



Planning Considerations: Evacuation and Shelter-in-Place

Guidance for State, Local, Tribal, and Territorial Partners

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Homeland
Security

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Background

Purpose

This document supports state, local, tribal, and territorial partners in planning for evacuation and/or shelter-in-place protective actions.¹ It summarizes characteristics that jurisdictions should consider when planning for evacuation and/or shelter-in-place operations and builds on *Comprehensive Preparedness Guide (CPG) 101: Developing and Maintaining Emergency Operations Plans* by providing unique considerations for development of evacuation and shelter-in-place plans.² In addition, this document contains job aids and checklists that jurisdictions can customize to meet their needs for all disasters regardless of scale.

Background

Protective actions such as evacuation and shelter-in-place have become more important to emergency management operations in previous years, requiring a more comprehensive look at concepts and principles that plans should be built around and considerations that are critical to ensuring effective implementation, this document aims to provide this. Over eight million people across the nation were affected by evacuation orders in 2017, including:

- Flooding in February near the Oroville Dam in California caused an evacuation of over 180,000 people³;
- Hurricane Harvey struck Texas in August and resulted in the evacuation of over 780,000 people⁴;
- Hurricane Irma struck Florida in September and resulted in evacuation orders covering a record 6.8 million residents;
- In October, wildfires in California forced the evacuation of over 100,000 residents.

Evacuation: Organized, phased, and supervised withdrawal, dispersal, or removal of civilians from dangerous or potentially dangerous areas, and their reception and care in safe areas.

Shelter-in-Place: The use of a structure to temporarily separate individuals from a hazard or threat.

These disasters illustrate that the use of evacuation and shelter-in-place as protective actions are commonplace regardless of the threat or hazard. The challenge is to tailor the protective actions to best address a variety of factors, including a community's demographics, location, infrastructure, resources, authorities, and decision-making processes.

¹ This document does not address building/facility evacuations or shelter-in-place considerations that are typically covered in occupant emergency plans.

² FEMA. *CPG 101: Developing and Maintaining Emergency Operations Plans*, Version 2.0. Washington, DC. 2010. [fema.gov/pdf/about/divisions/npd/CPG_101_V2.pdf](https://www.fema.gov/pdf/about/divisions/npd/CPG_101_V2.pdf)

³ FEMA. *2018 National Preparedness Report*. 2018. <https://www.fema.gov/national-preparedness-report>

⁴ FEMA. *2017 Hurricane Season FEMA After Action Reports*. 2018. <https://www.fema.gov/media-library/assets/documents/167249>

Roles and Responsibilities

Emergency managers conduct a range of outreach and engagement activities to help everyone understand their respective roles and responsibilities for evacuation and shelter-in-place.

Individuals and Families

Individuals and families must understand evacuation and shelter-in-place concepts and zones before a disaster strikes so they can make informed decisions and take protective actions. Individuals and families should develop plans and ensure their readiness for both protective actions.

Being prepared for shelter-in-place includes ensuring that the family or individual has a specified shelter-in-place location. When sheltering-in-place, individuals should ensure they have enough water, non-perishable food, blankets, communication equipment (such as radios), alternate power sources (including fuel for generators, first aid supplies, necessary medications, and durable medical equipment [e.g., wheelchairs, canes, and hearing aids] and consumable medical equipment [e.g., medical device batteries, catheters, and wound dressings]) to allow self-sustainment in that location for a minimum of 72 hours and a maximum of 14 days. The family or individual should plan to keep a well-stocked emergency kit available at home, at work, and in the car, to meet all contingencies. For a detailed list of supplies, consult <http://www.ready.gov/build-a-kit>.

Being prepared for an evacuation includes identifying primary evacuation routes from multiple locations (e.g., offices, homes, and schools), as well as reunification points in case an evacuation occurs while a family is separated. Families should establish a communication plan that supports the evacuation plan and helps members communicate even when cellular communications are disabled. Individuals and households that utilize visiting nurses or other service providers may work with the service provider to identify potential sources of similar services that would be available during an evacuation and displacement. Alternatively, households may establish a plan for the service provider to evacuate with the individual in order to administer care during the evacuation and displacement.

Private Sector

Private sector entities play an important role in safeguarding their employees. These entities prepare, plan, coordinate, and execute evacuation and shelter-in-place protective actions in case of threats or hazards impacting their workplaces. Jurisdictions should collaborate with the public and private sectors to develop a shared understanding of protective actions and shelter-in-place concepts, plans, terminology, and roles. Proper planning ensures the security of employees and reduces the potential for loss of life if an incident occurs during hours of operation.

Private sector planning should also account for disruptions to operations and include a continuity of operations plan (COOP). Private sector facilities should have similar provisions as individuals and families for shelter-in-place, but on a larger scale and accommodating goods and equipment. Private sector vendors may have access to resources that benefit evacuation operations and provide other resources (e.g., water, power, fuel). Private entities should also work with jurisdictions in the planning process to identify evacuation routes and resources available to the

private sector that could facilitate a large-scale evacuation (e.g., buses or vans for transportation, stores as arrival points), while providing accessibility throughout the process.

