

Los Angeles Region Disaster Plan

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I. Introduction and Purpose

The Regional Disaster Plan provides the planning and implementation procedures necessary to meet the requirements set by the American Red Cross to initiate and support responses to disasters. It is an outline of the coordinated actions that will be taken to ensure that high quality service is provided to people affected or potentially affected by a disaster. This plan consists of a base response plan, annexes and a gap analysis. It identifies the most likely major disaster scenario for the *Los Angeles Region*. The scenario has then been formulated, and the human needs quantified, in collaboration with local government and community partners. The document provides an in-depth analysis of resources and capabilities. The document reflects the group's current capability to respond to a disaster, how those resources will be applied and identifies areas to build capacity. This plan also identifies the triggers for transition from a Regional administered to a Disaster Operations Center National Headquarters administered operation. The Regional Disaster Plan is part of a three-tiered planning approach that includes the State Response Plan and the National All Hazards plan and its annexes. All identified actions of partner agencies outlined in this plan have been agreed to in writing.

The plan is a living document, updated in concert with the annual readiness cycle as capacities improve based on a targeted Capacity Building Plan within each Regional.

II. Plan Goals

The goal of this plan is to clearly outline critical information regarding:

- Identification of the most likely major disaster within the regional grouping
- What triggers the activation of this plan for a major event
- Who is in charge
- How the relief operation will be structured
- How response activities of the regional group and National Headquarters of the American Red Cross will be coordinated
- When and how the Region will request and receive resources from outside
- How coordination with the State Coordinating Chapters will occur
- How coordination with key external agencies and partners will occur
- What the service delivery requirements are
- What the service delivery priorities are
- How service delivery goals will be achieved
- How the movement of resources will occur
- What capability the regional group currently has and what capacity building goals have been set

III. Measures of Success

Success is the measure of satisfaction and loyalty produced by Red Cross interaction with five key constituencies:

1. **Clients** believe they have received assistance in relation to their disaster-caused emergency needs in a prompt, consistent manner
2. **Donors** believe the Red Cross is the most effective channel for their caring and generosity, that the Red Cross demonstrates its values in its actions and that it is a prudent steward of their contributions
3. **Partners** see the Red Cross as a reliable, effective and cooperative partner in the community's response to disaster
4. **Employees and volunteers**, in both the chapter and the disaster relief operation, believe they have "lived their values," met disaster-caused human needs, and been effectively supported by the Red Cross in carrying out their assigned work
5. **The public** believes the Red Cross has alleviated the human suffering associated with the event, and mission and performance are aligned with community expectations

IV. Response Plan

A. Plan Activation Triggers

- a) **Any disaster occurring within the jurisdiction of the chapter**
 - a. Disaster level: The Los Angeles Region Disaster Plan addresses scenarios starting at a Level II Disaster (\$10,000+ response cost). It is assumed, operationally, that the Region will lead through Level III and IV Disasters with National administration and accounting. Level V Disasters and beyond may be addressed by the National All Hazards Plan.
 - b. People displaced: Any response that overwhelms an individual Chapter's ability to respond within the confines of a DAT response may activate this plan.
 - c. Conditions and event time: certain extraordinary conditions may activate this plan; in particular regarding regional hazards as identified in Section IV, subsection B.
 - d. Multiple shelters: By nature are likely over the Level I Disaster.
 - e. Cross jurisdictional boundaries: Wide-area events are likely to be greater than Level I Disasters.
 - f. Resource requirements: Localized but extreme incidents may warrant Disaster Plan activation.
 - g. Request by Emergency Management government officials (requested or perceived problems requiring coordination of multiple resources by emergency personnel):
 - h. High media events
 - i. Activation of the Los Angeles County EOC
 - j. Declaration of Local Emergency
 - k. Pre-deployment of government response systems

b) Any pending disaster, e.g. severe weather watch

- a. Pre-deployment of govt. response systems
- b. Advance notice/Alert type events
- c. Significant community events (i.e. large concentrations of people)

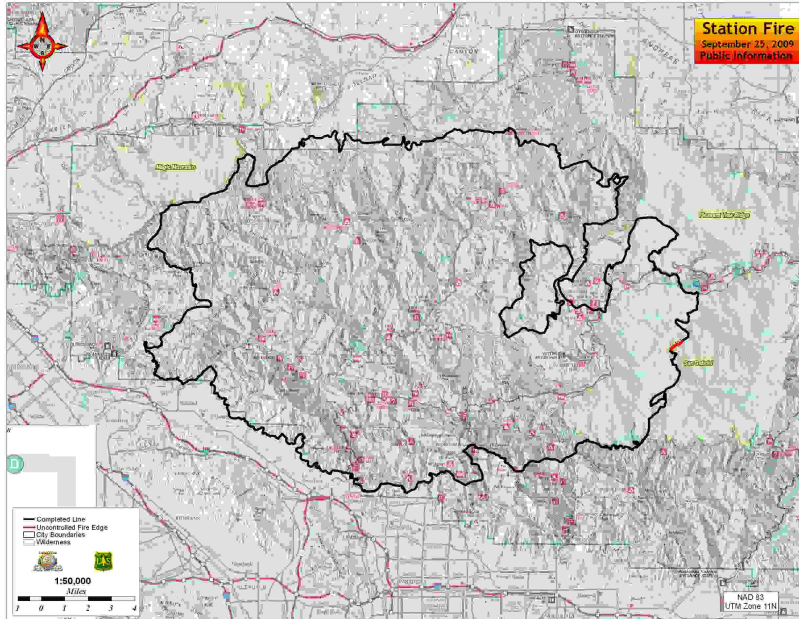
B. Hazard Risk Analysis

The Los Angeles Region of the American Red Cross encompasses most of Los Angeles County, a geographically diverse area with multiple overlapping threat zones. While a major earthquake is the biggest threat, the most common disaster threat is wildfire, with several areas conducive to Santa Ana winds and urban-wildland interfaces spread throughout the region.

Historically, fire was the first hazard to be recognized and addressed by El Pueblo de Los Angeles after its founding in 1781. Fire was a constant and significant threat, with both man-made and natural causes combining with weather conditions and topography for potentially devastating effects. In that respect, little has changed: while technology and technique have evolved, urban density has grown fast enough to keep emergency response at the ragged edge of disaster management.

Specific fire incidents in the region could populate its own report. The 1961 Bel Aire fire storm destroyed over 500 structures, 484 of them in the first six hours. In 1970, the Chatsworth fire destroyed 113 homes (and drove homebuilding regulations). The 1989 Sesnon (Granada Hills) fires damaged or destroyed 30 dwellings, while the 1993 fire season carried 12 fires across the region, from Ventura in the north down to San Diego County, tallying over 1,170 structures and 3 deaths before the season ended. The worst hit was in the central area of the Los Angeles Region, the Malibu-Topanga area, where all three deaths and 384 of those structures were lost.

2003 and 2008 were both remarkable years for fires – and the mudslides that followed – though 2009 dragged the region through the Station fire. It destroyed 200 homes and over 250 *square miles*, making it the largest fire in the history of Los Angeles County. The American Red Cross was there, opening 7 shelters and providing 12,300 meals and snacks for more than 500 people. Given the size of the fire, it was a remarkably low number mitigated mostly by the demographic of the particular foothills that the fire had raged through.



