Chapter 6
Disaster Management in California State (USA)
(Case Study)

6.1 Introduction

Ranking third among the U.S. states in area (158,693 sq mi (411,015 sq km). Pop. (2000) 33,871,648), California has a diverse topography and climate. A series of low mountains known as the Coast Ranges extends along the 1,200-mi (1,930-km) coast. The region from Point Arena, N of San Francisco, to the southern part of the state is subject to tremors and sometimes to severe earthquakes caused by tectonic stress along the San Andreas fault. The Coast Ranges receive heavy rainfall in the north, where the giant cathedral like redwood forests prevail, but the climate of these mountains is considerably drier in South California, and South of the Golden gate no major rivers reach the ocean. Behind the coastal ranges in central California lies the great Central valley, a long alluvial valley drained by the Sacramento and San Joaquin rivers. In the southeast lie vast wastelands, notably the Mojave Desert, site of Joshua Tree National Park.

Economy

California has an enormously productive economy, which for a nation would be one of the ten largest in the world. Although agriculture is gradually yielding to industry as the core of the state's economy, California leads the nation in the production of fruits and vegetables, including carrots, lettuce, onions, broccoli, tomatoes, strawberries, and almonds. The state's most valuable crops are grapes, cotton, flowers, and oranges; dairy products, however, contribute the single largest share of farm income, and California is again the national leader in this sector. The state also produces the major share of U.S. domestic wine. California's farms are highly productive as a result of good soil, a long growing season, and the use of modern agricultural methods. Irrigation is critical,
especially in the San Joaquin Valley and Imperial Valley. The gathering and packing of crops is done largely by seasonal migrant labor, primarily Mexicans. Fishing is another important industry.

![Figure 6.1: Topography and Geographic Provinces – California State, USA](image)

Much of the state's industrial production depends on the processing of farm produce and upon such local resources as petroleum, natural gas, lumber, cement, and sand and gravel. Since World War II, however, manufacturing, notably of electronic equipment, computers, machinery, transportation equipment, and metal products, has increased enormously. Defense industries, a base of the economy especially in S California, have declined following the end of the cold war, a serious blow to the state. But many high-tech companies and small low-tech, often low-wage, companies remain in S California, in what is said to be the largest manufacturing belt in the United States. Farther north,
"Silicon Valley," between Palo Alto and San Jose, so called because it is the nation's leading producer of semiconductors, is also a focus of software development.

California continues to be a major U.S. center for motion-picture, television film, and related entertainment industries, especially in Hollywood and Burbank. Tourism also is an important source of income. Disneyland, Sea World, and other theme parks draw millions of visitors each year, as do San Francisco with its numerous attractions and several entertainment-dominated Los Angeles-area communities. California also abounds in natural beauty, seen especially in its many national parks and forests—home to such attractions as Yosemite Falls and giant sequoia trees—and along miles of Pacific beaches.

One of the state's most acute problems is its appetite for water. The once fertile Owens Valley is now arid, its waters tapped by Los Angeles 175 mi (282 km) away. In the lush Imperial Valley, irrigation is controlled by the All-American Canal, which draws from the Colorado River. In the Central Valley the water problem is one of poor distribution, an imbalance lessened by the vast Central Valley project. Cutbacks in federally funded water projects in the 1970s and 80s led many California cities to begin buying water from areas with a surplus, but political problems associated with water sharing continue. California's failure to develop a long-term plan to end surplus withdrawals from the Colorado led the federal government to stop the release of surplus water to the state in 2003.

Governance

Most states in the United States of America decentralize the administration of their sovereign powers, typically in three tiers but always employing at least two tiers and sometimes more than three tiers. The first tier of decentralization is always the statewide tier, constituted of agencies that operate under direct control of the principal organs of state government—such as bureaus of vital statistics, and departments of motor vehicles or public health. The second tier is always the county (called a borough in Alaska and a
parish in Louisiana), which is an administrative division of the state. It may also be more than that (e.g., a metropolitan municipality), but it is always an administrative division of the state. The origin of the American county is from the French word "conte," meaning the domain of a count; however, the American county, defined by Webster as "the largest territorial division for local government within a state of the U.S. The third tier commonly found in many states, especially the Midwest, is the municipalities, which is an administrative division of a county.

In turn there are several different types of municipal government, generally reflecting the needs of different levels of population densities; although the types and nature of these municipal entities varies from state to state, typical examples include the city, town, and village (A village is a clustered human settlement or community, larger than a hamlet, but smaller than a town or city) Many rural areas and even some suburban areas of many states have no municipal government below the county level. In a few states, there is only one level of local government: Hawaii has no legal municipalities below the county level; while Connecticut and Rhode Island's counties serve no legal function—these being filled by city and town governments.

In addition to the above, there are also often local or regional special districts that exist for specific purposes, such as to provide fire protection, sewer service, transit service or to manage water resources. In many states, school districts manage the schools. Such special purpose districts often encompass areas in multiple municipalities.

The functions and services of counties can be grouped into three categories: (1) functions of state government which are administered by the county; (2) services that are of a local nature; and (3) internal administrative functions that the county performs for its own operation or on behalf of other local taxing jurisdictions. The local services provided by counties can be broadly categorized under the following headings: public works services, social/human services, health Services, and law enforcement. The internal administrative functions performed by counties are: property tax administration, finance, and Miscellaneous management and record-keeping functions.
Local government in the United States (sometimes referred to as municipal government) is generally structured in accordance with the laws of the various individual states. Typically each state has at least two separate tiers: counties (known in Louisiana as parishes and as boroughs in Alaska), and municipalities. In turn there are several different types of municipal government, generally reflecting the needs of different levels of population densities; although the types and nature of these municipal entities varies from state to state, typical examples include the city, town, and village. Many rural areas and even some suburban areas of many states have no municipal government below the county level. In a few states, there is only one level of local government: Hawai'i has no legal municipalities below the county level; while Connecticut and Rhode Island's counties serve no legal function—these being filled by city and town governments.

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California's 58 counties vary greatly in size, geography and population. San Bernardino County, the largest in area, is 46 times as large as Santa Cruz County, the smallest except for the combined city-county of San Francisco. The population of Los Angeles County is nearly nine million, while fewer than 1,200 people live in the mountains and forests of Alpine County. How are these differences accommodated? While the legislature may pass special laws for particular counties, state law also grants broad discretionary powers. Counties may adapt their internal structure, operations and programs to local conditions.

There are four basic units of California local government: cities, counties, special districts and regional bodies. All exist under the authority of the State of California and its laws, in particular the California Government Code (http://www.leginfo.ca.gov/calaw.html).

California gives cities and counties the "home rule" option, which means that they can choose to be governed under the framework of the California Government Code or they can adopt a charter, which gives them more latitude in running their affairs. The former
are known as "general law" jurisdictions and the latter are known as "charter" jurisdictions. The larger cities and counties tend to be charter jurisdictions.

Special districts are local entities that typically have a special purpose—e.g., fire protection, irrigation, mosquito abatement, street lighting, water supply, waste disposal, and so on. Their governing boards may be elected or appointed. In many cases the governing board is the city council or board of supervisors of the city or county in which the special district is located. School districts and redevelopment agencies are not considered special districts under California law. California has over 4,800 special districts.

Regional bodies address concerns that extend beyond local city and county boundaries. Some are advisory only, and others have true regulatory powers. Councils of government, which have a regional planning function, are an example of the former. Air quality management districts are an example of the latter. Some regional bodies, such as the Bay Area's Metropolitan Transpiration Commission, allocate federal funds in their regions, and in this way exercise considerable power. Regional bodies tend to have appointed boards, often consisting of elected officials from the cities and counties in which the regional bodies are located.

6.2 Disasters and their Incidence in California State

California's most infamous natural hazard is earthquakes due to the many faults that run through California, Nevada, and the Pacific Coast. Major historical earthquakes include: 1906 San Francisco Earthquake, Sylmar earthquake (1971), Loma Prieta Earthquake (1989), Northridge Earthquake (1994)

Coastal cities are vulnerable to tsunamis from locally generated earthquakes as well as those elsewhere in the Pacific Ring of Fire. The Great Chilean Earthquake tsunami (1960) killed one person and caused $500,000 to $1,000,000 dollars of damage in Los Angeles, damaged harbors in many coastal cities, and flooded streets in Crescent city.
Waves from the Alaskan Good Friday Earthquake of 1964 killed twelve people in Crescent City and caused damage as far south as Los Angeles.

The state is subject to coastal storms, especially during the North American monsoon season. Dry weather during the rest of the year produces conditions favorable to wildfires. California hurricane occurs less frequently than their counterparts on the Atlantic Ocean. Higher elevations experience snowstorms in the winter months.

Floods are occasionally caused by heavy rain, storms, and snowmelt. Steep slopes and unstable soil make certain locations vulnerable to landslides in wet weather or during earthquakes. California is also home to several volcanoes, including Lassen Peak, which erupted in 1914 and 1921, and Mount Shasta.

Table 6.1: List of Earthquakes Larger than M 6.5 with Epicenters Located Within about 100 Mile of California.

