

Public Buildings: Shelter-in-Place Guidelines

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State of California

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Executive Summary

Assembly Bill 934 requires the Department of General Services (DGS) to submit to the Joint Rules Committee, by March 1, 2022, a report summarizing current building safety guidelines of the Federal Emergency Management Agency (FEMA) or similar building safety guidelines relating to the integration of shelter-in-place facilities in public buildings.

The report does not include evacuation guidelines, emergency operations coordination, or recommendations for implementing the presented guidelines.

Background

The State of California has experienced earthquakes, wildfires, floods, mudslides, and other disaster events that leave little time for evacuation. In addition to natural disasters, there is an increase in domestic terrorist activities and violent protests focused on government buildings. Therefore, California government buildings need to be secured for the safety of employees and visitors, should a disaster, manmade or natural, occur. It is essential to understand current safety guidelines, including shelter-in-place measures designed to respond to safety threats to safeguard all government building occupants.

Objectives

FEMA considers shelter-in-place the first/default option for reacting to state hazards and threats. This report summarizes the current building safety guidelines of the Federal Emergency Management Agency (FEMA) and the Department of Homeland Security (DHS) relating to integrating shelter-in-place facilities in public buildings.

DHS classifies shelter-in-place as the use of a structure to separate individuals from a hazard or threat temporarily. This differs from an evacuation point that a building may become when there is sufficient advanced warning of a hazard or threat to move people away from another impacted area. Shelter-in-place allows people to remain in place in areas less impacted by an event, which helps reduce the negative impacts of evacuation. For example, during a local wildfire event, people may have enough time to evacuate from the most dangerous zones and be able to shelter in place in zones that may be less impacted, minimizing negative impacts to the populations and keeping roads clear for those in most immediate danger.

Study Methodology

DGS has reviewed multiple FEMA and DHS documents, including vital information regarding the ways and requirements of sheltering in place as they apply to public buildings, and has compiled a summary of key points that state government should consider when addressing the needs of sheltering in place.

The reviewed documents include [DHS Planning Considerations; Evacuation and Shelter-in-Place Guidance for State, Local, Tribal, and Territorial Partners](#); [FEMA COVID-19 Supplement or Planning considerations: FEMA Evacuation and Shelter-in-Place](#); [FEMA Developing and Maintaining Emergency Operations Plans](#); [FEMA Shelter-in-Place Guidelines](#) and the [DHS Threat and Hazard Identifications and Risk Assessment Guide](#).

Review of Hazards and Threats

California faces multiple hazards and threats that may require provisions to shelter-in-place in government buildings. Recognizing these potential risks is the first step for minimizing the potential for injury to the citizens of this state. Examples of these hazards and threats are:

Natural	Technological	Human-caused
Avalanche Earthquake Epidemic Flood Wildfire Tsunami Volcanic eruption Winter storm	Dam failure Hazardous materials release Industrial accident Levee failure Pipeline explosion Radiological release Train derailment Transportation accident Utility disruption Utility sparked wildfire	Active shooter incident Arson Armed assault Biological attack Chemical attack Cyber-attack against infrastructure Explosives attack Improvised nuclear attack Nuclear terrorism attack Radiological attack

Natural Disasters

Weather related natural disasters can be forecasted for the most part, and sheltering-in-place should not be a consideration for most governmental buildings apart from those that must remain in use to house detainees or provide first responder services and coordinating services during the emergency event.

Other natural disasters such as earthquakes and possibly volcanic eruptions from

Mount Shasta in the Redding area could come with little to no warning. In these instances, office staff will need to shelter-in-place during the initial emergency but then evacuate the building immediately after until it can be determined if the building is safe to re-enter. Most staff would likely wish to return to their homes immediately following a natural disaster. However, there may be hours or days before the way will be clear for some occupants to return home. In this scenario, those occupants would likely need to shelter-in-place at their worksite until they can evacuate the area.