The following chart reviews the hazard, potential of risk and impact on the Community and the Red Cross. Potential of Occurrence relates to the likelihood of occurrence based on historical and statistical projections.

Risks

- *Low Risk:* The level of risk below which no specific action is deemed necessary (by city officials). The occurrence of a specific event is unlikely.
- *Medium Risk:* The level of risk above which specific action is required to protect life and property, though the probability of the event taking place is low to moderate.
- *High Risk:* Risk levels are significant and occurrence of a particular emergency situation is highly probable or inevitable.

Impact

- *Low Impact:* Level I disaster. Can be handled by the chapter with no additional resources.
- *Medium Impact:* Can be handled by Chapter for first 24 – 72 yours. May need to request resources from beyond the Region.
- *High Impact:* Chapter will need to request resources immediately after the disaster occurs.

| HAZARD | POTENTIAL OF OCCURRENCE | IMPACT ON COMMUNITY | IMPACT ON RED CROSS |
|-------------------------------|----------------------------------|---|--|
| Structure Fire | Frequency – High Risk - High | Minor, temporary road closures. | DAT response – food, clothing, temporary housing. Low Impact |
| Wildland/Brush/ Grass Fire | Frequency – High Risk – High | Evacuations, road closures, breathing problems, loss of homes | Sheltering, fixed and mobile feeding, liaison at ICP and EOC. Client Casework, Service Centers. Medium Impact |
| Drought | Frequency – High Risk – High | Water shortage, extreme fire danger. | TEP or Sheltering, fixed and mobile feeding, liaison at ICP and EOC. Client Casework, Service Centers. Low Impact. |
| Earthquake | Frequency – Low Risk - Medium | Evacuations, fires, lack of structures, water, electricity, loss of homes | Outside sheltering, lack of electricity, gas, water, food. Road closures, transportation & communication problems, DWI. High Impact. |
| Hazardous Materials | Frequency - Low Risk - Medium | Evacuations, breathing problems, road closures | TEP or sheltering, fixed feeding, Liaison at ICP. Low Impact. |
| Flooding | Frequency – Low Risk - Medium | Evacuations, road closures, clean up after flood, loss of homes | Sheltering, TEP, feeding, liaison at IC and EOC, Client Casework, Service Centers. Medium Impact. |
| Landslide | Frequency – Low Risk - Medium | Evacuations, road closures, loss of homes | Sheltering, feeding, DMH, SCS, Client casework, service centers, Liaison at ICP & EOC. Medium impact. |
| Severe Weather | Frequency - Low Risk - Medium | Evacuations, road closures, loss of homes | Sheltering, feeding, client casework, service centers, Liaison at ICP & EOC. Medium impact. |
| Transportation Accident | Frequency – Low Risk - Medium | (Residential impact) Evacuations, road closures, significant loss of life, loss of homes | Sheltering, feeding, client casework, service center, Liaison at ICP, EOC & airport, DMH, SCS, immediate CRT assistance. Medium impact. |

| | | | |
|-----------------------|-----------------------------------|--|--|
| Police Action | Frequency - High Risk - Medium | Minor – temporary displacement from home, some road closures | TEP, feeding, liaison & canteen at ICP. Low Impact. |
| Dam Failure | Frequency – Low Risk - Low | Evacuations, road closures, loss of life, loss of homes | Sheltering, feeding, client casework, service center, Liaison at ICP and EOC. High Impact. |
| Tsunami | Frequency – Low Risk - Low | Evacuations, road closures, significant loss of life and homes | Sheltering, feeding, client casework, service centers, DMH, SCS, Liaison at EOC, DWI. High Impact. |
| Radiological Incident | Frequency – Low Risk - Low | Sheltering in place, evacuations, road closures | Sheltering or TEP, feeding. High Impact. |
| Terrorism/WMD | Frequency – Low Risk - Low | Evacuations, road closures, loss of life, loss of homes | Sheltering, feeding, client casework, service centers, DMH, SCS, immediate CRT assistance. High Impact. |

This information will serve as a basis for Chapter planning and provide a foundation for initiating effective mitigation, emergency response and recovery activities throughout the Chapter jurisdiction.

Earthquake

While wildfires are the most probable risk, earthquakes in the Los Angeles Region are the most significant risk. With an earthquake, there is no containment of potential damage, as is possible with a brushfire or flood. Unlike a brush fire or flood, whose path can be generally measured and predicted, quake damages and related hazard events may be widespread and unpredictable. Related hazard events could occur anywhere in the quake area, including inundations from damaged reservoirs or the release of hazardous materials, such as gas, which in turn could lead to fires or form toxic clouds.

About 30 earthquakes occur every day in Southern California. Most have a magnitude of less than 2.0. No evidence exists that earthquakes are more likely to occur in certain kinds of weather, nor at any certain time of day. While it is possible to judge probabilities of earthquakes for a specific zone, there is not yet any way to accurately predict an earthquake.

Since 1800 there have been approximately 60 damaging seismic events in the Los Angeles region. After a brief hiatus between major events (circa 1940-1972), the greater Los Angeles area has experienced a number of moderate events which have resulted in considerable disruption of the infrastructure, impact on social and economic life, loss of lives and extensive property damage throughout the greater metropolitan area and the adjacent region. The most recent of these was the 6.7 magnitude 1994 Northridge earthquake which was centered in the northwest

part of the City, in the general vicinity of the 1971 San Fernando (a.k.a. Sylmar) quake with a magnitude 6.1.

The response to a specific earthquake is dependent on several factors, including severity, location and time. HAZUS analysis divides casualty estimates based on three time-of-day events: 2:00 am, 2:00 pm and 5:00 pm. These times represent periods of the day that different sectors of the community are at their peak occupancy load.

Minor earthquakes may be so localized that ARC response is engaged on a DAT level to single-family structures (especially those built with unreinforced masonry). Mid-level earthquakes, starting in the upper 5s, will have a wider shake zone and result in a larger damage footprint. At that point, emergency response may include light search and rescue operations, food and temporary shelter based on large building failures, as well as short-term interruptions of critical infrastructure, such as water, power, gas and communications.

One example of this is the Whittier Narrows earthquake, measuring 5.9 on the Richter scale. This quake struck the East Los Angeles metropolitan area at 7:42 a.m. on October 1, 1987. The earthquake's epicenter was approximately six miles south-southeast of Pasadena. The main shock occurred along a previously unidentified Transverse Range thrust fault. It was followed by approximately thirty-five aftershocks including one magnitude 5.3 event at 3:59 a.m. on October 4. Aftershocks continued through the end of the month.

Numerous evacuations from high-rise and other types of buildings occurred after the earthquake. In most cases, these evacuations were spontaneous and unplanned, resulting in some inappropriate actions. For example, in some high-rise buildings, occupants congregated on sidewalks outside the building, risking injury from falling glass in the event of an aftershock.

In other cases, residents of apartment buildings self-evacuated to nearby parks, sometimes against the advice of Public Affairs Officials. Red Cross staff reported dealing with residents fearful of leaving shelters and returning to their homes.

Tallying the entirety of the incident, the American Red Cross sheltered 10,359 people in 21 shelters and fed disaster victims 186,635 meals. By November 18, 1987, we had provided 20,930 bed units. In addition, some 625 families had been placed in rental units and more than 593 individuals checked into motels. Some difficulties were reported in terms of developing coordination between volunteer organizations and local government in providing this service.