<table>
<thead>
<tr>
<th>Date</th>
<th>Magnitude</th>
<th>Epicenter Latitude</th>
<th>Epicenter Longitude</th>
<th>Name, Location, or Region Affected</th>
<th>Loss of Life and Property</th>
</tr>
</thead>
<tbody>
<tr>
<td>1700, Jan. 26</td>
<td>9.0?</td>
<td>?</td>
<td>?</td>
<td>Offshore, somewhere between Cape Mendocino and Canada</td>
<td>Data not available, but shook northern California, Oregon, Washington, and southern British Columbia; caused tsunami damage to villages in Japan and western US</td>
</tr>
<tr>
<td>1800, Nov. 22</td>
<td>6.3?</td>
<td>32.90</td>
<td>-117.80</td>
<td>San Diego/San Juan Capistrano region</td>
<td>Damaged adobe walls of missions in San Diego and San Juan Capistrano</td>
</tr>
<tr>
<td>1812, Dec. 8</td>
<td>7.3?</td>
<td>34.37</td>
<td>-117.65</td>
<td>Wightwood</td>
<td>40 dead at San Juan Capistrano</td>
</tr>
<tr>
<td>1812, Dec. 21</td>
<td>7.1?</td>
<td>34.75</td>
<td>-118.60</td>
<td>Los Angeles, Ventura, Santa Barbara</td>
<td>1 dead</td>
</tr>
<tr>
<td>1836, June 10</td>
<td>6.4?</td>
<td>36.90</td>
<td>-121.50</td>
<td>Near San Juan Bautista</td>
<td>[Older reports reported this quake as possibly larger and centered near Oakland]</td>
</tr>
<tr>
<td>1838, June</td>
<td>7.4?</td>
<td>37.30?</td>
<td>-122.15</td>
<td>San Francisco to San Juan Bautista</td>
<td>Damage to San Francisco and Santa Clara</td>
</tr>
<tr>
<td>1852, Nov. 29</td>
<td>6.5?</td>
<td>32.50</td>
<td>-115</td>
<td>Near Fort Yuma, Arizona</td>
<td></td>
</tr>
<tr>
<td>1857, Jan. 9</td>
<td>7.9</td>
<td>36.20</td>
<td>-120.80</td>
<td>Great Fort Tejon earthquake</td>
<td>1 dead; damage from Monterey to San Bernardino County</td>
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<tr>
<td>1860, Mar. 15</td>
<td>6.5?</td>
<td>39.50</td>
<td>-119.50</td>
<td>Carson City</td>
<td></td>
</tr>
<tr>
<td>1865, Oct. 8</td>
<td>6.5</td>
<td>37.20</td>
<td>-121.90</td>
<td>Santa Cruz Mountains</td>
<td>$0.5 million in property damage</td>
</tr>
<tr>
<td>Year</td>
<td>Month</td>
<td>Day</td>
<td>Hour</td>
<td>Min</td>
<td>Latitude</td>
</tr>
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<td>-----------</td>
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<tr>
<td>1868</td>
<td>Oct</td>
<td>21</td>
<td>7</td>
<td>0</td>
<td>37.70</td>
</tr>
<tr>
<td>1872</td>
<td>Mar</td>
<td>26</td>
<td>7</td>
<td>4</td>
<td>36.70</td>
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<tr>
<td>1872</td>
<td>Mar</td>
<td>26</td>
<td>6</td>
<td>8</td>
<td>36.90</td>
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<td>1872</td>
<td>Apr</td>
<td>11</td>
<td>6</td>
<td>8</td>
<td>37.50</td>
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<td>1873</td>
<td>Nov</td>
<td>23</td>
<td>6</td>
<td>9</td>
<td>42.00</td>
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<td>1890</td>
<td>Feb</td>
<td>9</td>
<td>6</td>
<td>8</td>
<td>33.40</td>
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<td>7</td>
<td>3</td>
<td>32.55</td>
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<td>6</td>
<td>6</td>
<td>38.40</td>
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<tr>
<td>1898</td>
<td>Mar</td>
<td>31</td>
<td>6</td>
<td>4</td>
<td>38.20</td>
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<tr>
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<td>Apr</td>
<td>15</td>
<td>6</td>
<td>7?</td>
<td>39.20</td>
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<tr>
<td>1899</td>
<td>Apr</td>
<td>16</td>
<td>7</td>
<td>0</td>
<td>41.00</td>
</tr>
<tr>
<td>1899</td>
<td>July</td>
<td>22</td>
<td>6</td>
<td>4</td>
<td>34.30</td>
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<td>25</td>
<td>6</td>
<td>7</td>
<td>33.80</td>
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<td>Apr</td>
<td>18</td>
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<td>8</td>
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<td>4</td>
<td>6</td>
<td>0</td>
<td>36.00</td>
</tr>
<tr>
<td>1911</td>
<td>July</td>
<td>1</td>
<td>6</td>
<td>4</td>
<td>37.25</td>
</tr>
<tr>
<td>1915</td>
<td>Nov</td>
<td>21</td>
<td>6</td>
<td>6</td>
<td>32.00</td>
</tr>
<tr>
<td>1918</td>
<td>Apr</td>
<td>21</td>
<td>6</td>
<td>8</td>
<td>33.75</td>
</tr>
<tr>
<td>1918</td>
<td>July</td>
<td>15</td>
<td>6</td>
<td>5</td>
<td>41.00</td>
</tr>
<tr>
<td>1922</td>
<td>Jan</td>
<td>31</td>
<td>7</td>
<td>3</td>
<td>41.00</td>
</tr>
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<td>1922</td>
<td>Mar</td>
<td>10</td>
<td>6</td>
<td>3</td>
<td>36.10</td>
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<td>2</td>
<td>40.40</td>
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<tr>
<td>1925</td>
<td>Jun</td>
<td>29</td>
<td>6</td>
<td>8</td>
<td>34.30</td>
</tr>
<tr>
<td>1927</td>
<td>Nov</td>
<td>4</td>
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<td>1</td>
<td>34.60</td>
</tr>
<tr>
<td>1932</td>
<td>Dec</td>
<td>21</td>
<td>7</td>
<td>2</td>
<td>38.75</td>
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<td>1933</td>
<td>Mar</td>
<td>11</td>
<td>6</td>
<td>4</td>
<td>33.70</td>
</tr>
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<td>1934</td>
<td>July</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>41.25</td>
</tr>
<tr>
<td>Date</td>
<td>Magnitude</td>
<td>Latitude</td>
<td>Longitude</td>
<td>Location Details</td>
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<td>-----------</td>
<td>-----------------------------------------------------------</td>
<td></td>
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<tr>
<td>1934, Dec 30</td>
<td>6.5</td>
<td>32.25</td>
<td>-115.50</td>
<td>In Mexico, about 40 miles S of El Centro</td>
<td></td>
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<tr>
<td>1934, Dec 31</td>
<td>7.0</td>
<td>32.00</td>
<td>-114.75</td>
<td>In Mexico, about 100 miles SE of El Centro</td>
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<tr>
<td>1940, May 19</td>
<td>7.0</td>
<td>32.73</td>
<td>-115.50</td>
<td>In Mexico, about 100 miles SE of El Centro</td>
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<tr>
<td>1941, Feb 9</td>
<td>6.6</td>
<td>40.70</td>
<td>-125.40</td>
<td>Offshore, about 65 miles W of Eureka</td>
<td></td>
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<tr>
<td>1942, Oct 21</td>
<td>6.4</td>
<td>32.97</td>
<td>-116.00</td>
<td>Offshore, about 65 miles W of Westmoreland</td>
<td></td>
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<tr>
<td>1947, Apr 10</td>
<td>6.5</td>
<td>34.98</td>
<td>-116.55</td>
<td>East of Yermo</td>
<td></td>
</tr>
<tr>
<td>1948, Dec 4</td>
<td>6.0</td>
<td>33.93</td>
<td>-116.38</td>
<td>East of Yermo</td>
<td></td>
</tr>
<tr>
<td>1952, July 21</td>
<td>7.3</td>
<td>35.00</td>
<td>-119.02</td>
<td>Kern County earthquake</td>
<td></td>
</tr>
<tr>
<td>1954, July 6</td>
<td>6.8</td>
<td>39.42</td>
<td>-118.53</td>
<td>Rainbow Mountain, near Fallon, NV</td>
<td></td>
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<tr>
<td>1954, Dec 16</td>
<td>7.3</td>
<td>39.28</td>
<td>-118.12</td>
<td>Farview Peak, near Fallon, NV</td>
<td></td>
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<tr>
<td>1954, Dec 16</td>
<td>7.1</td>
<td>39.80</td>
<td>-118.10</td>
<td>Dixie Valley, near Fallon, NV</td>
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<tr>
<td>1954, Dec 21</td>
<td>6.6</td>
<td>40.93</td>
<td>-123.78</td>
<td>East of Arcata</td>
<td></td>
</tr>
<tr>
<td>1956, Feb 9</td>
<td>6.5</td>
<td>31.75</td>
<td>-115.92</td>
<td>In Mexico, about 80 miles SW of El Centro</td>
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<tr>
<td>1968, Apr 8</td>
<td>6.6</td>
<td>33.19</td>
<td>-116.13</td>
<td>Borrego Mountain</td>
<td></td>
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<tr>
<td>1971, Feb 9</td>
<td>6.6</td>
<td>34.41</td>
<td>-118.40</td>
<td>San Fernando</td>
<td></td>
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<tr>
<td>1976, Nov 26</td>
<td>6.8</td>
<td>41.29</td>
<td>-125.71</td>
<td>Offshore, about 100 miles WNW of Eureka</td>
<td></td>
</tr>
<tr>
<td>1979, Oct 15</td>
<td>6.5</td>
<td>32.61</td>
<td>-115.32</td>
<td>Impenalt Valley</td>
<td></td>
</tr>
<tr>
<td>1980, May 25</td>
<td>6.2</td>
<td>37.60</td>
<td>-118.85</td>
<td>Mammoth Valley</td>
<td></td>
</tr>
<tr>
<td>1980, May 25</td>
<td>6.0</td>
<td>37.63</td>
<td>-118.93</td>
<td>Mammoth Lakes</td>
<td></td>
</tr>
<tr>
<td>1980, Nov 8</td>
<td>7.4</td>
<td>41.12</td>
<td>-124.67</td>
<td>West of Eureka</td>
<td></td>
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<tr>
<td>1983, May 2</td>
<td>6.4</td>
<td>36.23</td>
<td>-120.31</td>
<td>Coalinga</td>
<td></td>
</tr>
<tr>
<td>1984, Apr 24</td>
<td>6.2</td>
<td>37.31</td>
<td>-121.68</td>
<td>Morgan Hill</td>
<td></td>
</tr>
<tr>
<td>1986, July 21</td>
<td>6.4</td>
<td>37.54</td>
<td>-118.44</td>
<td>Chalfant Valley</td>
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<tr>
<td>1987, Oct 1</td>
<td>6.0</td>
<td>34.07</td>
<td>-118.08</td>
<td>Whittier Narrows</td>
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<tr>
<td>1987, Nov 24</td>
<td>6.2</td>
<td>33.09</td>
<td>-115.79</td>
<td>Superstiton Hills</td>
<td></td>
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<tr>
<td>1987, Nov 24</td>
<td>6.6</td>
<td>33.01</td>
<td>-115.85</td>
<td>Superstiton Hills</td>
<td></td>
</tr>
<tr>
<td>1989, Oct 17</td>
<td>6.9</td>
<td>37.04</td>
<td>-121.88</td>
<td>Loma Prieta</td>
<td></td>
</tr>
<tr>
<td>1991, July 12</td>
<td>6.6</td>
<td>42.02</td>
<td>-125.72</td>
<td>Offshore west of Crescent City</td>
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<tr>
<td>1991, Aug 17</td>
<td>7.0</td>
<td>41.71</td>
<td>-125.63</td>
<td>Offshore, about 100 miles NW of Eureka</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Prevced by two quakes (M 6.3 and 6.2) on Aug 16 and 17.
<table>
<thead>
<tr>
<th>Year</th>
<th>Magnitude</th>
<th>Latitude</th>
<th>Longitude</th>
<th>Location Description</th>
<th>Damage Summary</th>
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<tr>
<td>1992, Apr 25</td>
<td>7.2</td>
<td>40 33</td>
<td>-124 23</td>
<td>Petrolia</td>
<td>356 injured, $48.3 million in property damage</td>
</tr>
<tr>
<td>1992, Apr 26</td>
<td>6.6</td>
<td>40 43</td>
<td>-124 60</td>
<td>Petrolia</td>
<td>Aftershock of the Apr. 25 quake</td>
</tr>
<tr>
<td>1992, Apr 26</td>
<td>6.6</td>
<td>40 38</td>
<td>-124 59</td>
<td>Petrolia</td>
<td>Another aftershock of Apr 25 quake</td>
</tr>
<tr>
<td>1992, June 28</td>
<td>7.3</td>
<td>34 20</td>
<td>-116 44</td>
<td>Landers</td>
<td>1 dead, 402 injured, $91.1 million in property damage</td>
</tr>
<tr>
<td>1992, June 28</td>
<td>6.5</td>
<td>34 17</td>
<td>-116 83</td>
<td>Big Bear</td>
<td>Included with Landers losses, above</td>
</tr>
<tr>
<td>1994, Jan. 17</td>
<td>6.7</td>
<td>34 21</td>
<td>-118 54</td>
<td>Northridge</td>
<td>57 dead; more than 9,000 injured, about $40 billion in property damage</td>
</tr>
<tr>
<td>1994, Sep 1</td>
<td>7.0</td>
<td>40 40</td>
<td>-125.68</td>
<td>Offshore, about 70 miles W of Cape Mendocino</td>
<td></td>
</tr>
<tr>
<td>1995, Feb. 19</td>
<td>6.3</td>
<td>40 60</td>
<td>-126 03</td>
<td>Offshore, about 70 miles W of Cape Mendocino</td>
<td></td>
</tr>
<tr>
<td>1999, Oct. 16</td>
<td>7.1</td>
<td>34 60</td>
<td>-116 27</td>
<td>Bullion Mountains</td>
<td>Minimal injuries and damage due to sparse population in affected area</td>
</tr>
<tr>
<td>2003, Dec 22</td>
<td>6.5</td>
<td>35 71</td>
<td>-121 10</td>
<td>San Simeon</td>
<td></td>
</tr>
</tbody>
</table>