State, Local, Tribal, and Territorial Governments

State, local, tribal, and territorial governments have primary authority and responsibility for evacuation and shelter-in-place planning, in conjunction with the whole community. Prior to an incident, jurisdictional governments should engage the whole community (including public/private sectors, community-based service and advocacy organizations, nongovernmental organizations, faith-based organizations, nonprofits, and individuals and families) to conduct awareness briefings and preparedness training, including “know your zone” training and campaigns, so that stakeholders are familiar with what is expected of them during each type of protective action. Additionally, for each protective action, jurisdictions should create clear and accessible messaging in alternative formats, including social media. This messaging should be pre-approved by leadership and advise the public on necessary actions, including anything specific to the threat or hazard that is impacting their community (e.g., anticipated flooding, hazardous material exposure, expected loss of power). Jurisdictions should establish, publicize, and periodically test a community warning system. Jurisdictions should also monitor social media to identify and attempt to correct rumors or inaccurate accounts of the situation.

For evacuations, the jurisdictional government issues evacuation orders, manages traffic flow, identifies evacuation routes, identifies shelters for residents, and considers processes to reunify caregivers and family members separated from one another. Additionally, jurisdictions should plan for disruptions to government operations and ensure they have a COOP and a continuity of government (COG) plan. Jurisdictions activate these plans in the event of government disruption and/or government relocation from an impacted area. For large-scale events requiring Federal resources, communities should consult the Mass Evacuation Incident Annex⁵ for more information on coordinating efforts with Federal entities.

Jurisdictional Government Responsibilities

- Set clear expectations for whole community partners by hosting education, training, and information sessions
- Establish and publish clear, accessible evacuation routes and zones for the community, as well as alternate routes in areas with changing evacuation dynamics
- Identify evacuation shelters in the community, as well as shelters where evacuees can go in other communities if needed and work with those neighboring communities to establish notification and operations procedures
- Create pre-approved accessible messaging for rapid distribution regarding incident and shelter-in-place or evacuation instructions
- Have a continuity plan to help maintain response operations if interrupted
- Provide real-time mapping and navigation routing systems through Geographic Information System (GIS) and supported private sector features, such as the Waze Connected Citizens program

⁵ FEMA. *Mass Evacuation Incident Annex*. <https://www.fema.gov/media-library/assets/documents/25548>.

Key Concepts

The following key concepts help ensure successful evacuation and shelter-in-place planning: Zones, Evacuation Transportation Models, Phases, Community Lifelines, and Characteristics.

Zones

The goal of an evacuation is to move as few people as needed the shortest distance to safety. Zone-based evacuation plans can be most effective in meeting this goal. They reduce resource burdens, facilitate re-entry, and accelerate the transition to recovery. A zone-based approach requires emergency managers and the whole community to work together to understand and coordinate evacuation and shelter-in-place actions, and make informed decisions based on the appropriate transportation models. These protective actions support all-hazards planning, whether for hurricanes, wildfires, floods, chemical spills, or civil unrest. Situational awareness and flexibility of plans, along with an educated public, allow each state, local, tribal, and territorial partner to customize its preparation and response efforts.

Previous disasters highlighted the value of a zone-phased approach to evacuation and shelter-in-place. Jurisdictions can benefit from considering shelter-in-place as the first/default option, when feasible (e.g., during tornados).⁶ Establishing evacuation and shelter-in-place zones allows jurisdictions to target evacuation to the most vulnerable zones, while limiting the need for evacuating large areas that are not under the threat of the hazard. Generally, geographic considerations for zone boundaries include U.S. Census Blocks, neighborhood boundaries, fire/police districts, U.S. Army Corps of Engineers (USACE) hurricane evacuation zones, ZIP codes, and existing evacuation plans and documentation. The mechanism for assigning zones will vary from jurisdiction to jurisdiction. Situational awareness and flexibility of plans, along with an educated public, allow each state, local, tribal, and territorial partner to customize its preparation and response efforts for all hazards.

Evacuation Transportation Models

Transportation planning considerations should include staging, embarkation points, transportation centers, and shelter locations. Jurisdictions may choose to employ one of the transportation concepts below to facilitate the movement of evacuees:

- **Hub and Spoke** (Figure 1) moves and aggregates evacuees in short trips from numerous pickup locations to evacuation centers, which in turn provide evacuation to mass care centers. Hub and spoke maximizes routes and provides immediate