Major earthquakes start in the upper 6s and can create widespread moderate damage, with localized severe damage. At this point, the dramatic initial damage, including incidents such as high rise tower collapse, is likely to be overshadowed by the secondary damage, fire in particular. In the Golden Guardian 2008 scenario, a 7.8 earthquake is predicted propagating along the San Andreas Fault, resulting in significant shaking through the greater Los Angeles metro area. In that case, estimates are that fire will double both the loss of life and property damage, including some fires that merge into conflagrations to burn hundreds of city blocks.

What's the likelihood of such an event? The San Andreas, under the constant pressure of plate tectonics, is a fault snakes in an S-form. The last major movement on the fault was in the northern section, in 1906. The last major movement in the lateral Mojave segment was in 1857. There hasn't been a major movement in the southern section in over 300 years.

Even without the San Andreas, there have been four significant earthquakes that have inflicted moderate to severe damage in the Los Angeles region:

| Quake | Date | Magnitude |
|---------------------------------|------------------|------------------|
| The Northridge Earthquake | January 17, 1994 | 6.7 |
| The Whittier Narrows Earthquake | October 1, 1987 | 5.9 |
| The Sylmar Earthquake | February 9, 1971 | 6.6 |
| The Long Beach Earthquake | March 10, 1933 | 6.4 |

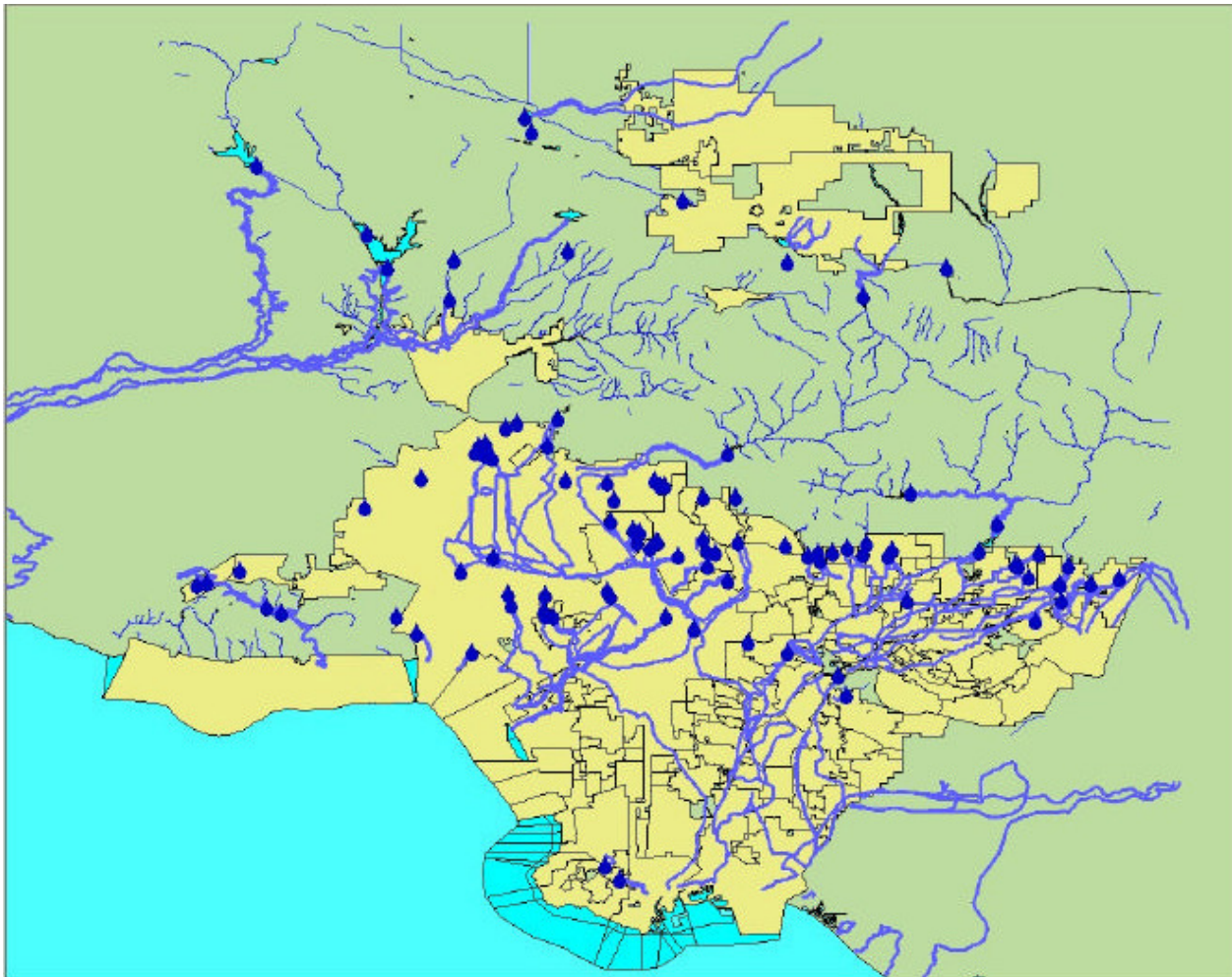
There are countless faults running through the Los Angeles Region and experts believe many faults capable of generating significant damage are still unknown (as was the case with the Northridge earthquake). Below is a listing of the some of the *known* major faults:

| Fault Zone | Type of Fault | Prob. Magnitude |
|-------------------|---------------------------|------------------------|
| San Andrea's | right-lateral strike-slip | 6.8-8.0 |
| Newport-Inglewood | right-lateral | 6.0-7.4 |
| Whittier | right-lateral strike-slip | 6.0-7.2 |
| Santa Monica | left-reverse | 6.0-7.0 |
| Palos Verdes | right-reverse | 6.0-7.0+ |
| Raymond | left-lateral | 6.0-7.0 |
| Sierra Madre | reverse | 6.0-7.0 |
| Verdugo | reverse | 6.0-6.8 |

Dam Failure

There are a total of 103 dams in Los Angeles County, owned by 23 agencies or organizations, ranging from the Federal government to Home Owner Associations. These dams hold billions of gallons of water in reservoirs. Releases of water from the major reservoirs are designed to protect Southern California from flood waters and to store domestic water. Seismic activity can compromise the dam structures, and the resultant flooding could cause catastrophic flooding. Following the 1971 Sylmar earthquake the Lower Van Norman Dam showed signs of structural compromise, and tens of thousands of persons had to be evacuated until the dam could be drained. The dam has never been refilled.