(Source: http://www.consrv.ca.gov/cgs/rghm/quakes/Pages/eq_chron.aspx)

6.3 Evolution of Disaster Management in California State

The original impetus for disaster preparation, however, was planning for war. California's legislative bodies learned from those wartime experiences to build OES into an agency now recognized worldwide for its natural and man-made disaster preparedness and response role. Since 1945, the state Legislature has given a single agency the responsibility for planning and preparing for war-caused emergencies, natural disasters and civil disturbances. It has recognized that the problems created by many types of disasters are similar. Programs, equipment, and emergency personnel are available for use in coping with any disaster, the main differences being in the degree and extent of damage and destruction, and in the primary types of assistance required.
OES started in 1917, in the midst of World War I. Following is the summary of its historical contours on time scale starting from 1917.

1917: STATE COUNCIL OF DEFENCE - On March 29, 1917, the state Legislature adopted the following wording which formed the first version of OES, called the State Council of Defense: “An act to create a State Council of Defense to make investigations into the effect of the occurrence of war upon the civil and economical life of the people of the State of California; to recommend to the Governor measures to provide for the public security, the better protection of public health, a fuller development of the economic resources of the state and the encouragement of military training; to impose upon public officers certain duties in connection therewith; and to make appropriation for the purposes of this act.” (Stats. 1917, Ch. 32, approved March 29, 1917, in effect immediately.)

This first State Council of Defense consisted of 33 members appointed by the Governor, with the Governor as ex officio chairman. The members were to be appointed from state officials, military personnel, staff of the University of California, and other qualified citizens of the state and nation. A vice chairman, appointed by the Governor, was to “devote his entire time to the work of the State Council of Defense,” the bill read. The other members were to serve without pay, except reimbursement for expenses.

The duties of the Council were as set forth in the title of the act, and a total of $100,000 was appropriated to accomplish these purposes. The adoption of this act as an urgency measure was obviously geared towards a wartime situation, and read “... the President of the United States has called the Congress to meet in special session to consider measures for national defense and has summoned the National Guard of the State of California.” The Governor had the authorization to dissolve the State Council of Defense or cause its activities to be suspended or terminated when found appropriate. This act was not repealed until 1935.
The next step toward the eventual formation of OES occurred in 1929. Various attempts had been made, particularly by municipalities, to draw up preparedness plans and to have a working organization ready whenever disaster might strike. In 1929 California created the State Emergency Council. It was approved by the Legislature on June 3, 1929 and took effect August 14, 1929.

The State Emergency Council was comprised of the heads of the State Departments of Finance, Public Works, Military Affairs, and Public Health; one member each representing the American Legion, the American Red Cross, the transportation interests of California, and the business organizations of the state; and one peace officer.

The Council was to elect one of its members as chairman. The members were appointed by the Governor for two-year terms and served without pay, other than reimbursement for expenses.

The purpose of the Council was to prepare a plan and to consider ways of dealing with all emergencies. The Governor was required to declare, in times of extraordinary stress and wide-spread disaster that an emergency existed. When there was conflict or inadequate local police authority, the Governor was to designate officers or departments to take charge of the necessary response. Under the direction of the Governor these officers had the authority of the highest police power, and it was directed that local governments cooperate with the state.

In 1941, about the time of America's entry into World War II, a temporary body with limited powers to be known as the California State Council of Defense, was created to facilitate state and local government participation in the National Defense Program. Its main function was to coordinate governmental and private agencies in the defense effort. This Council consisted of the Governor as ex officio chairman, the Attorney General, the Adjutant General, the State Superintendent of Public Instruction, the Director of Public Health, and 20 members appointed by and serving at the pleasure of the Governor subject
to Senate confirmation. Two members of the Senate and three members of the assembly were appointed to meet with and participate in the work of the Council. Again, members received no compensation. The California State Council of Defense was scheduled to continue until September 1, 1943, but it was repealed by the California War Powers Act.

1943: CALIFORNIA STATE WAR COUNCIL - The Legislature passed the State War Powers Act as its first official action in 1943 by special session. This created the State War Council to replace the State Council of Defense, to increase the emergency war powers of the Governor during World War II, and to provide an adequately financed official agency for the coordination of the local, state, and federal civilian war effort in California. The act provided that it should terminate at the expiration of six months after "cessation of hostilities." It was approved January 30, 1943, and went into effect May 1, 1943.

The State War Council originally consisted of the Governor; the Lieutenant Governor; the State Director of Civilian Defense; the State Director of Civilian Protection; the State Director of Civilian War Services; the Attorney General; two representatives of city governments and two representatives of county governments, who were appointed by and served at the pleasure of the Governor; as well as two members of the Senate and two members of the Assembly. Council members were not paid. The Governor was to be ex officio chairman, the State Director of Civilian Defense was ex officio vice chairman of the War Council. The War Powers Act divided the civilian war effort into two operational segments — Protective Services and War Services. Protective Services was composed of police, fire, health, rescue, demolition, and repair, and other protective service officials and auxiliary civilian volunteer groups. The War Services branch was designed to assist in maintaining civilian morale and providing opportunities for constructive volunteer service in the total war effort.

The volunteer citizen accomplishments from January 1943 to the close of the war included planning and training programs. The acceptance of the program and public
enthusiasm for it was apparent when more than a million volunteers registered in the various programs during the wartime period.

Under this act, the Governor was authorized to create advisory committees to assist in specific fields of civilian defense activity. Appointed advisory committees were made up of outstanding leaders in the various protective and service fields. The first development of the statewide mutual aid program occurred during this period. Cities, counties, and the State of California joined together in a Master Mutual Aid Agreement which provides for mutual aid between and among cities, counties, and state agencies. The same system has been used to access federal response resources.

Mutual aid is provided first at the local level. If a city requires assistance, it requests support from neighboring cities or from the county (Operational Area); if not able to assist, the request is presented to the OES regional office. If the regional office cannot meet all requests from its counties (Operational Areas), the requests are presented to the State Office of Emergency Services. The Mutual Aid System evolved from a program initiated by Attorney General Earl Warren early in 1938 among law enforcement agencies throughout California. It was designed to coordinate law enforcement action during local emergencies and to unite law enforcement services in the event of a national emergency. Under the War Powers Act, a coordinated program of mutual aid between cities and counties had been established. Under that program 10 Regional Civilian Protection Officers would have directed protective services through city, county, region, and state control centers in the event of enemy attack.

The War Council was reorganized in 1944. The membership then consisted of the Governor; the Lieutenant Governor; the director of the California State War Council; the Attorney General; two representatives of city governments; two representatives of county governments; and two members of the Senate and the Assembly. The Governor was the ex officio chairman and the Lieutenant Governor was ex officio vice chairman of the War Council.
The Office of the Director of the California State War Council was created in the Governor's Office, and provisions were made for the assignment of certain activities to regular state agencies. By 1945, 241 local war council organizations had been established in California counties and cities to carry out this program under the direction of local authority.