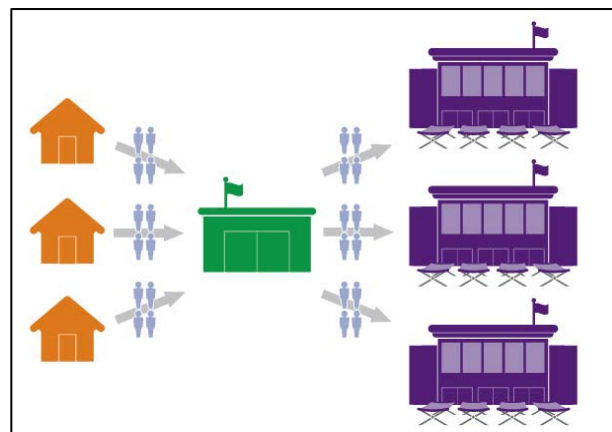


Figure 1: Hub and Spoke Evacuation Model

⁶ See the Critical Considerations section for further information and resources for zone-based planning.

movement of people from dangerous locations to a safer location temporarily. This transportation model allows jurisdictions to triage the needs of individuals, which may only be access to temporary shelter or access to personnel to facilitate the rental of a vehicle or other means to evacuate and provide care for themselves and their family directly.

- Point-to-Point** (Figure 2) moves evacuees directly from the point of embarkation to a host jurisdiction or shelter. Point-to-point is the fastest, most direct and streamlined, and least resource-intensive evacuation action in the immediate operational period. However, it has limited capacity for surges during large displacements. Shelters can come to capacity quickly, increasing travel for evacuees. Additionally, this model is not ideal if the host location has not been determined, such as in the instance of no-notice events that have a wide and unpredictable pattern.

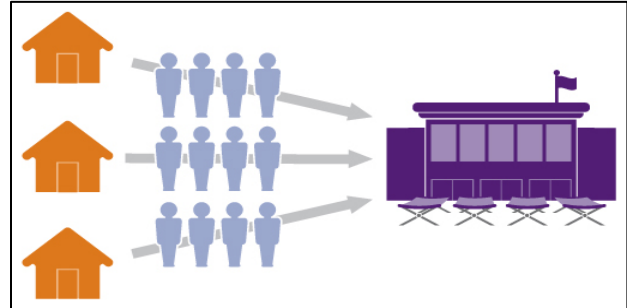


Figure 2: Point-to-Point Evacuation Model



In Practice: City of New Orleans – Evacuspots

New Orleans regularly faces severe flooding from rain, as well as damage from hurricanes, and has limited routes in and out of the low-lying city to safe areas further inland. Facilitating large-scale evacuations is a crucial issue.

New Orleans has taken steps to assist those who may not have access to, or be able to utilize, independent travel in evacuating the area. The city has put seventeen 14-foot-high statues around the city as assembly points, known as evacuspots, to pick up these individuals. Five evacuspots are specifically designated for senior citizens.

This method supports those with access and functional needs or requiring critical transportation assistance, allowing the city to efficiently evacuate the highest number of individuals out of an impact area.

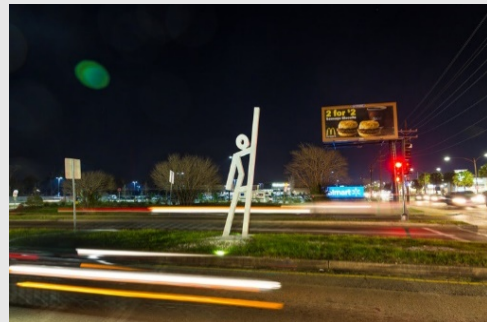


Figure 3: A statue designating an evacuation assembly point also referred to as an “evacuspot” in New Orleans, LA

Phases

Evacuation and shelter-in-place operations occur in five phases: mobilization, evacuation and shelter-in-place, impact, displacement/mass care, and re-entry. Used in conjunction with evacuation and shelter-in-place zones, phases provide a construct to move people to safety or have them shelter-in-place. Phases help jurisdictions plan, organize, respond, and coordinate evacuation and shelter-in-place strategies, messages, tasks, and decisions.

Phases may differ across zones that face unique hazards and considerations, may not occur at all, or may occur in any order based on incident realities. For instance, during no-notice events, the

impact phase, mobilization phase, and evacuation and shelter-in-place phase may be compressed or occur simultaneously, depending on incident specifics.