Technological

Like natural disasters, some technological hazards or threats could come with enough advanced warning that sheltering-in-place would be the only option for government first responders and detainees. With advanced warning, sheltering in place would only be considered if 1) the building site and structure are suitable for preserving the occupants during the emergency, and 2) that holding the building's occupants is the better option to keep evacuation routes from becoming overstressed.

The other technological hazards or threats that could come without warning, such as hazardous materials released from industrial accidents, would warrant building occupants being required to shelter-in-place until it is clear to leave the building. In these cases, the shelter-in-place provisions would need to consider protecting the building from the outside threat while providing a refuge in the center of the building that best accommodates the retreating occupants.

Human Caused

Human caused hazards or threats by nature come with little to no advanced warning for governmental building occupants. Biological, chemical, and radiological threats will require the same shelter-in-place provisions as some technological threats.

Protests that turn into violent riots, active single shooters, or coordinated domestic and foreign terrorists' threats to a government building will put the greatest pressure on shelter-in-place plans. As a result, the building will need to have its perimeter secured. The occupants will need to have a pre-planned and prepared secure shelter-in-place plan that provides extra security if the building's perimeter is breached.

Public Building Suitability to Shelter-in-Place Applications

There are four main types of state-owned buildings that would be appropriate for shelter-in-place scenarios.

Buildings Most Suitable for Shelter-in-Place Against Typical Hazards and Threats			
Building Type	Natural Disaster	Technological	Human Caused
The State Capital		X	X
Low Rise Office Buildings	X	X	X
High Rise Office Buildings		X	X
Detention Facilities	X	X	X

1. The California State Capitol building stands alone as a routine venue for protests and poses a unique risk for human caused hazards and threats.
2. Low-rise office buildings (under seven stories) are more common in rural areas that could be subject to various types of hazards and threats.
3. High-rise office buildings are vulnerable to some natural disasters because of their urban location. Still, the nature of the structure can be less occupiable if there are disruptions to their utilities and/or structure.
4. Detention Facilities by design are built to shelter-in-place the occupants and security staff in nearly all hazard and threat scenarios. Therefore, these structures should not be considered a place of refuge for non-security risk public individuals from the surrounding area.

Population To Be Considered for Shelter-in-Place Needs

This section lists the different people who are likely to seek sheltering-in-place in government buildings.

Building Staff

The primary users for sheltering-in-place in government buildings will be the staff using the buildings as their primary place of employment. For example, the occupants could include office staff, management, custodial staff, in-house consulting staff, and service providers, such as cafeteria and security staff. The numbers and demographics of the building staff should be planned for in advance.

Visitors

Nearly all government buildings serve the public and accept visitors during

normal operational hours. The types and needs of these visitors will depend on the location and types of services the building program provides.

Children and Unaccompanied Minors

Many government buildings have school-aged children visiting the premises for school field trips or accompanied by their parent/guardian staff member. Children can also be in the building as the person that the building staff serves. The specific needs of children and unaccompanied minors must be considered during shelter-in-place operations. Children and unaccompanied minors present a unique set of considerations, such as logistical requirements, medical needs, shelter placement, transport, and other services. Planners should work with local social services departments to develop a process for reunification with a parent/guardian or for care when a parent or guardian cannot be located.

Hospitals and Residential Medical Facilities

The state also operates hospitals and residential medical facilities, including mental health facilities, veteran retirement homes, and other assisted living facilities. These facilities face unique resource requirements and challenges to performing protective actions.

Detainees

The State of California houses a variety of persons that are not allowed the freedom of movement that the rest of the state population has. This includes detained individuals (inmates) involved in perpetrating crimes; community supervision of individuals conditionally released from prison (parole); and individuals who are under conditional liberty or provisional freedom (probation). It can also include detained individuals who are kept in secure housing who are not currently serving time for perpetrating a crime but who have been determined to pose an ongoing threat to the public.