Late in World War II, after the collapse of Germany and when victory over Japan appeared imminent, Governor Warren requested a survey of the wartime program, in the hopes of taking the benefits of the state's wartime experiences and establishing a peacetime organization to combat local or state emergencies.

1945: CALIFORNIA STATE DISASTER COUNCIL - By enactment of the California Disaster Act in 1945, the State War Council was superseded by the California State Disaster Council. (Stats. 1945, Ch. 1024, effective September 14, 1945.) The Disaster Council was composed of essentially the same personnel as the earlier councils, and was established as an advisory body to the Governor, charged with the responsibility of promoting the development of a State Disaster Preparedness Plan based on mutual aid between state and local governmental agencies. It was designed primarily to provide for mitigation of local or statewide natural disasters, but also to address needs of the state when the country was engaged in war.

A California Disaster Operations Procedure and Alert List was developed and approved by the State Disaster Council on November 8, 1945. Between 1945 and 1950 Council activities were limited, but many additional local disaster councils were accredited and considerable progress was made in mutual aid planning, particularly in the law enforcement and fire services.

1950: CALIFORNIA STATE DISASTER COUNCIL OF CIVIL DEFENCE - In 1950, when the Korean War escalated and the national government initiated a civil defense program, the staff of the State Disaster Council was quickly expanded. At a special session of the Legislature held in September of that year, the California Disaster
Act was amended to encompass civil defense programs in line with federal recommendations. To accomplish this, the amendment also provided a staff, to be known as the Office of Civil Defense, headed by a Director of Civil Defense. The Governor was authorized to assign all of his powers and duties under the California Disaster Act to this director.

The first comprehensive California Civil Defense and Disaster Relief Plan was issued in October 1950, and in many ways, resembles today’s structure. This plan was basically civil defense oriented, having been developed with the assistance of representatives of the Sixth U.S. Army, but one of its purposes was to combat the effects of natural-caused disasters. Some of the annexes, particularly those for fire and law enforcement, included more detail relating to natural disaster.

The California Disaster and Civil Defense Master Mutual Aid Agreement was also developed in 1950 and was adopted by all California counties, nearly every incorporated city, and hundreds of special districts. The agreement created a formal structure where jurisdictions voluntarily assisted each other by exchanging resources during disasters. The state agreed to also provide available resources to assist local jurisdictions in emergencies. The state was divided into Mutual Aid Regions, with offices staffed by the Office of Civil Defense to coordinate these activities.

On September 6, 1955, the Governor first promulgated orders, rules, and regulations to take effect immediately in the event of enemy attack upon the state or on receipt of official warning that such an attack was probable.

1956: CALIFORNIA STATE DISASTER COUNCIL AND CALIFORNIA DISASTER OFFICE - In 1956, to emphasize the importance of the natural disaster aspects of the state’s disaster preparedness programs, the Legislature amended the California Disaster Act to authorize the Governor to proclaim a “state of disaster,” as well as a “state of extreme emergency.” The Act also changed the name of the Office of Civil Defense to “California Disaster Office.” It was stipulated that the office should act
as the coordinator of all state disaster activities, and that every state agency and officer
should cooperate with the office's director in rendering all possible assistance.

A revised Civil Defense and Disaster Plan was issued in January 1958. This plan gave
equal emphasis to civil defense and disaster aspects of the program. It also included the
first series of Administrative Orders, which were issued to 16 state agencies pursuant to
an Executive Order by Governor Goodwin J. Knight. Under the authority of an executive
order, administrative orders summarize emergency assignments of state agencies. Each
state agency develops its own plan, including specific procedures and checklists
necessary for accomplishing assigned tasks. Agency plans may delegate authority and
assign responsibilities to divisions, bureaus, field offices, or other components of the
agency.

In March 1959, a Civil Defense Operations Plan was issued. This plan was developed
under a federally-funded project supervised by the California Disaster Office. It was
applicable during a state of extreme emergency when an enemy attack was probable,
imminent, or actual.

In 1961, Section 1510 of the Disaster Act, relating to membership of the State Disaster
Council, was amended to provide for alternates to be designated by and serve for the
Governor, the Lieutenant Governor, the Attorney General, the President pro tempore of
the Senate, and the Speaker of the Assembly.

A complete revision of the California Civil Defense and Disaster Plan was issued in
November 1963. This provided the basic assumptions and concepts for the development
of the Supporting Operations Plans, as well as a variety of legislation, executive orders,
administrative orders, and other official references affecting civil defense and disaster
activities in California.

In 1968, Governor Ronald Reagan issued an Emergency Resources Management Plan,
developed by the Disaster Office with the assistance of the private sector and
government. The plan was designed to enable the best possible management of available
resources, both human and material, should the nation be subjected to enemy attack. It
was based on maximum reliance on the private sector of the economy to perform
voluntarily in an emergency, under overall guidance and direction provided by
government.

1970: California Emergency Council and Office of Emergency Services - In 1970,
California’s emergency management agency as we fundamentally know it today was
formed when the California Emergency Services Act (OES, 2006) was passed,
superseding the California Disaster Act. The new act redesignated the State Disaster
Council as the California Emergency Council, with no major changes in composition,
powers, or duties. But it renamed the California Disaster Office as the Office of
Emergency Services, retaining that office in the Office of the Governor but providing
civil service status for its employees. It was approved on September 19, 1970, effective
November 23, 1970. The duties and responsibilities of the Director of the Office of
Emergency Services who reports directly to the Governor are defined in the Government
Code, Chapter 7. Other duties and responsibilities are delegated to the Director by the
Governor. More specifically, the duties included but are not limited to:

**Direction.** Oversight and coordination of all statewide emergency preparedness, and post
emergency mitigation efforts, and development, review, approval, and integration of
federal emergency response plans. It also includes integration of volunteers from the
private sector, direction and oversight of all drills, training, and exercising of emergency
plans.

**Reduction of all hazards.** This included directing departmental efforts relating to hazard
identification, either natural or man-made, and identification of mechanisms for hazard
reduction, including but not limited to promoting and negotiating changes in statewide
land use policies and codes relating to public safety.
Disaster response. Duties were related to development and maintenance of any and all mechanisms related to the effective use of state and local resources. This also included direction of the state’s emergency response including maintenance of necessary records, and the gathering of accurate disaster damage data for the Governor, and subsequently, the President. This effort included the responsibility for prioritizing the use of disaster response resources during major disasters.

Directing disaster recovery. The Director is solely responsible for directing coordination of all efforts related to immediate and long-term disaster recovery. This includes oversight of repair and replacement of public facilities, as well as all efforts related to immediate relief of human suffering via delivery of federal, state, local, and voluntary benefits. During recovery, the Director functions as the Governor’s Authorized Representative and the State Coordinating Officer.

The California Emergency Services Act (OES, 2006) constitutes a complete revision of the former act. This revision established the legal basis for the Governor’s response to emergency situations with which the state might be faced, regardless of the destructive force involved. The major objectives of this revision are to provide clarification of the many amendments to the Disaster Act since it was originally enacted in 1945. Then, in 1971, an updated California Emergency Plan was issued by Governor Reagan, to serve as a basis for the conduct of emergency operations by all jurisdictions. California updated all of its plans and procedures to fulfill local emergency preparedness responsibilities. This plan consisted of a Basic Emergency Plan, a Peacetime Emergency Plan, a War Emergency Plan, and a compendium of legislation and references. Under Governor Reagan’s administration, law enforcement and fire mutual aid programs increased. Activities included intelligence-gathering operations, pre-emergency liaison, and support to local jurisdictions through additional physical resources. During the 1970s, OES developed the state’s emergency operations plan and also focused on assisting other state agencies in developing their supporting plans. Maintenance, activation and management of the State Operations Center was also OES’s
responsibility including assuring the availability of reliable emergency communications facilities. Emphasis was placed on assisting local jurisdictions in emergency management planning and training, establishing strong lines of coordination with local responders, and providing direct support and assistance to cities and counties impacted by an emergency. Although the office was created to fill a civil defense need in the years immediately following World War II, the planning and response focus shifted very early to include natural hazards as well. Floods, earthquakes, and fires were the source of nearly all of the large scale activations of the State Operations Center. Throughout the 1970s increasing attention was given to the potential for technological or other man-made disasters such as toxic chemical releases, dam failure, oil spills, or an accident at one of the state's nuclear power plants. Traditional civil defense planning was continued, although interest had shifted from an anticipated super powers confrontation to the potential threat of terrorism.

**Mutual Aid (OES, 2006)**

An innovative feature of the OES structure during this period was the state's mutual aid system and its basic structure are still intact today. The Master Mutual Aid Agreement, signed by all 58 counties and most cities, created a formal structure where each jurisdiction could retain control of its own personnel and facilities but could still give or receive help whenever needed. The agreement also obligated the state to provide available resources to assist local jurisdictions in emergencies. To facilitate the organization and provision of mutual aid, the state was divided into six mutual aid regions. County units functioned as operational areas, coordinating the provision of mutual aid for its subdivisions.

For law enforcement, the county sheriff served as the operational area mutual aid coordinator and was elected by law enforcement in each county. (The Emergency Services Act, Sections 8559 and 8605, discuss the operational area. Section 8559: “An operational area is an intermediate level of the state emergency services organization, consisting of a county and all political subdivisions within the county area.” Section
Each county is designated as an operational area.

If requests for mutual aid assistance could not be filled at the region, they were forwarded to OES Headquarters (or the State Operations Center or State Coordination Center, if activated).

(Source: www.oes.ca.gov Official website state of California)

Figure 6.2: Mutual Aid Regions – OES, California State, USA
They were filled either with OES resources, those from a local jurisdiction from another OES region, another state agency, or directed to a private vendor. If the request could not be filled at the state level, either because the state system was overloaded or the needed resource was highly specialized, the request was forwarded on to the federal government.