Location of Dams and Reservoir Inundation Routes



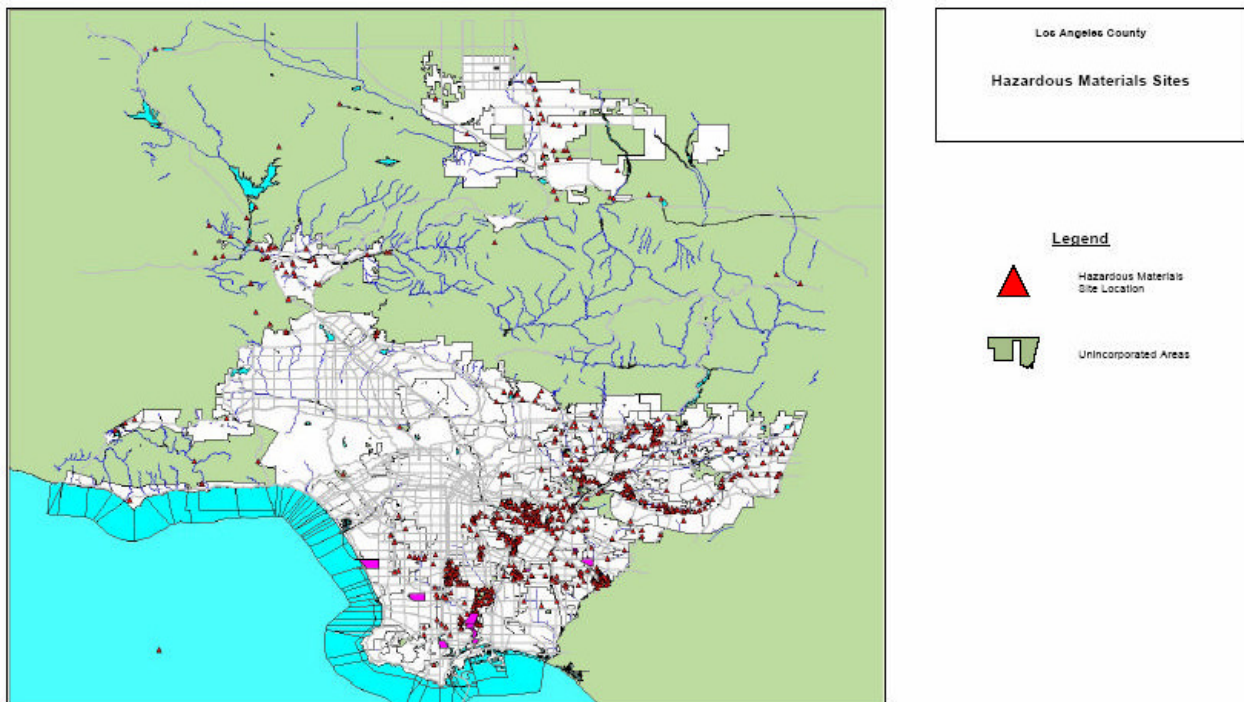
Hazardous Materials Incidents

The threat of a hazardous material incident in the Los Angeles Region has long been recognized. A release of a hazardous chemical can occur within a transportation route, a storage location, an industrial facility or a disposal site. Any discharge of a chemical in a densely populated area or along a heavily-traveled transportation route can create a significant problem for life, property or the environment.

Response personnel and other public safety providers are at risk when dispatched to hazardous materials incidents. An incorrect action can cause injury or death that may not manifest itself for weeks or longer. The consequences of an accidental release of hazardous material may be immediate (such as fire, explosion, chemical/biological injuries, etc.) or may create a health hazard that manifests itself over time.

Hazardous material incidents may result from an accident, a natural event such as a major earthquake, or by intentional human activity such as a criminal or terrorist attack. Los Angeles is vulnerable to many different types of hazardous material incidents, including:

- Release of Methane from Underground Oil Deposits
- Industrial Accident
- Natural Disasters
- Transportation Accidents
- Storage Facilities and Pipelines



Landslides

There are four categories of active and dormant landslides. They include debris slides, translational/rotational slides, earth flows, and debris flows and torrent tracks. Debris slide amphitheater and slopes and inner gorges are not technically landslides, but features formed by landslides processes. In some places, complex land sliding causes irregular ground surfaces. Generally, on landslide maps, such areas are depicted as disrupted ground or areas of extreme, high, moderate, and low relative stability.

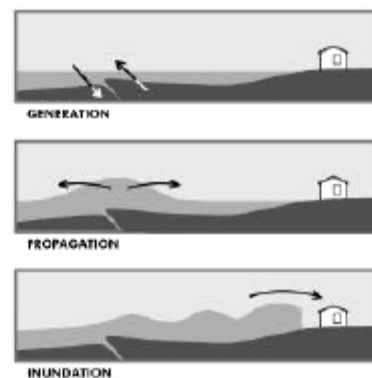
The geologic setting of southern California locally is conducive to slope failures and slope-failure deposits (landslides) that can be a hazard to human life and property. These hazards are created when geologic materials are displaced down a topographic slope under the influence of gravity. Factors that determine slope-failure occurrence include:

- Slope angle
- Geologic materials (substrate)
- Climatic conditions
- Earthquake shaking

Sudden "mudslides" gushing down rain-sodden slopes and gullies are widely recognized by geologists as a hazard to human life and property. Most "mudslides" are localized in small gullies, threatening only those buildings in their direct path. They can burst out of the soil on almost any rain-saturated hill when rainfall is heavy enough. Often they occur without warning in localities where they have never been seen before.

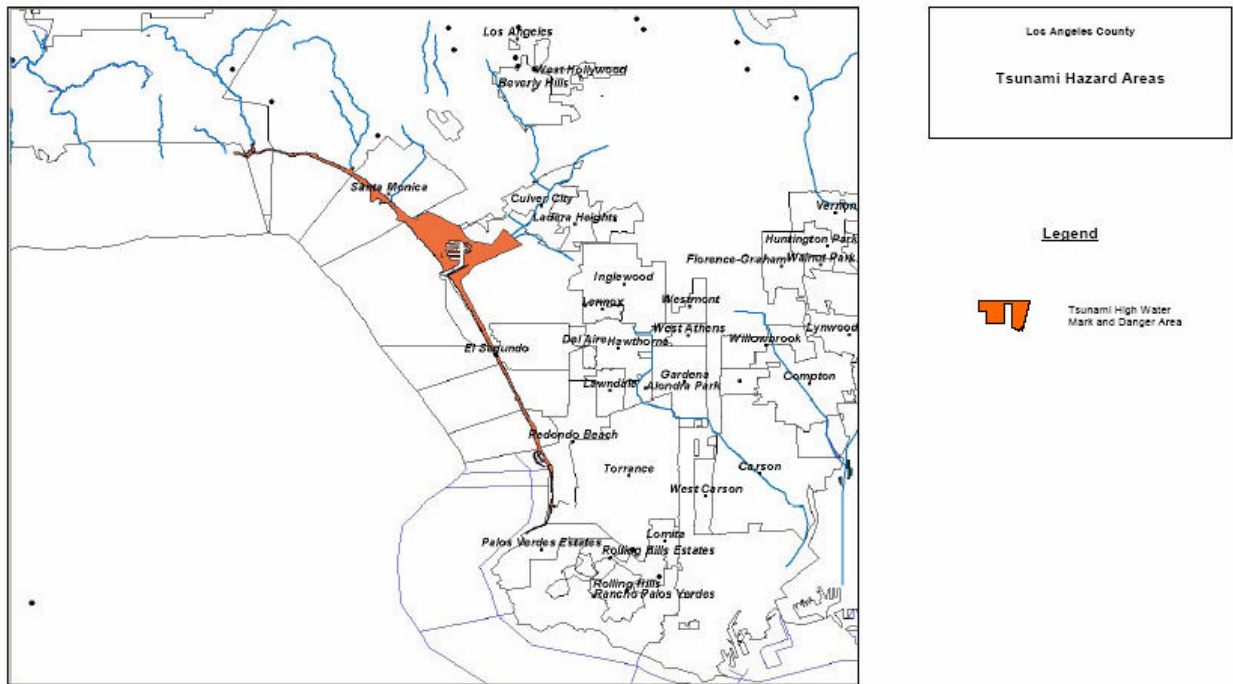
Tsunami

A tsunami is a series of long waves generated by any sudden displacement of a large volume of water. Tsunamis are triggered by submarine earthquakes, submarine volcanic eruptions, underwater landslides or slumps of large volumes of earth, meteor impacts, and even onshore slope failures that fall into the ocean or a bay. Tsunami waves can propagate as a series of long waves across entire ocean basins. The hazard can last for many hours as the tsunami passes, and waves may resonate in some harbors and bays for days after the initial attack. For example, tsunamis from the 1960 offshore Chile event were recorded for more than one week in some locations.