- **Mobilization:** Begins with the identification of a threat or hazard that could lead to an evacuation or shelter-in-place order. The first activity is initial notification of people, systems, and resources to establish incident command and management structures. Emergency management officials make coordinated decisions for protective actions and priorities, disseminating clear evacuation messaging to the public. Mobilization will likely happen concurrently with other phases for no-notice events and low-notice events.
- **Evacuation and Shelter-In-Place:** Begins when a threat requires evacuation or shelter-in-place operations, either following or concurrent with mobilization phase activities, depending on incident notice. For no-notice events, this is the first phase and mobilization may happen both outside and within the impact area as part of the response. This phase includes implementing the protective actions of evacuation and shelter-in-place orders, which will vary depending on the size and scope of the incident. This phase may be used in advance of the impact phase for notice events (e.g., hurricane) or after the impact phase for no-notice or low-notice events (e.g., earthquake, terrorist attack) to meet incident objectives and protect life and property.
- **Impact:** This phase begins when jurisdictions start to see adverse impacts on operations. During this phase, for notice events, jurisdictions work to secure facilities, people, and equipment and clear and close public transit to minimize the impact of the hazard. Within the impact phase, the “zero hour” marks the time needed to ensure the safety of first responders as the hazard makes impact, and it is the designated point in time when it is no longer safe for responders to continue operations.
- **Displacement/Mass Care:** If evacuees must leave their home jurisdiction, they must remain in the host jurisdiction until their community is safe. Mass care is mobilized and conducts operations throughout an incident to establish shelters and provide other services, but greater emphasis is placed on these activities during the Mass Care phase. During this phase, the evacuating jurisdictions communicate with the host jurisdictions to coordinate numbers and types of evacuees, shelters for them, and potential length of evacuation. Not every evacuation necessitates a robust mass care operation; it is most commonly conducted during long-lasting events. During shelter-in-place operations, mass care may consist of mobile commodity distribution or the establishment of hubs for evacuees to obtain food, water, and information during evacuations that last hours instead of days.
- **Re-entry:** Incorporates the coordinated movement of evacuees back into a community once the threat or hazard dissipates and the event causing the evacuation ends. In instances where residents may not be able to return to their communities for a longer period, this population is re-located to host areas and returned when it is safe. Re-entry typically marks the transition to recovery activities. This phase may follow the re-entry of first responders, if the threat or hazard was significant enough to require first responders to evacuate, or will begin once first responders have stabilized the area to a point where residents can return.⁷

⁷ Department of Homeland Security *Crisis Event Response & Recovery Access (CERRA) Framework*: <https://www.dhs.gov/publication/crisis-event-response-and-recovery-access>

Community Lifelines

Evacuations and shelter-in-place operations can serve as drivers and provide key information to inform Community Lifelines. The seven Lifelines include Safety and Security; Food, Water, Shelter; Health and Medical; Energy; Communication; Transportation; and Hazardous Material. They enable the continuous operation of government and critical business functions that are critical to human health, safety, or economic security. Community Lifelines provide a comprehensive way for decision makers to review impacts and prioritize resources and tasks.

Currently, evacuation falls under the Safety and Security lifeline. However, evacuation and shelter-in-place protective actions have aspects that may influence key information points under additional lifelines. For example, shelter-in-place due to a hazardous material spill may contribute key information into the Transportation, and Health and Medical lifelines, as well as Hazardous Materials.

Characteristics of Evacuation and Shelter-In-Place

Evacuations, like the incidents that trigger them, can affect multiple geographic regions and have long-term social, political, and economic impacts. A whole community approach supports and enables the safe and efficient movement of individuals and animals from an impacted or potentially impacted community, as well as their return once it is safe. Evacuations may begin with the spontaneous movement of evacuees or an official evacuation order and may occur before (pre-) or during and/or after (post-) an incident. Similarly, shelter-in-place action can be pre- or post-incident. Pre-incident shelter-in-place action may still require a post-incident evacuation if the threat or hazard occurs with little or no notice or presents an ongoing threat.

Characteristics and duration of evacuation or shelter-in-place depends on the incident and varies with jurisdiction size, location, and resources:

- **Pre-incident protective actions** occur when warning is available before an incident (such as a hurricane or sheltering in short notice for a tornado) and fall into two categories:
 - **Pre-incident evacuation** moves the most vulnerable, threatened population away from a potential area of impact, and shelters populations in place when and where conditions support. Pre-incident evacuation requires transportation resources and infrastructure other than or in conjunction with those utilized during normal conditions. Pre-incident evacuation decision making requires officials to balance potentially costly, hazardous, or unnecessary evacuations against the possibility of loss of life from untimely evacuation.
 - **Pre-incident shelter-in-place** allows people to remain in place in areas that are less impacted, which helps reduce the negative impacts of evacuation. For example, during a hurricane, 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.
- **Post-incident protective actions** occur during and/or after an incident. This may be the result of a no-notice event or an unexpected impact of a notice event.
 - **Post-incident shelter-in-place** may be necessary in certain instances such as an ongoing active shooter or complex coordinated terrorist attack.

- **Post-incident evacuation** should only occur when it is unsafe for the affected population to remain in the incident area, such as after a hazardous material spill with shifting wind patterns that may endanger a new part of the community. In contrast to pre-incident evacuations, post-incident evacuations may occur simultaneously with life-saving response operations. Resource constraints will arise as resources otherwise employed to support evacuation operations fulfill different emergency response tasks instead.