Homeless Populations

People experiencing homelessness¹ have limited resources to evacuate, stockpile food, store medications, and shelter-in-place. Messages communicated through mainstream media sources may not reach them because many of these individuals have no access to radio, television, or the

¹ "Homeless person" is defined as an individual without permanent housing who may live on the streets; stay in a shelter, mission, single-room-occupancy facility, abandoned building, or vehicle; or in any other unstable or non-permanent situation.

internet. Some may be illiterate or have limited English proficiency, so written communication may also be ineffective with this population. The most common form of communication in this population is word-of-mouth, leading to the spread of inaccurate rumors and misunderstandings that may have serious consequences during an emergency. Some homeless people have access to cell phones. However, their use of this technology can be based on limited data and/or call minutes and access to charging.

Sheltering-in-place on the streets is likely not going to be an option for homeless populations, and properly directing homeless individuals into government buildings that provide safe harbor from a hazard should be considered. In these instances, many individuals, including the homeless population, may have difficulties interacting with the mainstream building population. In addition, the stressful and (relatively) intimate setting of a disaster shelter may amplify the upset of the situation.

Service Animals

Due to the diverse population both working in and visiting government buildings, there will naturally be some people who have service and emotional support animals with them when a shelter-in-place need arises. By law, service animals and, in some cases, assistance animals must always remain with the owner. Trained personnel should work to assess the animal population that might be included with the general population during a shelter-in-place scenario. Regardless of disaster type, jurisdictions should have plans in place for the safe and effective sanctuary of service animals and common pets that might come when sheltering building occupants or the nearby homeless population².

Common Needs for Shelter-in-Place Provisions

This section addresses the common needs for all shelter-in-place scenarios.

Accommodations

State government must determine what the standard planning should be for shelter-in-place scenarios. For example, does the state need to only plan for relatively short duration shelter-in-place threats such as human caused, sudden technological, or natural disaster? Or is it the goal of the state to prepare for longer shelter-in-place needs, such as in the event of a biological, chemical, or radiological threat that will require time to clear the atmosphere before

² Offering shelter must include personal pets. People resist the offer for shelter when their pets are not welcomed with the opportunity to escape the hazard or threat.

evacuation can happen?

Communication Services

In any shelter-in-place scenario, providing communication services for the retreating occupants will be key to keeping those individuals calm. When individual cell phone service is overloaded or non-functional, having broadcast radios, landline telephones, and Wi-Fi internet service available is vital.

Accessibility

Accessible resources, accommodations, and/or modifications for accessibility ensure that shelter-in-place operations consider children and adults with certain access and functional needs. This includes provisions for accessible dissemination of information, including shelter-in-place orders. These necessities include, but are not limited to, sign language interpreters, alternative forms of communication and language translation, as well as transportation and facility access.

Service and Assistance Animals

Animals require their own resources and supportive services. Planners should address the specific needs associated with pets and service and assistance animals. Plans need to include water availability and animal toiletry needs in a safe and secure manner, preferably isolated from the general areas where the shelter-in-place population is sequestered during the emergency.

Supplemental/Specialized Shelter-in-Place Considerations

Shelter-in-Place for Security Threats

Security threats such as active shooters or violent rioters are individuals who attempt to hurt or kill people in a confined space or populated area. These attackers typically use firearms, knives, or clubs and have no pattern to their selection of victims. However, when escaping the immediate threat is not possible, there are several special measures to keep in mind with sheltering-in-place:

1. If you see suspicious activity, let security or law enforcement authorities know immediately.
2. Stay out of the attacker's view. Close all blinds or window coverings.
3. Lock and block entries to areas of refuge.
4. Groups of people should spread out when hiding.
5. Texting information to 9-1-1 is the best way to communicate the danger silently.

6. Stay in place, if possible, until given an all clear by a verifiable law enforcement officer. Do not accept voiced shouts to come out from hiding without another means to ensure that the attacker is not the one calling out.
7. Silence electronic devices, including those on vibration mode.

Preparedness measures include:

1. Participate in security threat drills. Prepare and present plans to the building occupants in preparation for active security threats.
2. Take the time to know two nearby exits.
3. Map out places to hide, such as rooms without windows, behind solid doors with locks, desks, or heavy furniture to hide behind or under.