A tsunami is a series of deep, long waves generated by a sudden displacement of a large volume of water

To date, Tsunami damage in the Los Angeles Region has been limited to its harbors. A catastrophic earthquake in Chile, during 1960, originated from a major marine fault. That fault generated a tsunami that caused loss of property and life across the Pacific. Los Angeles and San Diego Harbors experienced \$1 million in damage to piers and small boats.



Severe Weather

For this analysis, there are three (3) forms of natural disasters recognized as severe weather:

- Extreme heat
- High Winds
- Tornadoes

The Los Angeles Region gets hot, particularly during the July-August months. However, high humidity is the other requirement for the National Weather Service to declare a Heat Emergency, and that is a rarity in our region. Figures from the CDC bear this out: during 1979-1998 (the most recent years for which national data are available), 7421 deaths in the United States were heat-related with a median of 274 deaths per year. Heat-related death rates appear to be stable over time in all age groups with the highest mortality among persons aged >65 years. During that period, the age-adjusted heat-related death rate in Los Angeles County was 44% lower than that in the general U.S. population.

Santa Ana winds are one of the principal signatures by which Los Angeles weather is known. Santa Ana's are offshore winds, usually warm, blowing from the mountains to the coast, and occurring principally in the fall and winter. They are a type of downslope (Foehn) wind which occurs in many other regions of the planet.

But perhaps nowhere else do such winds impact so many people with so much force, and possess such extensive opportunity for damage and destruction. Fortunately, destructive Santa Ana winds are rare.

For most Angelinos, and for the great majority of Santa Ana events, the effects of these offshore wind conditions are benign and even welcome. The Santa Ana condition is usually one of warm temperatures when the rest of the United States is in the grip of winter. For most of the district, Santa Ana's are marked by light coastal winds, clean air and extremely low humidity of less than 10 percent.

Moving from the straight-line winds to cyclones, the Los Angeles Region has a surprising number of tornadoes. The south coastal region of California, including the Los Angeles Basin, has the greatest incidence of tornadoes in the state. The cause of many, if not most, of the Los Angeles Basin tornadoes seems to be linked to the terrain layout of the basin, specifically the natural curvature of the shoreline and the location of the coastal mountains. Tornadoes in the Los Angeles basin are typically less severe than those in other parts of the country as most do not touch down.

Severe storms researcher John E. Hales, Jr. (1983) stated that "a tornado can hardly find a place to touch down around Los Angeles that won't hit something." That assertion notwithstanding, there is no record of a Los Angeles tornado ever causing a fatality. Nevertheless, the fact that tornadoes occur with great frequency in a very densely populated urban area makes the occurrence of tornadoes in the Los Angeles Basin particularly relevant.

In the period from 1950 to 1992, the basin had 99 confirmed tornadoes. According to Blier and Battan ("On the Incidence of Tornadoes in California" 1994), this area has a tornadic incidence similar to that of the State of Oklahoma. However, these researchers go on to point out that the size, severity and duration of California tornadoes is less than those common to the plains states, and the tornado count in the Golden State may be inflated due to inaccuracies within the database.

Unlike their Plains counterparts, southern California tornadoes occur mainly in the winter. Of the 99 tornadoes that were reported in the Los Angeles Basin between 1950 and 1992, the vast majority (83) occurred in the months November through March. March had the highest number of incidents (22). The fact that few tornadoes occur in the Los Angeles Basin during the warm season is primarily due to the stabilizing effect of the marine layer, and the lack of dynamic forcing during the warmer months.

Roughly a quarter of the tornadoes listed by Blier and Battan originated as waterspouts over either Santa Monica Bay or San Pedro Channel. There were many more waterspouts that never made landfall; these were not included in the tornado count.

In conjunction with topographic features which set up favorable cyclonic, low-level wind patterns, severe storms researcher John E. Hales, Jr. identified a number of synoptic weather features in Los Angeles—more common to the cool season—that is associated with the strongest of the tornadoes that he studied. These include:

- Closed cyclonic circulations from the surface to 500 millibar (mb).
- A west-southwest oriented, 120 knot or stronger, 300 mb jet that crosses the coast near San Diego. The tornadoes always form on the cyclonic side of the jet.
- A dewpoint at San Diego of 51° or greater.

- The 500 mb temperature on the Vandenberg sounding -5° (-20°C) or colder.
- A mean cold front position on the California/Arizona border. Usually, tornadoes occur well behind the surface cold front.
- A time of occurrence between 1200 and 1500 PST, coincident with maximum solar heating.
- A strong increase in wind speed with height — similar to wind profiles in the central United States.

In the 1997-98 El Niño episode, the Pacific storm track was located over southern California for much of the winter season. This produced a number of days in which Hale's criteria were approximated over the Los Angeles Basin and adjacent waters.

In that season, there were over twenty days in which either waterspouts, funnel clouds or tornadoes were reported—including 30 separate sightings. Two tornadoes touched down within the City of Long Beach.

Tornados can potentially occur anywhere in the Los Angeles Basin. Wood frame structures, unreinforced masonry buildings, and mobile homes are most vulnerable to damage or destruction from tornados. Since 1950 tornadoes have caused slightly more than \$60 million in property damage and injured fewer than 50 Los Angelinos. Compared with damage from other natural hazards these impacts are relatively modest.

The Fujita Tornado Damage Scale is commonly used to describe the severity of tornados:

- **Category F0:** Light damage (less than 73 mph)
- **Category F1:** Moderate Damage (73 - 112 mph)
- **Category F2:** Considerable Damage (113 - 157 mph)
- **Category F3:** Severe Damage (158 - 206 mph)
- **Category F4:** Devastating Damage (207 - 260 mph)
- **Category F5:** Incredible Damage (261 - 318 mph)

Since 1950 there have been 32 tornados in Los Angeles, ranging in intensity from F0 to F2.

C. Risk Area

The Los Angeles Region of the American Red Cross encompasses much of Los Angeles County, with spill-over into surrounding counties, including Kern, Ventura, San Bernardino and Orange Counties. There is a wide variation in the geography, each zone with particular disaster needs. The northern desert areas of Lancaster and Palmdale anchor the Antelope Valley and those adjoining communities fall into both 100 and 500-year flood hazard zones. There is a wide band of mountains in the north-middle third of the Region, comprised of the San Gabriel Range, that present heightened urban-interface wildfire hazards. The southern half of the Region holds terrain of alternating valleys and minor mountains, from the densely-populated San Fernando Valley, over the Santa Monica Mountains, through the Los Angeles Basin, and east toward

Orange and Riverside Counties. Similar to the area surrounding the San Gabriel band, the mix of terrain in the south and eastern portions present significant, overlapping hazards.

