

TONIGHT'S PROGRAM

Sign-in/Registration

Please sign in! If you would like to receive future email notifications about the MJHMP, including opportunities to participate and the availability of the Draft MJHMP for review, provide your email address and we will add you to the MJHMP notification list.

If you haven't already done so, please take a few minutes to complete a survey. This survey will help the MJHMP Steering Committee better understand the community's concerns about natural hazards and to identify policies, programs, and projects that can help lessen the impact of future hazard events.

What is the Culver City and Culver City Unified School District Multi-Jurisdictional Hazard Mitigation Plan?

A brief presentation will be provided to learn more about the MJHMP – its requirements and what to expect through the plan development process. The presentation will include an overview of the natural hazards being profiled in the MJHMP and explain the format/activities for the evening and next steps.

Open House and Revolving Stations

Participants can walk around to view maps and information for each hazard identified for evaluation, ask questions, provide comments, and directly participate in identifying mitigation actions.

Hazard Stations

The MJHMP Steering Committee has identified the following natural hazards to be profiled as part of the plan:



- Drought
- Seismic Hazards (Fault Rupture, Ground Shaking, Liquefaction, Landslide/Mudflow)
- Wildfire
- Severe Weather (Windstorm and Heavy Rains)
- Flood

These natural hazards were identified based on the City or surrounding area having characteristics that make it more susceptible to experience or be impacted by the hazard – such as active fault zones; having a documented history of occurrence within or impact on the City; having a higher likelihood of the hazard occurring within or impacting the City in the future, and potential for critical facilities to be directly impacted as a result of the hazard.

Each hazard station provides a display with information specific to the hazard as it relates to Culver City/CCUSD. Stop by each station to review information, ask questions, and provide comments using the post-it notes.

Activity Station

Follow the instructions provided and use the sticky dots to tell us which natural hazards you feel should be prioritized in the MJHMP and what types of mitigation actions should be pursued. Using post-it notes or index cards provide additional comments, ideas, or concerns that we should be aware of.

Thank you for your participation!



THE CITY OF CULVER CITY AND THE CULVER CITY UNIFIED SCHOOL DISTRICT MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

COMMUNITY WORKSHOP
Thursday, September 24, 2015
7:00 pm – 9:00 pm
Culver City Senior Center

Thank you for coming to the Community Workshop

Welcome to the Culver City and Culver City Unified School District (CCUSD) Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) Workshop! Tonight we will be providing information on the MJHMP, why we need it, and what is required in the plan. This is also an opportunity for you to ask questions, offer comments, prioritize the natural hazards that could affect the community, and provide your input on potential mitigation actions to reduce the impact of these hazards.

For More Information

For more information about the MJHMP and process, including upcoming opportunities to participate, visit the website at: www.culvercity.org/hazardmitigationplan.

You may also send comments or questions to hazardmitigationplan@culvercity.org or contact Joe Susca, Public Works Department, Senior Management Analyst at 310-253-5636.



NATURAL HAZARDS

A brief overview of the natural hazards, including their history within the City or region and risk of occurring in the future is provided below. More detailed information will be provided in the MJHMP, which will be made available for public review at a future date.



Drought

A drought is a period of drier-than-normal conditions that results in water-related problems. When rainfall is less than normal for several weeks, months, or years, the flow of streams and rivers decline, water levels in lakes and reservoirs fall, and the depth to water in wells increases. If dry weather persists and water-supply problems develop, the dry period can become a drought.

California has experienced numerous severe droughts over the past century. Historically, the Federal Emergency Management Agency (FEMA) has declared one drought emergency for the State (January 1977). From 1972 to 2009, there have been eight State Emergency Proclamations of drought in California. Most recently, the Governor of California declared a state-wide drought emergency on January 17, 2014.

Drought is one of the few hazards that has the potential to directly or indirectly impact each and every person within the larger region, as well as adversely affect the local economy. The impacts would be water restrictions associated with domestic supplies, agricultural losses and economic impacts associated with those losses, economic impacts to tourism and recreation industries, hydroelectric power reductions, increased wildland firefighting costs, and increased costs for water. Due to the historical prevalence of severe droughts in California as well as the severe drought conditions the City and the State are currently facing, there is a high probability of future drought events in Culver City.