Wildfires

Most California state government buildings are in urban areas with natural barriers to wildfire spread. However, some state facilities, such as fish hatcheries, state parks administration, and maintenance facilities, must be in areas where wildfires are a greater threat. These facilities should design and maintain ample defensive space from adjacent wooded areas to deter the approach of fire to the building. In addition, the building itself should be constructed to prevent wind carried embers from igniting or entering the structure. As a last resort, there should be open areas of refuge for people to gather outside if a building has caught fire.

Chemical, Biological, Severe Smoke Hazards

Go inside quickly. Stay inside until authorities give an all clear. Lock all doors and windows for better seals. Turn off all HVAC, fans, and personal heating equipment. If available, tape plastic over windows to the rooms used for sheltering-in-place. Do not drink water from the tap.

Radiological Hazards

Nuclear explosions can cause significant damage and casualties. Exposure to dangerous radiation falling to the ground can cause severe illness. Radioactive fallout generally begins to collect about 10 minutes after the explosion. This gives you time to find adequate shelter. Get inside the nearest building to avoid radiation. Brick or concrete structures are best. Go to the basement or middle of the building. Stay away from the outer walls and roof. Family members and caregivers should not leave to get their children. Schools/daycares have disaster plans and are caring for your children. Reunite later to avoid exposure to dangerous radiation. Plan to stay inside for 24 hours unless local authorities provide other instructions.

Earthquakes

If you are outside, stay outside. If you are inside, do not attempt to run outside. Earthquakes are the sudden, rapid shaking of the earth caused by the breaking and shifting of underground rock. Earthquakes can collapse buildings and cause heavy items to fall, resulting in injuries and property damage. Drop to your hands and knees. Cover your head and neck with your arms. Hold on to any sturdy furniture until the shaking stops. Crawl only if you can reach better cover without going through an area with more debris. If you are in a high-rise building, expect fire alarms and sprinklers to go off. Do not use elevators.

Hospitals and Residential Medical Facilities

In instances where these facilities must shelter-in-place, planning for unforeseen threats and hazards is crucial. Hospitals and residential medical facilities should continue to plan and coordinate transportation needs with jurisdictions after shelter-in-place operations end or if subsequent evacuations are needed. Facilities should establish internal plans to care for patients and staff throughout an incident requiring shelter-in-place. These buildings need to ensure that the facility has sufficient resources such as medical supplies, food, and portable water both for drinking and for procedures such as dialysis, as well as sanitation procedures of personnel and equipment.

Detainees

Because of the obvious security needs, detainees are the primary population to be considered for sheltering-in-place in nearly all emergency scenarios. Because of this, the buildings holding detainees have been designed to the highest standards for preserving life against most threats and hazards. However, not to be overlooked are the detainees who have been released into the public as work trustees and those conditionally released from prison. These detainees may be integrated with other members of the public that require sheltering-in-place in a non-secure building. Planning for these individuals must not be missed.

Homeless Populations

To aid in alleviating tension among shelter occupants, shelter staff should include specialists trained in assisting homeless persons. Jurisdictions should also consider shelter staff training for specific needs of the homeless population in their plans.

COVID-19 and Other Pandemic Scenarios

Using shelter-in-place during all disasters and threats as a protective action in a

COVID-19 or other pandemic environment must include provisions to reduce transmission of disease. Considerations should include the ability to provide safe distancing of individuals, provide face masks and ample washing and sanitizing facilities, and when needed, isolation areas for people presenting the symptoms of a highly communicable ailment.³

Conclusions

This report has summarized the many guidelines and considerations to implementing shelter-in-place planning for state government buildings. It will be prudent to use this information to prioritize which government buildings are at the greatest risk to warrant the need for sheltering-in-place and then implement plans and provisions for these facilities.

³ Testing will not always be available or practical in an emergency. Shelter-in-place facilitators must be prepared to use common health assessment means for determining individuals that might require isolation from the public seeking shelter.