Not included in the Los Angeles Region are the areas of the County covered by the adjoining Long Beach and Rio Hondo Chapters. These neighbor Chapters cover some of the southern and southeast portions of the County. In a disaster situation, it is likely that the Los Angeles Region will be among the first to offer mutual aid to these regions, which face similar threats.

The Hollywood Hills, an area of the Santa Monica Mountain range is an area susceptible to urban conflagration. The Mediterranean climate, vegetative fuels, semi-mountainous topography, and seasonal Santa Anna weather conditions are all significant contributing factors that place this area at risk. The Bel Air fire in November of 1961 occurred in an area just a few canyons over from the Hollywood Hills and resulted in 26 fatalities and the loss of over 500 homes.

With narrow, steeply graded roads commonplace in this area, egress of residents and access by suppression resources can be severely hampered. Additionally reduced water supplies, a problem typically associated with higher elevation, semi-mountainous areas such as the Hollywood Hills, may limit a robust initial attack.

The demographics below are from the Los Angeles Times:

Population

- 21,588 population in 2000, according to the U.S. Census
- 22,988 population in 2008, based on L.A. Department of City Planning estimates.
- 7.05 square miles
- 3,063 people per square mile, among the lowest densities for the city of Los Angeles and among the lowest densities for the county

Ethnicity

- The percentage of white people is high for the county. Not especially diverse for the city of Los Angeles but moderately diverse for the county
 - White: 74.1%
 - Latino 9.4%
 - Asian: 6.7%

 - Other: 5.3%
 - Black: 4.6%

Housing

- Average household size of 1.8 people, low for the city of Los Angeles and low for the county
- Occupied housing units:
 - Rent: 56.5%
 - Own: 43.5%

D. Impact Analysis

The impact of an urban interface fire in the Hollywood Hills would be far reaching. This same event could easily occur in many other areas of the Region. Specific Red Cross related impacts are outlined in Section V – Gap analysis. As with any urban firestorm, the following impacts are likely:

- Displaced populations due to actual and threatened fire conditions.
- Dynamic evacuation zones that change in response to fire behavior and progression.
- High media attention due to the intensity of the event as well as being in an international media market
- Fires of this scope are often wind – driven events caused by “Santa Ana” conditions which can yield high winds, high temperatures, and low humidity. As a result, of these conditions, utilities can be impacted; water use affected, and localized traffic and parking restrictions placed into effect.
- The demographics of the Hollywood Hills tend towards the more affluent, professional type of resident. However, also within the Hollywood Hills may be scattered seniors who have been long time property owners and lower income domestic staff.
- Hollywood Hills is a community within the City of Los Angeles. Primary jurisdiction for this incident would rest with that city. Consequently, Los Angeles Fire, Los Angeles Police, and Los Angeles Emergency Management, Los Angeles Department of Water and Power, and other City departments can be expected to be actively engaged in response to this incident.
- Additionally, it can be expected that Los Angeles County will be involved to a lesser, but important level including: mutual aid, County Emergency Operations Center activation, and Public Health response.
- There could be some affect to Red Cross service delivery with regard to Mass Care. Given the nature of wildfire, the disaster front is in constant flux, and established fire lines are often “jumped” by the fire itself, creating a possibly new hazard. This constant movement of the fire can make designation of safe areas difficult, thus the establishment of shelter locations can be delayed. Fire movement can also necessitate moving an already established shelter from a now “at risk” area to a safer location
- Roads may be closed due to these wildfires, which can also delay the response, or inhibit logistical support.

E. Assumptions

This Plan assumes:

- Disasters are a recurring threat within the Los Angeles Red Cross Region. Many disasters occur with little or no warning
- Local, State and National governments and agencies expect the Red Cross to provide Mass Care services
- Implicit in this document is the distinction between preparedness, which encompasses the Region's ongoing and continual efforts to educate and prepare its communities for disaster, and readiness, which covers the Region's internal preparations and assessments of capacity to initiate a response when a disaster event is imminent.
- The available technologies used to predict the occurrence of disasters is limited, therefore the Red Cross must have an integrated approach of planning and preparedness efforts that provides for prompt, focused, flexible and prudent response actions.
- The type, scope and magnitude of a disaster event will affect the timeframe for accomplishing activities as outlined in this document. Specifically, if a disaster incident offers pre-event warning, some of the actions outlined can be started or accomplished prior to the occurrence of the threatening event.
- Effective Red Cross service delivery following a disaster requires the engagement and mobilization of all the resources, in the entire LA Region, neighboring regions and the National organization.
- The LA Region will pre-plan in separate annexes, for seasonal or known hazards through pre- and post-disaster event response activities conducted in partnership with local, state and federal government counterparts as well as voluntary organizations and businesses. These include:
 - "Red Flag" or Santa Ana conditions
 - Urban interface fires
 - Storms , Mud, and debris flow
 - High heat events
 - Significant media events
 - Major spectator events
- An immediate and sustained Red Cross presence in the disaster-affected area is essential to the satisfaction of our constituents.
- Constituent groups should see a diverse Red Cross in both leadership and service delivery workers.

- Once a Disaster Relief Operation (DRO) is established, the Region will continue participating in service delivery and support activities throughout the duration of the DRO. One Service Delivery Plan will be developed and carried out by the DRO, and the Region.
- The Region will have a plan to support ongoing DAT responses during a relief operation.
- When possible for certain types of disasters, the pre-deployment of resources is expected. Resources will be “pushed forward” and then “scaled back” as appropriate.
- Regional facilities in risk areas may be subject to damage, and employees and volunteers may be directly affected.
- Infrastructure, material and human resources, goods and services, communications, and electricity may be affected or completely unavailable due to disaster-caused damage.
- Damaged or limited capacity infrastructure will delay and/or impact a Regional response. This includes transportation, utility, and communication systems.
- Pre-identified vendors may also be impacted by the disaster and unable to provide normal services.
- In general, 1/3 of the Red Cross workforce will be available for an immediate response
- Leadership will be assembled from regional personnel first, the state and, if necessary, from National resources
- In general, it is anticipated that 10% of any population displaced by a disaster will seek shelter with the American Red Cross.
- In general, 30% of any population displaced by a disaster will require feeding services
- In Southern California, approximately 70% of the population owns a pet and/or livestock
- Financial authority is outlined in the Disaster Operations Handbook.
- Each significant response operation will be reviewed by an After Action Review and evaluation.