Types of Evacuees

Understanding the types of evacuees in the population affected by a potential threat or hazard and their associated needs is critical to evacuation and shelter-in-place planning efforts. These types include:

- **Children and Unaccompanied Minors:** These evacuees require specialized approaches and care. During a no-notice evacuation, children and unaccompanied minors can be gathered in facilities, such as schools, childcare facilities, hospitals, or other locations. These evacuees require assistance during evacuation or shelter-in-place operations and reunification.
- **Self-Evacuees:** Individuals who possess the capability or can obtain the resources to evacuate from a potentially dangerous area prior to, during, or after an incident with minimal or no assistance. This type of evacuee used their own transportation or utilized informal assistance such as from a family member or neighbor to evacuate by private or all-terrain vehicle, boat, aircraft, on foot, or other evacuee-directed and controlled transportation.
- **Critical Transportation Needs (CTN) Evacuees:** Individuals who may not have access to transportation and require assistance to leave a potentially dangerous or disaster-affected area (also referred to as Transportation-Dependent or Transportation-Disadvantaged Population). This category also may include individuals with access and functional needs who may require accessible transportation assistance to evacuate.
- **Animal Evacuees:** Animals, such as service animals and assistance animals, household pets, working dogs, agricultural animals/livestock, wildlife, exotic animals, zoo animals, research animals, and animals housed in shelters, rescue organizations, breeding facilities, and sanctuaries, may need evacuation support. Service animals evacuate with their owners as part of either the general or patient population and remain with their owners throughout the process. Shelter-in-place of animal evacuees depends on the incident, hazard, or threat and the safety of sheltering in place versus evacuating.
- **Spontaneous Evacuees:** Under some circumstances, residents may self-evacuate based on an individual, family, or group decision in reaction to an incident or threat of an incident, rather than being motivated to take a protective action as a result of an evacuation order. These individuals and/or groups are considered spontaneous evacuees. Spontaneous evacuations can complicate operations and add confusion. Jurisdictions can lessen the likelihood and impact of spontaneous evacuations by conducting pre-event preparedness education campaigns; clearly defining zones; providing clear, unified, and unambiguous evacuation and shelter-in-place orders; and providing clear expected actions, and timely threat, hazard and risk information. Jurisdictions should carefully shape all communications to use appropriate and accessible language and forms of media to provide evacuation and shelter-in-place information to the community.

Evacuation Facilities

A large-scale incident requires moving people across large areas and multiple jurisdictions. The types of sites and resources identified by the planning team for such an incident depend on the classification of the local jurisdiction. In addition, planners should be aware of resources in “pass-through” communities (between evacuating and host jurisdictions), because pass-through jurisdictions may be asked to establish and host additional shelters if needed. Based on the incident, possible evacuation facilities may include:

- **Evacuation Assembly Point:** A temporary location exclusively for evacuation embarkation and transportation coordination in a field setting. Basic life-sustaining services are not generally available.
- **Emergency Respite Site:** A location along an evacuation route that can support transportation-assisted evacuees and self-evacuees. Respite sites may include fuel stations, restroom facilities, and access to water.
- **Regional Hub Reception Center (RHRC):** A regional facility where evacuees can receive assistance in identifying the most appropriate shelter location for their needs. RHRCs are typically state-run and employed during significant multi-jurisdictional, multiregional events.
- **Shelter⁸ (Mass Care):** A facility where evacuees without a destination are evaluated and receive disaster services from government agencies and/or pre-established volunteer organizations. Meals and water are available, as well as basic first aid, pet and service animal sheltering (if applicable), sleeping quarters, and hygienic support, and basic disaster services (e.g., counseling, financial assistance, referral) should also be available. Other resources required in a mass care setting are listed in “FEMA Guidance on Planning for Integration of Functional Needs Support Services in General Population Shelters.”⁹

⁸ “Shelter” refers to a fully functional evacuation shelter. Emergency shelters may have limited supplies and services and are meant to assist in immediate lifesaving and sustaining care until conditions stabilize and full services can be established at shelter locations.

⁹ Available at <https://www.fema.gov/media-library/assets/documents/26441>.

Critical Considerations

Communities and emergency managers weigh many considerations as they integrate evacuation and shelter-in-place protective actions into their emergency plans. Communities must develop operational-level plans based on existing capabilities and revise those plans, and the specific annexes for evacuation and shelter-in-place, as strategic planning continues and capabilities change. The following alphabetical list includes some of the complex considerations that emergency managers and planning teams encounter during planning, exercises, or execution.

Accessibility

Accessible resources, or accommodations and modifications for accessibility, ensure that evacuation and re-entry operations include children and adults with access and functional needs. This includes provisions for accessible dissemination of information, including evacuation and shelter-in-place orders. These provisions include, but are not limited to, sign language interpreters, alternative forms of communication and language translation, as well as transportation and facility access.¹⁰

Children and Unaccompanied Minors

The specific needs of children and unaccompanied minors must be considered during evacuation and 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.

Contraflow Lane Reversal

Contraflow lane reversal alters the normal flow of traffic (typically one or more lanes in the opposing direction on a controlled-access highway) to increase the flow of outbound vehicle traffic during an evacuation. Contraflow operations may cause issues at jurisdictional borders if the transition from contraflow lanes to normal lanes is uncoordinated, which can significantly slow the evacuation. Properly executed, contraflow requires significant resources and time, and it is most applicable when an expedited large-scale evacuation is necessary. Generally, coordinating contraflow takes place at the state level and requires considerable planning to avoid any interference with response operations.