Seismic Hazards

Seismic hazards occur when accumulated stress between portions of the earth's crust is released, resulting in sudden ground movement that we perceive as an earthquake. Primary seismic hazards are the direct result of the release of this accumulated stress, and are typically characterized as earthquake fault rupture (displacement of the ground surface at the earthquake site), and seismic shaking (the ground movement itself, which can cause damage a significant distance from the earthquake site). Earthquakes can also cause secondary seismic hazards such as liquefaction and earthquake induced landslides/mudflow.

There are numerous faults in and around Culver City, including the Newport-Inglewood Fault Zone running through the City, the Whittier-Elsinore Fault Zone, and the San Andreas Fault. The Newport-

Inglewood Fault Zone is capable of causing surface rupture within Culver City, and a number of other faults can create substantial ground shaking in the community.

These events can also result in a seismic hazard called liquefaction, which occurs when the force of an earthquake's shaking causes groundwater to mix with the soil. This mixture temporarily becomes a fluid and loses its strength, which may in turn cause buildings and other structures built on or in it to tilt, collapse, or otherwise suffer damage. Earthquakes can also cause landslides, either directly as a consequence of the ground shaking or indirectly when soil loses its structural integrity due to liquefaction.

Four comparatively large earthquakes have occurred around Culver City in recent history:

- In 1933 an earthquake off the coast of Long Beach measured an estimated 6.4 on the moment magnitude scale killed 115 people, largely in southern Los Angeles and Long Beach.
- The 1971 San Fernando earthquake in the San Gabriel Mountains measured 6.5 on the moment magnitude Scale, killing 64 people, and causing extensive damage to freeway structures and buildings.
- In 1987 an earthquake near Rosemead in the San Gabriel Valley, with a moment magnitude of 5.9 killed three people and was widely felt throughout southern California.
- The Northridge earthquake in 1994 measured 6.7 on the moment magnitude scale killing 57 people, causing over 5,000 injuries, and spawning multiple strong aftershocks. This earthquake caused an estimated \$20 billion or more in damages.

Some of the most extensive damage in Culver City occurred as a result of the Northridge earthquake. The Interstate 10 overpasses at La Cienega Boulevard, Venice Boulevard, Fairfax Avenue, and Washington Boulevard, immediately north of Culver City, were significantly damaged and had to be rebuilt.

The California Geologic Survey does not identify any previous instances of liquefaction within the limits of Culver City. There are areas near Culver City, in Santa Monica and Marina Del Ray, with past liquefaction events related to earthquakes. The California Geologic Survey has noted evidence of previous landslides in the Blair Hills neighborhood of Culver City, particularly near the Baldwin Hills Scenic Overlook park.

Culver City is located in a seismically active area. Maps maintained by the California Department of Conservation place Culver City in an area at a high risk of ground shaking. The Newport-Inglewood Fault Zone passes through the northern portion of Culver City. The Newport-Inglewood Fault Zone caused the 1933 Long Beach Earthquake, which was the last major event along this fault. The Southern California Earthquake Center estimates that a future major event along this fault could measure 6.0 to 7.4 on the moment magnitude scale. As a major fault passing through Culver City, it is capable of causing surface rupture in the community.

Most of Culver City is in an area of elevated liquefaction risk. The California Geologic Survey identifies the Blair Hills neighborhood of Culver City as the primary location with an elevated landslide risk.



Wildfire

A wildland fire is a large destructive fire that can spread quickly over woodland or brush. A wildfire is an uncontrolled fire spreading through vegetative fuels. Wildfires often occur in forests or other areas with ample vegetation. In areas where structures and other human development meets or intermingles with wildland or vegetative fuels (referred to as the "wildland urban interface"), wildfires can cause significant property damage and present extreme threats to public health and safety.

Culver City is developed with urban, open space, and park and recreation uses and is located adjacent to other natural open space recreational areas. Wildland fires, have historically occurred within proximity to Culver City and the surrounding Los Angeles County region. In 1985, the Baldwin Hills Fire resulted in the loss of three lives and destroyed 53 structures.