F. Demographics of Impacted Area

Diversity is the one unifying factor of the Los Angeles Region. The chart below is 2009 census data for the County of Los Angeles, for which the American Red Cross, Los Angeles Region, is either a principle response agency or a primary mutual-aid partner. The neighborhood-by-neighborhood variation is large enough within the incorporated 88 cities, much less the vast unincorporated areas, those sites affected by a Level II Disaster or greater should be considered individually rather than as an average of the data below.

| | |
|---|------------------|
| Population, 2009 estimate | 9,848,011 |
| Population, percent change, April 1, 2000 to July 1, 2009 | 3.5% |
| Population estimates base (April 1) 2000 | 9,519,331 |
| Persons under 5 years old, percent, 2009 | 7.4% |
| Persons under 18 years old, percent, 2009 | 25.4% |
| Persons 65 years old and over, percent, 2009 | 10.6% |
| Female persons, percent, 2009 | 50.4% |
| White persons, percent, 2009 | 74.0% |
| Black persons, percent, 2009 | 9.3% |
| American Indian and Alaska Native persons, percent, 2009 | 1.0% |
| Asian persons, percent, 2009 | 13.4% |
| Native Hawaiian and Other Pacific Islander, percent, 2009 | 0.3% |
| Persons reporting two or more races, percent, 2009 | 1.9% |
| Persons of Hispanic or Latino origin, percent, 2009 | 48.0% |
| White persons not Hispanic, percent, 2009 | 28.4% |
| Living in same house in 1995 and 2000, pct 5 yrs. old & over | 52.0% |
| Foreign born persons, percent, 2000 | 36.2% |
| Language other than English spoken at home, pct age 5+, 2000 | 54.1% |
| High school graduates, percent of persons age 25+, 2000 | 69.9% |
| Bachelor's degree or higher, pct of persons age 25+, 2000 | 24.9% |
| Persons with a disability, age 5+, 2000 | 1,775,009 |
| Mean travel time to work (minutes), workers age 16+, 2000 | 29.4 |
| Housing units, 2009 | 3,390,793 |
| Homeownership rate, 2000 | 47.9% |
| Housing units in multi-unit structures, percent, 2000 | 42.2% |
| Median value of owner-occupied housing units, 2000 | \$209,300 |
| Households, 2000 | 3,133,774 |
| Persons per household, 2000 | 2.98 |
| Median household income, 2008 | \$55,452 |
| Per capita money income, 1999 | \$20,683 |
| Persons below poverty level, percent, 2008 | 15.3% |

The City of Los Angeles operates under a strong elected mayor/councilmember form of government. The Red Cross works closely with the Emergency Management Department by participating at their monthly Emergency Management committee meetings and workgroups for various activities like Shelter and Welfare, Preparedness, and Operations. We also have representatives that participate at the quarterly Emergency Operations Board which is made up of many city Department General Managers.

Los Angeles County functions under an elected five member Board of Supervisors which has operational oversight via an appointed Chief Administrative Officer. Under the CAO's oversight there is the Office of Emergency Management which operates the Operational Area (OA) for the County. The Red Cross has a close relationship with the county as well. We participate in the Operational Area Advisory Board which oversees the planning and operations in the EOC. We also have a representative that has a permanent seat on the Operational Area Emergency Operations Board that is headed by the CAO, Fire Chief and the Sheriff.

Care and shelter for the OA is headed by the Department of Public Social Services (DPSS) which the Red Cross a strong working relationship with. This relationship is governed by the signed State DPSS agreement.

H. Concept of Operations

The Red Cross Los Angeles Region's Disaster Services Program encompasses disaster preparedness, readiness and response. All Disaster Service programs of the community chapters have been integrated into one department. The integration of the Emergency and Disaster Response department occurred on July 1, 2010. All of the human and material resources of the community chapters are now considered regional resources and are coordinated as a single resource.

The program delivers high-quality services in a uniform, consistent and responsive manner. Initiating and maintaining relief services when disasters occur, helps to sustain human life, reduce the harsh physical and emotional distress that prevents people affected by disaster from meeting their own basic needs, and promotes their recovery.

The Los Angeles Region continuously monitors information from emergency management officials, weather service and local community resources to know when a threat of a disaster is imminent or an incident has occurred.

Every response begins with the five initial actions, to meet the immediate emergency needs of the community. The region's duty system has the responsibility for provision of disaster services within the region. When the Region receives notification of a disaster or of an imminent threat, it will immediately initiate an appropriate response to the threat using local area resources and supplemented as needed from throughout the region. The Region will coordinate and share information through the State Coordinating Chapters to the Disaster Operations Center at National Headquarters. This is outlined in the State Operations Plan. If the disaster is

determined to be of a Level II magnitude or greater the Disaster Operations Center (DOC) at National Headquarters will assign a disaster relief (DR) number to the operation.

Community Partners are engaged and coordinated through many avenues including ENLA (VOAD) and direct partnerships as evidence in the CDRA Partner Annex.

In situations where there is advance warning of an imminent threat, the Los Angeles Region will implement appropriate response plans and may request resources from other regions. The LA Region will activate previously established partnerships with community groups and use local resources to provide adequate service delivery during the initial response phase.

The Region is divided into three “Area’s”.

- North Area is East and West Valley, Santa Clarita Valley and Antelope Valley.
- East Area is Glendale, San Gabriel-Pomona Valley, Arcadia and Claremont.
- South Area is Santa Monica, West Los Angeles, Central East, South East, and South Bay.

Initial Actions –

When notified of a disaster the Area Disaster Duty Officer (ADDO) will contact the on-call Disaster Action Team to respond to the incident. The DAT will provide assistance as outlined in their protocols. When it is determined that the disaster is beyond the scope of their capacity the Area Disaster Duty Officer (ADDO) will notify the Regional Disaster Duty Officer who coordinates the overall resources of the Region.

The Regional Disaster Duty Officer (RDDO) will initiate the required initial or additional resources needed according to established protocol. The Regional Disaster Duty Officer will, depending on the incident will determine whether a transition to a larger operation is warranted or not. This includes notification and coordination of on-duty group / activity leads and management. Staff services will develop the DRO leadership team from throughout the Region by following the established protocols for staffing a relief operation with qualified individuals. The Region will be utilizing the current CDRA staff assessment tools to support the establishment of the relief operation. Additional human resources as need will be requested through the State Coordinating Chapter and to the DSHR Team Leaders / staffing process.

As the relief operations is established the Operations Management and the group / activity leads will be evaluating the operation to ensure that human and material resources are applied in a uniform and consistent manner throughout the region and the disaster area.

Regional Response

A Regional Response is defined as any response in which Red Cross resources needed to support the immediate needs of clients exceed the capacity of a DAT. This includes a secondary site such as a shelter or evacuation center, personnel other than DAT teams, or the activation of responders or supplies from more than one Area.

Whether or not there is warning preceding a disaster incident, every response begins with the five initial actions, undertaken to meet the immediate emergency needs of the community.

1. Sheltering: Establish initial sheltering on a scale commensurate with the community risks and requirements. Shelter sites have been identified and are listed in NSS. Mass Care is responsible for maintaining the database and updating NSS during operations.
2. Feeding: Initiate fixed and mobile feeding sites commensurate with the scope of the disaster.
3. Government Liaison staffing EOCs: Immediately staff EOC's appropriate to the size and scope of the disaster. The Region will support the Operational Area County, Los Angeles City, Pasadena City EOC's and Incident Command Posts as needed. These are the key EOC in the county. The other 75 city EOC's will be supported as needed and as resources are available.
4. Information Gathering / Sharing: Reporting information systems are immediately initiated to communicate the size and scope of the disaster. This includes situational awareness information, daily 5266 reporting, updating NSS, and situation reports. Reports will be distributed widely internally and as appropriate to our partners, State Coordinating Chapter, and Government Partners.
5. Public Affairs & Fundraising: The Region within Disaster Services has integrated Public Affairs and Fundraising into the EOC or Relief Operation. They are supported by the Communications and Marketing, and Fundraising personnel of the Region. The public messaging is an activity of the EOC or the Relief Operation and follows the established DRO approval processes. Fundraising personnel from the Region are responsible for initiating the Disaster Fundraising Action Plan. Region fundraising and public affairs leadership are included in all management communications to ensure that they are supporting the operation.