In addition to contraflow, shoulders of certain evacuation routes can be used to increase traffic flow out of the evacuation area. This alternative leaves the route into an evacuation area accessible for emergency services personnel to ingress the area. These shoulders must be paved and wide enough to accommodate vehicles.

¹⁰ See additional information in Vince Taylor's FEMA PrepTalk, at <https://www.fema.gov/preptalks/taylor>.

Correctional Facilities

The correctional system in the U.S. is comprised of incarceration within correctional facilities (e.g., jails, prisons) that detain 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).

- **Jail:** A containment area for suspected offenders awaiting trial or convicted inmates awaiting sentencing or potentially serving shorter sentences. Planning for protective actions for these facilities usually falls under the state or local jurisdiction prosecuting these individuals.
- **Prison:** A facility to confine convicted felons. Prisons have several security classifications (e.g., High, Medium, Low, and Minimum) that typically correspond to the seriousness of convicted offenders' crimes, their demonstration of intent, and their capacity to harm others (such as inmates and corrections personnel) during incarceration. Planning for these facilities to implement protective actions falls under Department of Corrections of a jurisdiction or other governing bodies that oversee such facilities.

The custody and care of inmates falls under the corrections department of the local, state, or Federal jurisdiction that oversees the facility. The evacuation of secure correctional facilities requires a coordinated effort between local and state law enforcement and corrections officials, publicly run and privately-operated institutions (if applicable), and Federal agencies, (e.g., Department of Justice Federal Bureau of Prisons, Department of Homeland Security [DHS], Bureau of Immigration and Customs Enforcement, U.S. Marshals Service).

Domestic/Sexual Violence Shelters

Domestic and sexual violence leaves long-lasting impacts on survivors. Shelter managers and management teams should strive to provide additional protections for those who have already survived domestic and sexual violence, as well as prevent these acts from occurring during the operation of shelters with displaced evacuees. There is a potential for an increase in domestic/sexual violence following a disaster. Evacuation site managers should visibly post telephone numbers for local domestic violence shelters and national providers such as the National Domestic Violence Hotline: 1-800-799-SAFE (1-800-799-7233), or (1-800-787-3224) (TTY), and the National Human Traffic Hotline (1-888-373-7888) in emergency shelter areas.

In addition, individuals currently living in community domestic or sexual violence shelters may need to evacuate to emergency shelters due to the impacts of a threat or hazard. These survivors require additional precautions, particularly when handling their personally identifiable information (PII), such as securing shelter registrations, not leaving client information exposed, or ensuring ample room between registering shelter clients. When emergency shelter management teams cannot take on this additional task, they should make alternate arrangements to maintain confidentiality for these survivors. Types of safe and secure alternate housing accommodations include:

- A **physical shelter facility** operated by a domestic violence program that serves victims of domestic/sexual violence.
- A **safe home** provided by a victim's family member or friend.

- Other accommodations, such as a time-limited motel or hotel placement or other direct placement programs providing safe housing. These accommodations should have a telephone and bathroom facilities, and all doors to the accommodations should have locks.

To ease the burden on shelter managers, planning teams should include domestic violence shelter staff in the planning process so that they can consider alternative safe and secure arrangements ahead of time. Planners consider the whole community approach to planning, and partner with other organizations (domestic violence centers, independent and senior living facilities) that can assist with sheltering specific populations.

Evacuation Clearance Time

Evacuation clearance time is the estimated time necessary to safely evacuate people, from the time an evacuation order is given until the time when either the last evacuee leaves the evacuation zone (given various factors such as the type of hazard or threat, level of notice of the incident, population characteristics of the area at the time, and public behavior) or the remaining population is forced to shelter-in-place due to conclusion of operations as the hazard begins to impact the area.

Jurisdictional analysis of clearance times should include a calculation of individuals with access and functional needs, spontaneous evacuees, and evacuees from other jurisdictions who may pass through. Clearance time calculations should include the time required for evacuees to secure their homes and prepare to leave, the time spent by all vehicles traveling along an evacuation route network, and the additional time spent on the road caused by traffic, road congestion, bridge closures, and other unexpected complications.

Fuel Management

A large-scale evacuation places increased stress on a variety of resources. Fuel management is a crucial challenge that jurisdictions should address, particularly in planning evacuation routes. Jurisdictions should:

- Identify evacuation routes that have ample businesses in pass-through communities to provide fuel to evacuees.
- Make an effort to ensure that secondary and tertiary evacuation routes are also well supplied with fuel resources.
- Work with their private sector partners to identify additional fuel supplies and coordinate additional deliveries to providers along evacuation routes.
- Partner with fuel trade organizations to encourage station owners to install generators along evacuation routes in the case of power loss, as fuel will remain inaccessible without power.
- Identify the locations of alternative fuel vehicle sites along mapped routes and communicate these alternative fuel sites as part of the evacuation response.

Failure to manage fuel supplies ahead of time leads to fuel shortages, which impact traffic patterns and slow down evacuation operations. Jurisdictions should plan to retain a supply of fuel to support evacuation operations, first responder operations, and evacuation, if necessary.