Training
Emergency management training was another important element of the OES mission from this period. OES participated in training programs for local government and state agencies since its inception; however, most of the training involved state-wide implementation of the Federal Emergency Management Training Program and some function-specific, such as law or fire mutual aid, training. Although these other elements of training continue, the OES role in training changed greatly with the absorption of the California Specialized Training Institute (CSTI) into the Office of Emergency Services in 1985. CSTI had been created in 1971 as a grant project of the California Military Department to train National Guard members and their civilian counterparts from law enforcement agencies. A need was identified for a broader type of training focusing on effective local, state, and federal interaction during any kind of emergency. In the early 1980s emergency management courses focusing on earthquake response became a major, and extremely popular, element of the diverse CSTI catalogue. In recognition of its state-wide interdisciplinary nature, the Legislature assigned CSTI the task of overseeing development and implementation of hazardous materials training. As a result, CSTI has won recognition as the preeminent emergency training center in the nation. Several other programs that began in the 1970s and 1980s continue having influence today. Some of those include:

Earthquake Planning and Preparedness Programs
In 1972 and 1973 the National Oceanic and Atmospheric Administration (NOAA) prepared reports estimating earthquake losses in the San Francisco and Los Angeles areas. These reports clearly demonstrated that a major earthquake would cause damage that would devastate the current capabilities of the local, state, and federal response
Two significant events that shaped California’s current earthquake preparedness program occurred in 1979. Governor Jerry Brown appointed the Earthquake Task Force, bringing together representatives of local, state, and federal agencies, private industry, and volunteer agencies to address planning and preparedness issues. The Task Force remained active through 1985, developing and drafting the California Earthquake Response Plan for the Southern San Andreas Fault in 1983, and subsequent Northern California Plan.

After the 1980 Mount St. Helens eruption in Washington, the U.S. Geological Survey took a closer look at geologic hazards facing urban areas, which included re-evaluation of the estimates NOAA made in 1972-73 for earthquake hazards in California. There were concerns that a damaging earthquake would occur in Southern California and that state and local governments were unprepared to deal with the consequences. That prompted establishment of a joint state-federal effort to accelerate preparedness. The Southern California Earthquake Preparedness Project (SCEPP) and the Bay Area Earthquake Preparedness Project (BAREPP) were created as part of the Seismic Safety Commission and in the mid-1980s joined OES.

Radiological and Hazardous Materials Programs
OES had been involved in federally funded radiological programs since the early 1950s, beginning with tracking fallout from Nevada and later shifting to a civil defense focus. In 1979, after the accident at the nuclear power plant at Three Mile Island in Pennsylvania, OES was assigned the task of coordinating studies and planning for emergencies at California’s nuclear power plants.

OES has been involved in planning for hazardous materials emergencies since 1981, developing the state’s initial plan for response to hazardous materials incidents, operating a centralized notification system, and keeping track of post-incident reports. However, interest in hazardous materials issues intensified after the 1984 Bhopal, India, chemical
disaster. The Legislature passed AB 2185 (Waters) a hazardous materials emergency planning and community right-to-know law in 1985 which assigned new regulatory responsibilities to OES. In 1986 the U.S. Congress passed the Federal Superfund Amendments Authorization Act of 1986 requiring each governor to establish a state commission and local planning committees to implement a similar federal planning and right-to-know law. The former OES Hazardous Materials Division grew to support this state commission and six regional planning committees. In 1987 the Legislature passed AB 3777 (LaFollette) focusing on chemical accident prevention, requiring businesses to develop risk management, and assigned OES the task of developing program guidelines and providing assistance to local implementing agencies.

OES has been assigned these hazardous materials programs because they are founded in emergency response planning, coordinated with other types of emergency planning (such as that for catastrophic earthquakes), and require coordinated multi-disciplinary responses.

In addition to specific response plans for state/federal agency coordination at these incidents, OES provides assistance to local jurisdictions. Federally funded radiological training focuses not only on civil defense related issues but also on peace time applications, such as response to transportation accidents involving radiological materials.

Operational Area Satellite Information System (OASIS)
Earthquake simulation exercises in 1987 and 1989, and the response to the 1989 Loma Prieta earthquake, highlighted the need for a manageable and effective system for compiling disaster intelligence and resource requests. In pursuing solutions, OES identified several issues. One problem was that a number of jurisdictions were discussing the same information or resource needs. Another was the need for a high capacity, failsafe communications system. To address these, OES proposed expanded use of the operational area concept in emergencies, and development of an alternate network of
communications hardware. These proposals are the focus of the Operational Area Satellite Information System (OASIS).

OASIS offered a systematic approach for exchanging disaster intelligence and resource requests between special districts, cities, counties, operational areas, and the state. The communications hardware component included a high frequency radio system and a satellite communications network, each with one downlink per county and also downlinks to state agencies, including OES.

The Federal Emergency Management Agency (FEMA) participated in the planning process and provided matching funds for the development of OASIS guidelines and support for development of prototype operational areas. A communications study, funded under the Federal Earthquake Hazards Reduction Act of 1986, resulted in state funding for a high frequency (HF) radio system and a satellite communications network. As part of the OASIS project, these two systems were designed to connect all 58 counties with OES and other state agencies for disaster communications and day-to-day traffic. The satellite system, which uses technology similar to cellular telephones, has 60 channels.

6.4 Office of Emergency Services - Coordination

The Office of Emergency Services has supported several boards, committees, and commissions. Some of these include:

**California Emergency Council**

The California Emergency Council is the official advisory board to the Governor on matters pertaining to statewide emergency preparedness. Established by the Emergency
Services Act, the Council also may act as an advisory body to the Governor in times of emergency. The Emergency Council meets periodically to review plans and accredit local Disaster Councils.

**Governor’s Emergency Operations Executive Council**

The Governor’s Emergency Operations Executive Council (GEOEC) supplements the California Emergency Council, and in times of emergencies may advise the Governor on policy issues and application of state resources. The GEOEC was created by Governor George Deukmejian to provide a mechanism for seeking input from the directors of emergency response-oriented state agencies.

The GEOEC is supported by the Statewide Emergency Planning Committee (SWEPC), made up of staff level planners from state agencies that deal with emergency planning and coordination issues. SWEPC meets quarterly.

**California Earthquake Prediction Evaluation Council**

The California Earthquake Prediction Evaluation Council (CEPEC), established in 1974 as an advisory committee to OES, was officially appointed in 1976. CEPEC acts as an advisory body to the Director of OES relating to earthquake predictions. It may also be activated to evaluate and assess information on seismic activity, particularly the occurrence of earthquakes that may be foreshocks. Meetings of CEPEC are held quarterly or as required to evaluate predictions. Upon review of the prediction, CEPEC will advise the OES Director of the validity of the prediction and, if the prediction is considered valid, the OES Director will notify the Governor and may implement the Short-Term Earthquake Prediction Response Plan or take other actions as appropriate. That plan includes notification of local governments of the prediction and the public release of information. The members of CEPEC are appointed by the Governor, upon recommendation by the OES Director and the CEPEC Chairperson.

**Chemical Emergency Planning and Response Commission**

The Chemical Emergency Planning and Response Commission (CEPRC) was established
by an Executive Order to fill the requirement in Title III, the Federal Superfund Amendments and Reauthorization Act of 1986. The act requires that each governor establish a state emergency response commission to address a variety of hazardous materials planning and community right-to-know issues. The commission also provides input regarding the state's implementation of the federal law.

The CEPRC also appoints members and provides direction to local emergency planning established in each of the six OES Mutual Aid Regions. Each LEPC has 15 members representing a variety of disciplines interested in hazardous materials management and four ad hoc positions designed to help the commission fit the needs of the region.

**Citizens Advisory Committee**

The Citizens Advisory Committee on Nuclear Emergency Planning (CAC) was created in 1988 by SB 2591 (Hart). A committee to review the planning and public information being provided around the state's nuclear power plants was based on a recommendation of the Task Force on California Nuclear Emergency Response shortly after the Chernobyl nuclear power plant accident in the former Soviet Union. The nine members of the committee represent specific disciplines and are appointed by the Governor, Chairperson of Senate Rules Committee, and Speaker of the Assembly.

**California Utilities Emergency Association (CUEA)**

The Governor of California chartered the California Utilities Emergency Association (CUEA) in 1952 as part of the state's Civil Defense Plan. The Association was created as a Joint Powers Agreement to represent California utilities on utility emergency-related issues. In 1997, the CUEA filed for nonprofit status as a public benefit corporation.

Utility emergency-related issues in California are addressed through the Utilities Branch of the State Operations Center and Regional Emergency Operations Centers. Utilities covered under this branch include gas, electric, telecommunications, water, waste-water, and petroleum pipeline industries.
During emergencies, the Utilities Branch is activated to enhance the state’s capability to respond to and recover from emergencies by providing an improved structure for cooperation and communication among utilities and government agencies. Trained utility representatives may also respond to the SOC or may staff the utilities function at the REOC. The utility function at Operational Area EOC’s works in coordination with the Regional Emergency Operations Centers.

OES Fire and Rescue Advisory Committee
The OES Fire and Rescue Service Advisory Committee is a representative group of the fire service established to provide guidance and assistance to OES in all matters relating to planning, preparation, and response to fire and rescue disasters utilizing the Rescue Mutual Aid plan and Mutual Aid System. The Committee also serves as the Board of Directors for FIRESCOPE (Firefighting Resources of California Organized for Potential Emergencies), which is responsible for overseeing the expansion of the Incident Command System throughout the state and for implementing other FIRESCOPE programs statewide. The Chief of the OES Fire and Rescue Division serves as the coordinator for the committee.

Urban Search and Rescue Advisory Committee
The Urban Search and Heavy Rescue Advisory Committee was established in 1989 to advise the OES Director. The multi-disciplinary committee includes representation from local, state, and federal agencies and encompasses volunteer groups, medical specialists, and engineers. The committee makes policy recommendations relating to rescue techniques, resources, guidelines, and procedures, training for professionals and volunteers; coordination of local, state, federal, international, and private sector resources; development of an urban search and rescue mutual aid plan, and other issues related to urban search and heavy rescue. California’s US&R program formed the foundation of the National Urban Search and Rescue Program.
6.5 Standard Emergency Management System (SEMS)

The Standardized Emergency Management System (SEMS) is the system used for coordinating state and local emergency response in California. SEMS provides a multiple level emergency response organization that facilitates the flow of emergency information and resources. As a direct result of events during the 1991 East Bay Hills fire, Senator Nicolas Petris introduced SB 1841. The bill signed into law by Governor Wilson directed OES to establish by regulation the Standardized Emergency Management System. The system consists of Incident Command System, mutual aid, the operational area concept and multi-interagency coordination.