Spontaneous Volunteers

The Region's Department of Volunteer Services is charged with the development of the Region's Spontaneous Volunteer Management program. Staff Services will provide significant support to Volunteer Services in the reception, intake and processing of spontaneous. The EDR Department is developing an online partner training shelter course that will be a tool to train spontaneous volunteers during the intake process. The Regional Spontaneous Volunteer plan is currently being revised to include a catastrophic component to be completed by June 2011.

State Coordinating Chapter (SCC)

The Los Angeles Region is designated as the State Coordination Chapter for Southern California. Gateway to the Golden State Region (ARCBA) is the State Coordinating Chapter for Northern California. The two Coordinating Chapters work in collaboration with each other and share the operational coordination responsibility. Generally, the SCC:

- Implements the state disaster response plan.
- Coordinates the mobilization of in-state resources until DRO is established and shares this information with the DOC and the DRO.

- Serves as a point of contact for the DOC for response activities and information when a response goes beyond one regional chapter.
- Provides an assessment of the scope and magnitude of the event to other SCC, the DOC and the DRO, when established.
- Assists in identifying the headquarters site for a DRO.
- Monitors the situation, and continues to support the operation until the DRO is established.
- During an event that affects the Los Angeles Region, the Region will transfer all operational responsibilities in Southern California to the Gateway to the Golden State Region (ARCBA). This will be communicated to all of the regions in the state through e-mail and by telephone.
- The SCC coordinate resources and information sharing to the DOC and to the State Operations Center.

V. Gap Analysis - Current Capacity and Gaps

A. Estimated Damage

This plan is based upon an urban – interface fire in the Hollywood Hills. Although this scenario is geo-centric to a community in the City of Los Angeles, similar events have historically happened and will be repeated in other areas of the Region. In this scenario, 600 homes are projected to be destroyed and the evacuation of 50,000 people is being planned.

- 600 homes destroyed
- 50,000 people displaced
- Approximately 25,000 non – displaced persons without power for up to 72 hours
- Fatality and injury estimates are difficult to estimate because they are directly related to fire behavior and early evacuation compliance. For a fire of this magnitude, 6-12 fatalities and 100 injuries are conceivable.

B. Service Delivery Requirements

Using experience – based national averages, the Red Cross estimates the following service delivery needs:

Sheltering

In the scenario and assumptions for this plan, we would have a shelter population between of approximately 5,000 people. This will require the same number of cots, blankets and comfort kits. It may also require between 10 and 15 separate shelter locations across the affected area.

- 10% of the evacuated population will seek Red Cross shelter
 - $10\% \times 50,000 = 5,000$ needed shelter spaces

Feeding

Food and hydration will be a primary concern. Estimating the shelter population at the top end means 30,000 prepared meals per day. Historical data shows that this high population level will diminish relatively quickly but should it hold for even seven days, it would require 210,000 meals. Hydration will also be an issue as these fires often occur during the hottest days of the year. At four bottles per person per day over seven days, that would require 140,000 bottles.

- 30% of the evacuated population will require feeding (2 meals/day)
 - $30\% \times 50,000 = 15,000$ (x2) = 30,000 meals needed per day

Bulk Distribution

This activity will be carried out through a combination of Points of Dispensing (PODs), Aid Stations and mobile distribution. Based on previous experience, items most requested include wire mesh sieves, to go through the ashes and retrieve items, coolers, ice, gloves, personal hygiene items, brooms, rakes and shovels. Eventually garden hoses may be requested as well.

Health and Mental Health Services

In concert with our partners at the Los Angeles County Department of Health Services, as well as other health care providers, health and mental health workers will provide services at shelters, service centers, bulk distribution routes, aid stations and temporary evacuation points.

Client Casework

Based on prior data, we can estimate that 600 families will require some form of recovery information. It is recognized that in the event there will be a Federal Declaration and financial assistance will not be given through a traditional casework process. Recovery casework would be accomplished through normal Red Cross mechanisms as well as engagement of partners

Public Affairs

In addition to DRO public affairs staff, a Red Cross public affairs representative would be assigned to work out of the Joint Information Center (JIC).

Fund Raising

Disaster Fund Raising is accomplished through a combination of private and corporate donations. Refer to the Disaster Fund Raising Action Plan (DFRAP)

Disaster Services Technology

This will have a significant impact on service delivery as computers capabilities are limited. Additional support will be needed to support the many service delivery sites that would be needed in this event. The types of support will vary depending on the site.

External Relations

This activity will be the interface between the Red Cross and many partner organizations. The Liaison will be present, in this scenario, in the County EOC as well as the City of Los Angeles EOC and may well have a presence at one or more fire ICP's. They will work with other local NGO's individually and through the local VOAD.

C. Current Capacity and Gaps

In each of the following sections, current chapter capacity and gaps in material and personnel are discussed. In all areas, where there are gaps in capacity we will reach out to other regions for mutual aid.

Based on current inventories and need requirements, the Los Angeles Region is generally expected to have sufficient material resources to a meet the demands resulting from this scenario based event.

Material Resources

In the given scenario, we would be able to supply cots, blankets and comfort kits to most, if not all, of the shelter population. Additional supplies would be requested through the DRO.

Facilities (non-shelter)

This Region has strong relationships with several commercial property realtors. This gives us the ability to locate available structures that may be used for additional warehousing or for alternate headquarters locations.

Facilities (Shelter)

This Region has 859 possible shelter facilities listed in National Shelter System. This gives us a total shelter inventory in excess of 100,000 spaces. This far exceeds the number necessary for sheltering in the scenario that drives this plan. The majority of those facilities are schools, with the balance a mix of faith-based and municipal locations. We anticipate having sufficient shelter spaces

Generators

The Regional EOC, located at the Los Angeles Chapter Headquarters has, as new 200KW diesel generator tied to the electrical system with automatic switchover capability. The generator has fuel capacity to run 7 days, which will allow us to remain operational for up to one week. The Region also has portable generators that would allow us to set up operations in the field should that become necessary.

Tele-communications equipment

Understanding this loss of communication, we have several systems in place. The first is mobile phone service through the commercial vendor networks. This has proven to be a robust system during past fires and is used by many of our governmental partner agencies. Next would be Red Cross radio system. This system will allow us to communicate anywhere within chapter boundaries. We have also a radio unit of the San Diego Chapter so that long distance communication can continue despite interruptions in other services. We also have a large and experienced short wave communications group. These volunteers regularly train and communicate with other chapters across the state and are well practiced in disaster communication.

Feeding

Feeding will be accomplished through the newly established Feeding agreements with several large, commercial prepared food vendors. Between these established agreements, in kind donations from other food vendors, and existing partnerships with Los Angeles Unified School District, we anticipate being able to meet the 30,000 meals per day demand. Feeding will take place at shelters and through mobile routes.

Human Resources

Based on current readiness assessments and need requirements, the Los Angeles Region will be challenged to meet the demands resulting from this scenario based event using existing, position qualified leadership personnel. We can recruit sufficient numbers of spontaneous volunteers and we continue to bring qualified people into supervisor and manager positions. Using the most current CDRA, we have 37 of 90 positions filled with qualified individuals. The remaining 53 positions have candidates identified. Aggressive PDP and other volunteer development plans are under way to narrow the gap this year and eliminate it altogether within by 2015.

External Relations

There are experienced personnel within the External Relations activity, some are still seeking qualified status but all have had experience. Until we have significant numbers of qualified people within the Region, we will utilize mutual aid to fill shortfalls.

-END-