Homeless Populations

People who are experiencing homelessness¹¹ 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 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 is based on limited minutes and access to charging.

To communicate disasters to people without homes, jurisdictions should include homeless service providers in emergency notification systems to help create an effective communication plan that includes accessible messaging. Service providers can quickly and effectively communicate the emergency to homeless individuals concentrated near their facilities and deploy outreach teams to notify other homeless people dispersed throughout the community. Outreach teams making notifications can also transport people to shelters or designated pickup points for evacuation. Outreach teams employed by homeless service providers are familiar with homeless communities, have established trust and credibility and are better able to negotiate with people who might resist evacuation efforts. Jurisdictions should coordinate outreach teams, drivers, and accessible vehicles in advance, and assign them to specific designations as soon as possible to prevent delays during a potentially small window of time.

Many individuals, including the homeless population, may have difficulties interacting with a mainstream shelter population, and the stressful and (relatively) intimate setting of a disaster shelter may amplify the situation. 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.¹²

Communities should also consider the housing needs of homeless individuals after a disaster. Many areas inhabited by homeless people may not be suitable for living after a disaster. Despite the transient nature of homelessness, many homeless people want to return to their communities.

Further information is available through the National Health Care for the Homeless Council at <http://www.nhchc.org>.

¹¹ “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.

¹² Department of Housing and Urban Development. *Resources for Homeless Population*. <https://www.hudexchange.info/homelessness-assistance/disasters/>.

Hospitals and Residential Medical Facilities

Hospitals and residential medical facilities, including hospice centers, mental health facilities, nursing homes, and other assisted living facilities, face unique resource requirements and challenges to performing protective actions. During times of disaster, these facilities should:

- Engage with jurisdictions and other partner facilities to streamline, coordinate, and reduce the burden of Health Insurance Portability and Accountability Act (HIPAA) restrictions.¹³
- Coordinate evacuations with partner facilities that provide similar services and are located outside of the impact zone to transfer patients to open spaces within those partner facilities. Jurisdictions should engage hospitals and residential medical facilities in the planning process to better assess the needs and capabilities of the facilities within the jurisdictions, and to coordinate use and sharing of resources.
- Ensure that patients being evacuated have supplies of medical equipment and medicine that can last through transportation to a new facility and until the new facility can complete intake of the patient and properly integrate the patient's care plan into their system and operation.

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 over the course of an incident requiring shelter-in-place. These plans should:

- Ensure that the facility has sufficient resources such as medical supplies, food and potable water both for drinking and for procedures such as dialysis as well as sanitation procedures of personnel and equipment.
- Assess needs as if they will have no utilities for a minimum of 72 hours. These facilities should ensure that a steady power supply is available, and the appropriate fuel can be obtained to keep the temporary power supply online. Facilities should coordinate with jurisdictions to ensure generators in place are accessible and meet the needs of the facility or that the hospital power infrastructure can be compatible with jurisdiction-provided generators if none are currently in place at the facility.

Household Pets and Service Animals

Sixty-five percent (65%) of American households have pets, which includes a variety of animal species,¹⁴ and populations who are evacuating should bring their animals with them. If they are not able to bring their animals, a significant percentage of the population may not leave. During evacuation and re-entry operations, animals require tracking, embarkation, transportation, debarkation, care, feeding, husbandry/waste removal, veterinary support, and sheltering support.

¹³ Department of Health and Human Services. *Health Information Privacy: Emergency Situations: Preparedness, Planning and Response*. <https://www.hhs.gov/hipaa/for-professionals/special-topics/emergency-preparedness/index.html>.

¹⁴ American Pet Products Association. *Pet Industry Market Size and Ownership Statistics*. http://americanpetproducts.org/press_industrytrends.asp.

When feasible, animals should remain with their owners during transport. 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 requiring evacuation to determine transportation, mass care, and additional support requirements. Regardless of disaster type, jurisdictions should have plans in place for the safe and effective evacuation and sheltering of not just common pets, but all types of animals within the impacted communities. Failure to have and communicate such plans creates preventable risks for animals, animal owners and caretakers, the public, and first responders. Previous disasters have demonstrated that co-evacuating (and co-sheltering, where possible) people with their animals, including household pets and service and assistance animals, increases compliance with evacuation orders, increases survivor resilience, and decreases re-entry to unsafe areas motivated by animal rescue.¹⁵

Animals, including service and assistance animals and household pets that co-evacuate with owners, should be in good health and vaccinated. Otherwise, the animals could spread disease among themselves, or to evacuees (e.g., from bites). Ensuring the good health of animals before a disaster occurs should be a priority for animal owners, and jurisdictions should communicate this priority in public information campaigns for disaster readiness. Also, shelter personnel should have a plan in place regarding verifying vaccination/health records, such as recommending that families carry animal vaccination records with them during the disaster. During the co-evacuation process, owners should also provide sufficient means, such as leashes and crates, to control their pets, service, or assistance animals. Jurisdictions should consider other circumstances that involve animals and have separate areas for evacuees with unvaccinated animals or evacuees that are allergic to certain animals.