**Organization Levels and Functions**

<table>
<thead>
<tr>
<th>Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>Statewide resource coordination integrated with federal agencies.</td>
</tr>
<tr>
<td>Regional</td>
<td>Manages and coordinates information and resources among operational areas.</td>
</tr>
<tr>
<td>Operational Area</td>
<td>Manages and coordinates all local governments within the geographic boundary of a county.</td>
</tr>
<tr>
<td>Local</td>
<td>County, city or special district.</td>
</tr>
<tr>
<td>Field</td>
<td>On-scene responders.</td>
</tr>
</tbody>
</table>

**Five functions:**

- **Management:** provides the overall direction and sets priorities for an emergency.
- **Operations:** implements priorities established by management.
- **Planning/Intelligence:** gathers and assesses information.
- **Logistics:** obtains the resources to support the operations.
- **Finance/Administration:** tracks all costs related to the operations.

Figure 6.3: Standard Emergency Management System – OES (California State)

SEMS was developed in coordination with all interested state agencies with designated response roles in the state emergency plan and interested local emergency management agencies. It officially took effect on December 1, 1996. OES established the SEMS Development Advisory Committee to assist in the development of the system and regulations. OES also established a maintenance system to improve SEMS when necessary and keep it responsive to changing technology and circumstances.
SEMS consist of five operational levels which are activities as required by the emergency:

1. Field response
2. Local Government
3. Operational area
4. Regional &
5. State

The Regional and State are under jurisdiction of the OES. Under SEMS all jurisdiction within geographic boundaries of a county are considered a single operational area during declared emergencies. The operational area is not a formal political sub-division of the state, rather, a special zoning established from emergency management perspective by the OES.

The basic of Incident Command System (ICS) guide line is that the person at the top of origination is responsible until the responsibility is delegated to another person. Thus, on the smaller incidences, where additional personnel are not required the incident commander manages all aspects of incident / emergency management.

Operations are grouped accordingly to activities and location of activities (Field, EOC, and DOC) as indicated in the table 6.2 given below.

<table>
<thead>
<tr>
<th>ACTIVITY</th>
<th>FIELD</th>
<th>EOC</th>
<th>DOC</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMAND (Field)</td>
<td>Sets objectives and priorities and has overall responsibility at the scene of incidence</td>
<td>Overall responsibility for establishing and implementing jurisdiction wide policy and response strategy</td>
<td>Implement jurisdiction policy established by EOC and manages all departmental activities</td>
</tr>
<tr>
<td>MANAGEMENT (EOC)</td>
<td>Coordination all jurisdiction</td>
<td>Coordinating all department</td>
<td></td>
</tr>
<tr>
<td>OPERATION</td>
<td>Direct tactical response of all</td>
<td></td>
<td>Coordinate all department</td>
</tr>
</tbody>
</table>

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The five SEMS follows basic ICT structure and operational parameters. The primary functions in a SEMS are performed in:

1. **EOC (Emergency Operation Center):** from where centralized emergency management is performed. EOC facilities are found at local Government, Operational area, Regional & state level.

2. **DOC (Department Operation Center):** A location from which specific department within municipality, special district, county, region or state agency coordinates its emergency management activity and reports to central EOC. DOC facilities are found at local Government, operational area, regional and state levels.

(Sources: FEMA / OES literature search)
General Concept of Operations
Under SEMS, every effort is made to concentrate emergency response functions at the lowest level, which will ensure operational effectiveness. Wherever possible, direct State response coordination with mutual aid regions and operational areas will be maintained at the State OES Regional Emergency Operations Center (REOC) level.

The SOC will ensure the overall effectiveness of the State's Standardized Emergency Management System. During an emergency, the SOC plays a primary role in assisting the Governor in carrying out State emergency responsibilities. This role is carried out by performance of the several primary response functions as required by the situation.

Major Responsibilities of the State Operations Center (SOC)
1. Ensure that all State and Regional response elements of the State's Standardized Emergency Management System (SEMS) are activated, as the emergency situation requires, function effectively, and are maintained at the level necessary for the response.

2. Support the Regions, state agencies, and other entities in establishing short-term recovery operations following disasters.

Primary Response Functions of the State Operations Center
1. Act as overall state coordinator in the event of simultaneous multi-regional disasters such as earthquakes, fires, or floods. In this situation, provide inter-regional policy direction and coordination for emergencies involving more than one REOC activation. Monitor and facilitate inter-regional communications and coordination issues.
2. Compile, authenticate, and make available summary disaster status information obtained from all sources, in the form of Situation Reports to the Governor's office, the legislature, state agency headquarters, media and others as appropriate.

3. Act as the state's initial response entity until the appropriate REOCs are activated as assume local management of their operational response functions. Maintain control and status of mission numbers and purchasing authority until these functions are assumed by the REOC in the affected area.

4. Provide on-going inter-agency coordination with the DOC headquarters of all state agencies involved in the response effort to ensure adequate statewide mobilization and allocation of state assets. This is typically accomplished through state Agency Representatives assigned to the SOC.

5. Provide necessary coordination with and between established statewide mutual aid systems at the state headquarters level.

6. Manage the state's Emergency Public Information program.

7. Provide and maintain state headquarters linkage and inter-agency coordination with the Federal Response System. This includes requesting appropriate assignments of federal ESFs at both the SOC and REOC to ensure maximum effectiveness.

8. Assist in the planning for short-term recovery, assist State agencies, and REOCs in developing and coordinating recovery action plans.

**State Operation Center (SOC) – Activation**

Three levels of activation are recommended at the State SOC.

*Level One - Minimum Activation*
At a minimum, this level would consist of a person functioning as the SOC Director. In addition, one or more Section Chiefs, the Situation Status and Analysis Unit in the Planning/Intelligence Section, the Communications Unit from the Logistics Section, or other units may also be activated if required at this level. SEMS primary functions will be the responsibility of the SOC Director until they are activated.

**Level Two - Mid Level Activation**

Level Two activation would normally be achieved as an increase from Level One or a decrease from Level Three. Level Two activation would initially activate each functional element of the organization at a minimum level of staffing. One person may function in more than one capacity. The SOC Director and the General Staff will determine the level of activation required, and demobilize functions or add additional staff to functions based upon event considerations. State Agency Representatives to the SOC would be required under Level Two.

**Level Three - Full Activation**

All functional elements are represented at full staffing. Level Three activation would also include State and Federal proclamations/declarations with appropriate Federal Emergency Support Function (ESF) representation at the REOC.

### 6.6 RIMS (Response Information Management System)

RIMS are a successor to the Operational Area Satellite Information System (OASIS) project and use the OASIS data communications capability. Utilizing the program Lotus Notes, RIMS uses the essential elements of information identified by the OASIS project. RIMS also use the existing OES statewide computer network. RIMS is an integral part of the OES Information Management Strategic Plan.
Technology for RIMS has been used for daily-use information processing applications throughout OES. Applications include purchasing, timekeeping, asset inventory control, work plans, and the next generation of Public Assistance Damage Survey Report Management Information System (PADMIS).

The purpose of RIMS is to improve OES's level of service and efficiency by improving its ability to respond to, manage, coordinate requests for resources; and collect, process, and disseminate information during and after a disaster. The first major test for RIMS was the flooding disaster in January 1997. The automated tracking system utilized in the floods for tracking requests for emergency resources and other emergency functions excelled as expected. In the spring of 1997, OES earned a national award for Outstanding Achievement in the Field of Information technology in the competition sponsored by the National Association of State Information Resource Executives (NASHIRE). RIMS were recognized as the best state government client/server application in the nation. The Response Information Management System (RIMS) Information Management System is an Internet based computer system that provides (RIMS) at the SOC emergency information exchange between the state, other state agencies, regions, operational areas and local jurisdictions. Through the use of specialized forms it provides a vehicle for requesting and tracking resources and other critical emergency information through the SEMS levels. RIMS are the primary method of communications within SEMS.

Updated version of RIMS (RIMS, 2005) has enhanced its features and functionalities are another step forward in improving emergency management California. SEMS and RIMS together provide a framework ensuring that OES and its assisting and cooperating agencies efficiently support local governments and the populations they serve in time of need.
A significant enhancement in RIMS is the ability to display maps of incident locations using new computerized mapping features in the system. When RIMS report forms are filled out and the geo-location of incidents (addresses, lat-long, or intersections etc) are included, they can automatically be displayed on maps as small icons (RIMS, 2005).

6.7 GIS (Geographic Information System)

GIS is a display and analysis high resolution mapping that integrates the latest in computer technology. OES’s involvement with Geographic Information Systems (GIS) has evolved enormously since it was created in the early 1980s. At that time, the Southern California Earthquake Preparedness Project (SCEPP) contracted for GIS analysis regarding potential earthquakes. In Northern California, similar efforts were pursued with Association of Bay Area Governments (ABAG), and by the Bay Area Earthquake Preparedness Project (BAREPP). The Hazardous Materials Division of OES

(Source: www.oes.ca.gov)
has also been active in GIS since the early 1990s. Use of GIS for real time display and analysis was being introduced to the emergency services world by FEMA and private vendors by the end of the 1980s. However, GIS as a basic service available to all the program areas and response efforts grew more out of OES’s involvement with FIRESCOPE (Firefighting Resources for Southern California Organized for Potential Emergencies). A series of firestorms in 1970 triggered the formation of FIRESCOPE, and it was chartered in 1972. One of the issues to come out of the design process was the need for specialist groups to develop specific guidelines. Because of the general confusion caused by the multitude of different map products used in multi-jurisdictional incidents, a mapping specialist group was created within FIRESCOPE. In 1978 general implementation of the FIRESCOPE program began. On October 17, 1989, the Loma Prieta earthquake hit. As a consequence, McDonnell Douglas corporation, in concert with Oracle, Digital Equipment, Lockheed, and Etak, donated software, equipment, and data.