According to the Los Angeles County Fire Hazard Severity Zone (FHSZ) map, the eastern portion of Culver City is located within a Very High Fire Hazard Severity Zone (VHFHSZ). The portion of the City in the VHFHSZ consists of properties within the Blanco/Culver Crest neighborhood that are considered in a wildland-urban interface. A wildland-urban interface is defined as anywhere the growth and spread of a fire may begin in a brush or wildland region, and then quickly enter an urban environment. Additional wildland areas located within Los Angeles County are directly adjacent to the Culver City communities of Blair Hills and Culver Crest.

As the eastern portion of Culver City and adjacent areas within Los Angeles County are considered wildland-urban interface areas, the City has a higher probability of wildfire risks within the Blair Hills and Culver Crest communities and the surrounding area.



Severe Weather

Severe weather can be defined as any destructive weather event with the potential to damage property or cause loss of life. In Culver City, severe weather typically consists of high wind and heavy rain events.

Windstorms that affect Los Angeles County, notably Santa Ana winds, are not location specific but rather impact a majority of the area. Severe windstorms pose a significant risk to life and property by creating conditions that disrupt essential systems such as public utilities, telecommunications, and transportation routes. High winds occasionally cause damage to homes and businesses, typically involve responses from emergency service personnel. Severe windstorms can present a very destabilizing effect on dry brush that covers local hillsides and urban wildland interface areas, increasing wildfire threat. Destructive impacts to trees, power lines, and utility services also are associated with high winds. Falling trees can cause fatalities

and serious structural damage while fallen power lines could cause widespread power outages and fire. The entire City is susceptible and has experienced Santa Ana winds.

Periods of intense rain can happen, usually as a result of a meteorological phenomenon called an "atmospheric river", which is a narrow band of very moist air that can deliver strong winter storms to California, particularly to coastal areas. Strong storms are also linked to El Niño events, which occur when the surface of the eastern tropical Pacific is warmer than normal and result in various climate extremes around the globe, often including increased precipitation in California. While the intensity and duration of the events are varied and hard to predict, El Niño events occur on average every two to seven years. Events often begin early in the year and peak between the following November and January, but no two events behave in the same way. The 1997-1998 El Niño event was categorized as "very strong", with the most recent event occurring in 2009-2010 categorized as "moderate".

Within the City, heavy winds have resulted in broken and fallen tree limbs and small fires. Localized flooding associated with storm drain capacity issues have also occurred causing minimal damage. Heavy rains have also resulted in precipitation-induced mudslides within the Culver Crest neighborhood.

Severe weather, including both high winds and heavy rains will continue to occur in Culver City. Due to previous existing weather patterns, increases in the probability of future occurrences of severe weather events, like El Niño cycles in Los Angeles County, are anticipated and often result in compounded hazards countywide.



Flood

Flooding occurs when a waterway, either a natural one or an artificial drainage channel, receives more water than it is capable of conveying, causing the water level in the waterway to rise. Depending on how long these conditions last and the amount of water the waterway receives in proportion to its capacity, the rising water level may eventually overtop the waterway's banks or any other boundaries to the drainage area, resulting in flooding in the surrounding area.

Culver City has been relatively free of major flood events in previous years, although small-scale flooding has occurred during intense precipitation. FEMA flood maps indicate that a few locations in the northern parts of the City are at an elevated risk for flooding. A small area, bordered roughly by Ballona Creek, Fairfax Avenue, and Adams Boulevard lies within a 100-year flood zone for a 1 to 3 foot flood, meaning that there is a one in 100 chance that a flood event sufficient to cause 1 to 3 feet of inundation will occur in any given year (Zone AO). Two additional areas nearby, one between Eastham Drive and Ballona Creek and the second the area immediately adjacent to Ballona Creek, between National Boulevard and Sentney Avenue, are also within a 100-year flood zone, although FEMA does not specify the potential amount of inundation in this area (Zone A). Another part of the City, between Adams Boulevard and Dauphin Street, is at risk from a flood capable of causing inundation of less than 1 foot with a one in 100 and one in 500 chance of occurring between any given year (Zone X).