <u>Explosive Device (VBIED) to a</u> <u>mass gathering location</u> (Proposed)</p> <p>A previously unknown terrorist organization or single actor employs a VBIED at a government office providing direct services to the public such as a Department of Motor Vehicle office. Office is crowded with customers during a known/observable period of heavy use.</p>	<p style="text-align: center;"><u>Vehicle-borne Improvised</u> <u>Explosive Device (VBIED) to</u> <u>critical infrastructure</u> (2012/2013 THIRA)</p> <p>VBIED attack against a power sub-station resulting in widespread power failure mid-day during the summer. Affected area may be entire regional distribution system (e.g. PG&E, Southern California Edison).</p>	<p style="text-align: center;"><u>Multiple attackers at a single</u> <u>mass gathering/economic target</u> (Proposed)</p> <p>A known terrorist organization attacks a tourist bus stopped near a crowded location of economic or psychological significance to California. The bus is occupied by a group targeted in accordance with the political objectives or ideological motives of the attackers. The attack is initiated by an explosive device (a man-portable device in the bus or VBIED in close proximity to the bus) followed by direct assault on first responders/surviving victims/any gathering crowd near the attack.</p>