6.8 OES Reorganization

The Department of Finance (DOF) completed a program review of OES in May 1992. Concurrent with that study, the OES Director commissioned an internal task force to study the organization and its programs. Both DOF and the task force found that the organizational structure hindered some operations.

Subsequent to these studies, OES and several other state entities suffered another significant reduction to their General Fund appropriations in fiscal year 1992-93. OES also experienced an ongoing 30 percent reduction to its Hazardous Waste Control Account appropriation, which funded a majority of HazMat projects. In addition to the problems identified by DOF, these reductions reinforced the need for a very streamlined organization able to deliver services.

It was determined that consolidating into three regions instead of six would ease the way for coordination and consistent support of local emergency managers, and at a lower cost. Since this consolidation significantly increased the responsibilities of the new Regional
Administrators, the existing six mutual aid regions remained unaltered; only OES's administrative functions were consolidated. The new structure also put the responsibility for policy decisions within the Executive Division; streamlined the reporting relationships within each program; and accommodated the reduced level of resources.

### 6.9 Office of Emergency Services (OES) - Present Scenario

Since 1989 California has experienced a series of extraordinarily large, complex and diverse disasters. These include the 1989 Loma Prieta earthquake, 1991 East Bay Hills fire, 1992 Los Angeles Civil Unrest, 1992 Landers and Big Bear Earthquakes, 1993 Southern California Fires, 1994 Northridge Earthquake, and 1995, 1997, and 1998 Floods. During this period every California County received at least one Federal and State Disaster Declaration and many counties received multiple declarations. OES responded to this record series of disasters through an innovative and effective internal reorganization and external restructuring of the state's entire emergency management system. SEMS, RIMS, and increased resources at the regional level are just a few of the products of this most challenging period in the state's history of emergency management.

OES today is a diverse, committed organization which has grown from about 250 employees just a few years ago to over 800 today. The following is an overview of the divisions making up the largest state emergency management organization in the nation.

#### Executive Division

This includes the Director, Chief Deputy Director, two Deputy Directors, one Assistant Director, two Executive Secretaries, and the Information and Public Affairs Office. In addition, the Administration Division reports to the Chief Deputy Director, along with a Program Support Section.
Information & Public Affairs Section

The Information and Public Affairs Section (IPA) has overall responsibility for OES contact with the news media. IPA communicates OES policies and activities to the public and manages the state’s emergency public information system. IPA also coordinates information dissemination to both internal and external constituents, including public officials, organizations, and businesses. IPA develops, coordinates, and serves as a clearinghouse for written and audio-visual materials. In addition, it supports state and local emergency services through training and organizational services. IPA also develops and coordinates public education campaigns and serves as a resource center for emergency management and preparedness information and materials.

Legislative Affairs

Legislative Affairs serves as a liaison between OES and the California State Legislature. Its primary function is to monitor all legislation which impacts disaster preparedness, response, and recovery. The staff analyzes and tracks bills that relate to hazardous materials, fire and law enforcement mutual aid, urban search and rescue, and general emergency management issues. Legislative Affairs makes recommendations to the Governor on pending legislative measures. The Legislative Affairs liaisons work closely with legislative members, committees, and staff on a variety of policy matters as well as provide expertise during the budget hearing process. It serves as the main point of contact for legislative members requesting information or assistance relating to disaster response and recovery issues impacting their districts.

Information Technology

Information Technology is responsible for providing agency-wide computer support, Geographic Information Systems (GIS), and Telecommunications to all OES offices during daily and emergency operations. This includes installation and operation of the wide area computer network. It is comprised of the Telecommunications Section, which includes the 24-hour Warning Center, the Computer Support Section, and the Geographic Information Systems Section.
**Administration Branch**

The Administration Branch provides essential agency support services. To achieve the agency mission, the Branch provides business and fiscal management, accounting, and personnel functions. The Branch includes: the Accounting Office, Budget Office, Business Services Office, Personnel Office, and Selection Services Office. Accounting is responsible for day-to-day agency transactions. The Budget Office oversees fiscal management. Business Services assists with purchasing, contracting, facility leases, and building management. Personnel and Selection Services includes transactions, classification, selection, benefits, and management control reports.

**Regions**

The State of California is partitioned into three administrative regions and six mutual aid regions. Each of the three OES regions is modeled after the larger organization and includes the full complement of support programs.

*Figure 6.5: OES Administrative Regions, California State*
A primary goal of this organization is to place more emphasis on regional support of local government. The regional branches are responsible for providing planning and technical assistance to state and local agencies within their respective areas. The programs provide support to local government, schools, businesses, and the public through outreach, education, earthquake hazard mitigation, and preparedness activities.

The regions are also responsible for assisting in the coordination of mutual aid, delivery of disaster assistance and training programs, and the overall management of regional emergency response activities.

The regional branches oversee the Mutual Aid Regional Advisory Committees (MARACs), which propagate SEMS throughout the regions.

**Emergency Operations, Planning, and Training Division**

**Planning & Technological Assistance Branch**

The Planning and Technological Assistance Branch provides policy and guidance for emergency planning and preparedness, including developing and maintaining the state's Standardized Emergency Management System (SEMS). The branch maintains the State Emergency Plan; coordinates with federal agencies involved in the development of the Federal Response Plan; and provides expertise to develop and maintain emergency preparedness/prevention, response, and recovery plans for technological hazards such as hazardous and radioactive materials. The branch is also responsible for development, revision, and maintenance of the agency Strategic Plan and agency Work Plan.

**Fire & Rescue Branch**

The Fire and Rescue Branch manages the California Fire and Rescue Mutual Aid System. Its primary responsibility is assisting the California Fire Services in mutual aid planning and coordination. The Fire and Rescue Branch also manages the statewide response of mutual aid resources to all types of fire, rescue, or disaster related emergencies through six Regional and Operational Area Coordinators. In addition, the Fire and Rescue Branch
maintains OES fire engines to support mutual aid and manages California's Urban Search and Rescue Teams, the FIRESCOPE (Firefighting Resources of California Organized for Potential Emergencies) program, and the State Assistance for Fire Equipment (SAFE) Act.

**Law Enforcement Branch**

The Law Enforcement Branch manages the California Law Enforcement Mutual Aid System. It coordinates the law enforcement resource response to emergencies and search and rescue operations. The Law Enforcement Branch issues identification to consular officials residing in California. This Branch also works with law enforcement officials in municipal, county, state, and federal agencies and with volunteer organizations to provide mutual aid and search and rescue training, to provide planning guidance, and to pre-stage specialized equipment resources.

**Utilities**

The Utilities Branch is responsible for integrating public and private utilities' emergency preparedness, response, and recovery capabilities through comprehensive planning, training, education, and coordination between the utilities and government agencies at all levels.

**California Specialized Training Institute**

The California Specialized Training Institute (CSTI) coordinates the agency's emergency management training programs. Training is provided to state, local, federal, private sector, and students from foreign countries.

The Institute's courses cover a wide spectrum of emergency management areas, including the state's Standardized Emergency Management System, hazardous material response and contingency planning, radiological incident response and management, law enforcement officer training, disaster recovery operations, and disaster mitigation.
Disaster Assistance Division

The Disaster Assistance Division serves as a single point of contact and is responsible for administering and coordinating federal and state public assistance and individual and family grant programs. It coordinates local, state, and federal disaster assistance and recovery operations, including coordination of requests for state and federal emergency declarations, damage assessment, and participation in Disaster Field Offices, outreach efforts, and other required activities. The Disaster Assistance Division also oversees the agency’s risk management responsibilities, including the development and implementation of post-disaster hazard mitigation plans and reports. The Disaster Assistance Division is comprised of two Branches: Disaster Assistance Programs Branch and the Disaster Assistance Resources Branch. The Programs Branch consists of the Public Assistance, Individual Assistance, and Hazard Mitigation Sections. The Resources Branch contains the Financial Management Services and Program Support Sections.

Public Assistance Section

The Public Assistance Section is responsible for overall management, administration, and coordination of state and federal public assistance programs. This responsibility includes: conducting damage assessment to establish a basis for recommending a governor’s declaration of state of emergency and/or request for a presidential declaration of a major disaster area; conducting briefings for local and state agencies on program eligibility requirements; acting as the public assistance applicant for all eligible state and local public agencies, and, when applicable, private non-profit organizations; providing administrative and technical assistance to eligible agencies and organizations regarding disaster survey reports; and, conducting the required inspection of eligible projects.

Hazard Mitigation Section

The Hazard Mitigation Section is responsible for administering the Hazard Mitigation Grant Program (HMGP). This program, which is federally funded, is a competitive grant program established to mitigate risks to facilities and infrastructure from future disasters. The Hazard Mitigation Section is also responsible for the development and
implementation of the program which integrates both pre- and post-disaster risk management. It includes disaster prevention, hazard mitigation, hazards assessment, and vulnerability studies. The section also manages the disaster preparedness improvement grant.

**Individual Assistance Section**
The Individual Assistance Section is responsible for the coordination and implementation of the individual assistance program, including the state administered Individual and Family Grants (IFG), mental health, housing, unemployment, and other programs. It provides assistance, advice, and guidance to local, state, and volunteer agencies and organizations involved in individual and family disaster assistance. The section assists in the training of OES and other state agency personnel. It approves the Department of Social Services IFG Administration Plan. The Individual Assistance section also provides guidance and procedures, in cooperation with FEMA and other concerned agencies; recommends improvements to existing regulations and procedures.

**Financial Management Services Section**
The Financial Management Services Section develops and maintains systems for monitoring public assistance disaster claims and payments, including those for tracking sub grants to state and local agencies. It substantiates the department's own disaster recovery costs. The section tracks expenditures for various accounts; produces fund balance data; prepares special reports; identifies required administrative procedures. The section also develops and maintains the disaster recovery operations annex of the agency's Administrative Policies and Procedures Manual. The section also provides audit support and information to all recovery programs administered by the division.

**Program Support Section**
The Program Support Section provides administrative support to the Disaster Assistance Division. It develops and maintains the logistical capability to organize and establish recovery operations. The section also assists with and participates in programs designed to train local and state personnel in disaster recovery operations.
Planning & Technological Assistance Branch

**Planning Section**
The Planning Section is responsible for establishing departmental policy and guidance for emergency planning and preparedness activities for state and local levels of government. It also has the lead for developing and maintaining SEMS.

**Resource Planning Unit**
The Resource Planning Unit was established in February of 1997. The main project responsibilities for the Unit include: the OES Strategic Plan, Emergency Management Assistance (EMA) program, Performance Partnership Agreement with FEMA (PP20A), Cooperative Agreement with FEMA (CA), OES Agency Work Plan, Project Time Report (PTR), Disaster Service Worker Program, Grants Management, Business Resumption Planning, and Oil Spill Planning elements.

**Plans Unit**
The Plans Unit develops and maintains the State Emergency Plan and State Operation Center procedures. This unit also coordinates with federal agencies involved in the development of the Federal Response Plan.

**Planning Assistance Unit**
The Planning Assistance Unit provides planning assistance to other OES branches and regions, other state agencies, and local jurisdictions. Assistance includes the formulation and adoption of emergency planning, development, and maintenance of planning guidance materials, and coordination with other OES branches and regions to ensure implementation of emergency planning policy and guidance.

**Technological Hazards Section**
The Technological Hazards Section provides expertise needed by state and local government agencies and private companies and businesses in the development and maintenance of technological hazards (toxic chemical, biological and radiological materials) emergency preparedness/prevention, response, and recovery plans.

**Hazardous Materials Unit**

The Hazardous Materials Unit develops and maintains a hazardous materials reporting network and notification system. It also provides technical assistance in the development of training and certification and risk management programs. Finally, it provides technical assistance and support to the state’s advisory commission, establishing technical standards and guidance to state and local agencies and other OES branches and regions.

**Radiological Preparedness Unit**

The Radiological Preparedness Unit coordinates and provides technical assistance for California’s Nuclear Power Plant Emergency Response Plan and other radiological emergency preparedness activities. The unit is also responsible for the establishment and provision of technical standards and guidance to state and local agencies, other OES branches and regions, and the private sector.

**6.10 Office of Emergency Service (OES) in the Forefront**

OES is a “single window” for disaster management in the state. Standard Emergency Management System (SEMS), a design of OES, has been found extremely useful for “effective emergency response and disaster management” and is accepted and adopted by all other states in USA. Local, State, and Federal government's, as applicable, implements regulations, provides guidance and limitations on land use, and in general raise the awareness of the population. Federal Emergency Management Agency (FEMA) and Office of Emergency Services (OES) provide information and assistance on pre-earthquake mitigation strategies and post earthquake assistance in response and recovery phases.
Alert and Warming Center of OES works 24*7 to monitor, analyze and manage hazards and emergencies information system. All emergency agencies in the state are integrated with AWC with dedicated communication links. Enough redundancies are designed and incorporated into OES’s Information and communication networks so as to maintain connectivity under all circumstances.

Public education and awareness.

The first and foremost strategy in managing earthquake risk is the informed public. Every school in the state informs the students about earthquake risk. There are regular earthquake drills in schools so those children know what to do if there is an earthquake. These school children talk to their parents about what they have learned about earthquakes and how to protect themselves if an earthquake occurs. There are brochures sent out by the local utilities to all the home owners about the earthquake risk in the region and what to do to protect themselves, their families, and their property before, during, and after an earthquake.

Building standards and codes management:

Development of state of the art building standards and processes to implement these standards for all construction. Design, construction, and inspection of all new buildings and infrastructure must be according to the existing code requirements. Rules to deal with existing construction and to bring them to life safety standards have also been implemented in most urban communities of California.

Public Buildings designed for shelter:

Facilities such as schools, hospitals, police stations, fire stations, which are critical for response and recovery after an earthquake must be built to more stringent standards with special provisions for inspection and checking during construction process.

Private-Public –Participation (PPP) in disaster management:
Corporations taking responsibilities for providing a safe work environment for their workers through corporate earthquake risk management studies. These studies provide an understanding of the impact of various levels of earthquakes to their business and to their people. Pre-earthquake loss mitigation strategies for corporations involve engineering strengthening their facilities and/or buying earthquake insurance and business interruption insurance.

In addition the corporate participate in disaster preparedness by their readiness with the required “emergency resources” contribution to ease the resources stress in the post disaster phase.

**Earthquake Insurance:**

Availability of earthquake insurance to all the residential and commercial property holders and to corporations forms one of the most important strategies for managing earthquake risk.

### 6.11 OES Resources

OES’s primary directives are to ensure that the state agencies move rapidly to meet the needs of California’s residents, and to use the full resources of the State to support local governments. OES may call on its own response resources to assist local Governments (OES, 2003). These resources include:

- Four Communication Vans to provide local jurisdiction with communication support at disaster sites
- Portable Satellite units to provide voice and data transmission from remote locations
- Caches of specialized equipments are maintained: Including mobile command post and communication vans and armored rescue vehicles, principally for use by the local agencies
• One hundred and ten OES fire engines ("pumpers") stationed with the fire districts at strategic locations throughout state that can dispatched when needed.
• 24-Hours tool free toxic release hotline
• Staffs who are on call 24 hours a day to respond to any state or local emergency needs.

6.12 Evolving Character of OES

The Golden State emergency response agencies protect life, property, economy and the environment. And now when disaster strikes California can count on improved accelerated efforts to restore their communities. In early 2006, OES adopted a new Statewide Emergency Management Strategic plan. The plan will influence the development of a master strategic for the state emergency management community over the next five years. Common priorities were defined in the plan for migration against, preparing for responding to and resolving from natural and human caused events that threaten lives, property the economy and the environment. The new plan builds upon California comprehensive standardize Emergency management system SESM which was adopted by the federal government as the template for the new national incident management system (NIMS) emergency management strategies for OES and other state agencies will be guided by the plan, which will be available to local and tribal government and other organization to help them align their government managements strategies with those of the State plan.
The plan also builds upon historically strong partnership between state and local government, federal agencies, tribal governments community based organization and private sector response entities such as utility and medical service providers.

In this post 9/11 environment OES has been the leader in spearheading the state continuity of government operations planning efforts. As directed by S-04-06 governor schwarzenegger’s April 2006 Executive order, OES and other state agencies are developing comprehensive continuity of operations (COOP) and continuity of government (COG) plans and exercise strategies to test all those plans.
The objectives of the OES COOP COG program include protecting essential facilities, equipments, records, and other assets, reducing or mitigating disputes to operations, reducing loss of life, minimizing damage and losses, achieving a timely and orderly recovery from an emergency, and reputation of full services in order to accomplish the agency’s mission (OES).

6.13 Key Observations

- Established Policy, Acts/Legislations, Procedures, and dedicated Organisation to support emergency and disaster management in the state.
- Enforcement of codes for construction and other things under the guidelines issued in the ACT/Policy.
- Standard Emergency Management System (SMES) is mandatory for all local jurisdictions under the legislation in California. This measure was seen as a means of eliminating the confusion that had existed over how to organize and disaster operations, while at the same time enabling many jurisdictions and agencies to integrate their activities and resources more smoothly during disasters (Tierney, 2001).
- Established Mutual Aid (EMAC) system enabling effective, inter and intra state emergency resource sharing.
- Extensive use of modern technology tools for monitoring, measurement, analysis, forecasting, and coordination, alert and warning.
- Organisation has highly skilled technical and emergency management personnel as internal resource.
- Dedicated internal emergency resources of inventories.
- Effective capacity building program for all stakeholders through training and drilling. California Specialized Training Institution (CSTI), which is branch of the OES devoted specifically to improving knowledge and skills in the area of emergency and disaster management.
- Effective and reliable emergency communication network.
• Integrated Response Information Management system (RIMS) for every thing including (Training, response, recovery, Mission task tracking, resource management). All emergency resource persons are connected with RIMS + Paging + Cell phones. State dispatch center keep record of all acknowledgments.

• 24*7*365 State Alert and Warning Center connected with NOAA and other weather agencies and hazardous locations (including atomic power stations, refineries etc). All EOCs are connected to this center through various communication channels and all communication channels are tested twice a day. Telecommunication resources at this center includes – 2 different VSAT systems in addition to traditional channels

• Regional commanders have autonomy and authority to initiate community assistance as required.

• Continuous research, review and revision of procedures, systems and technology.

• Emphasis on the Home and Community Preparedness as they are the first responders during any disaster. People work hard on preparedness as they know that state is not going to compensate damages if they are not insured.

• Excellent Media management as emergency services uses media as a most effective system for mass notifications.

6.14 Concluding Remarks

California is the "Earthquake Country", with a history full of major earthquake (List of earthquake given above) stories like Gujarat State, and storied past. Since 1917, State level emergency organizations have existed in California. But disasters, most notably the 1906 San Francisco Earthquake, had a major impact on the state long before then. The Governor’s Office of Emergency Services, much like the state it serves, has a rich and storied past. Because of the large number of natural and human-caused disasters, California from its earliest days was moved into its present role as a leader in disaster preparedness, response and recovery.
Creation of an earthquake resistant community demands a shared responsibility between all the stakeholders. Citizens, corporations, and governments must take their share of responsibility in building a safe community. Not that California has "solved" all their problems related to earthquake safety, but it would be interesting to know how the problem of earthquake safety is addressed in this state. In a 1995 study by Risk Management Solutions, Inc. of California, they estimated that a repeat of 1906 earthquake in San Francisco (Surface Wave magnitude of 8.3) would cause far less impact destructions and damages in the San Francisco Bay Area (this region includes the famous Silicon Valley) compared to what they could be if California had not taken a multi pronged approach in mitigating the effects of future earthquakes. California State is better emergency prepared state compared to when the study was conducted. Office of emergency Services (OES), keeping a pace with emerging trends in disaster and their management, is one of the most successful agency in conceiving, planning, designing, implementing effective, efficient and sustainable Disaster Mitigation Strategies anywhere in the world. The base for the state’s risk management approach is – shared responsibility and shared efforts of all stakeholders for disaster mitigation.

Earthquake safety is considered in all aspects of planning, building, operating business, and in developing a safe and sustainable living environment in California. It is well accepted amongst California citizens that earthquakes do not kill people, it is unsafe construction of buildings and infrastructure as well as uncontrolled planning, and that kills people.