Individuals with Access and Functional Needs

Individuals with access and functional needs may include, but are not limited to, individuals with disabilities; older adults; individuals who are blind, deaf, hard of hearing, have speech and language disabilities, mental health conditions, learning, intellectual, and developmental disabilities, and chemical sensitivities; unaccompanied minors; individuals with limited English proficiency (LEP); limited access to transportation; and/or limited access to financial resources to prepare for, respond to, and recover from an emergency. Through times of disaster, jurisdictions should still comply with regulations and laws regulating the care of individuals with access and functional needs, such as the Americans with Disabilities Act (ADA), as well as other Federal, state, and local laws and statutes.

Populations evacuating an impact area and arriving in a host area may include some individuals with health or medical needs who normally require home- and community-based services. Conditions that may have been under control prior to evacuation may be exacerbated, and health conditions may degrade during the evacuation process. Evacuees with such needs may require ongoing health support in host areas, and jurisdictions should ensure evacuees obtain that support.

¹⁵ Animals include household pets, service and assistance animals, working dogs, agricultural animals/livestock, exotic animals, and animals housed in shelters or rescue organizations.

Most relevant medical support and assessment follows the same procedures, whether it takes place in the impact area prior to the transport of evacuees or when they arrive in host areas. Assistance may be required to connect/reestablish evacuees with home- and community-based service providers. During the evacuation process, monitoring these evacuees will help identify if conditions worsen and if additional medical assistance and supplies are necessary. Jurisdictions should plan for individuals with access and functional needs in all aspects that will impact them (e.g., transportation, evacuation, sheltering).

Legal Requirements and Authorities

Evacuation and shelter-in-place planning is a core element of all-hazards emergency preparedness, and one of the first steps is to review and understand the extent of emergency powers granted to and within a jurisdiction. In many cases, the authority to issue evacuation and shelter-in-place orders exists in state, local, tribal, or territorial laws, statutes, regulations, delegations of power, memoranda of understanding/memoranda of agreement (MOUs/MOAs), policies, and other guidance documentation. Planners should review all legal requirements and authorities during the planning sessions. Since these legal requirements vary by jurisdiction, they are not included in this document. Check with your jurisdictions' legal authorities to determine the legal requirements in a specific jurisdiction, to confirm what authorities exist in your jurisdiction, and the limitations on those authorities.

Mass Care & Sheltering Services

As part of the evacuation process, mass care planning is vital. While not the focus of this document, jurisdictions must consider short-term and long-term mass care to be able to stand up operations quickly to provide essential services for evacuees.

Initial evacuee support consists primarily of mass care in respite and congregate evacuee shelters. However, once immediate life safety considerations have subsided, some evacuees may continue to need shelters or accessible housing for a longer duration. This may include non-congregate sheltering (e.g., hotels, motels), interim housing (e.g., apartments, mobile homes, detached homes), or alternative housing solutions (peer-to-peer market). Many disaster survivors in less-impacted areas may be able to return to their homes quickly after the disaster, if not immediately. Disaster survivors whose homes suffered minor damage may be able to stay in their homes as they undergo repairs. However, evacuees using their own resources to meet their emergency need for shelter (e.g., staying in a motel, with friends or family) are often able to maintain their shelter for only a brief time before their resources are exhausted, and they may then turn to other available mass care/or non-mass care shelter options.

Population Assessment

Pre-incident population information may be incomplete, requiring an immediate assessment of the evacuee population to identify specific individual or family group needs (e.g., health/medical, mental, functional, social services, sociocultural, socioeconomic, nutritional, language, religion). Maintaining an accurate population assessment helps a jurisdiction understand the needs of the community and better estimate the resources needed to implement efficient protective action operations.

Terminology Used in Public Messaging

During a threat or hazard involving shelter-in-place or evacuation protective measures, a concise, accurate, accessible, and understandable message to the public is critical. To that end, jurisdictions should consider the terminology they use in their messaging—the public does not use the same common terminology as emergency management professionals and may interpret terms and instructions quite differently than intended (e.g., mandatory, voluntary, recommended, forced, phased, zoned). It is imperative that jurisdictions develop messages with clear, plain language terms understandable by all members of the community during a crisis.

In addition to clear messaging, planners should also identify alternative ways to distribute messaging to ensure it reaches all populations in the community, including those who may not be aware of or have difficulty accessing traditional emergency notification and warning systems. Regardless of the terminology, individuals within an impacted or potentially impacted jurisdiction or community are most likely to heed evacuation orders issued by a trusted authority (e.g., governor, police chief) or from a trusted source in the community such as faith-based organizations, community radio, television stations, or social media accounts. Common language and easily understood messaging helps ensure that official messaging is distributed widely and is followed more closely than other community-based (e.g., neighborhood associations) messages or instructions. This may help ensure that residents remain safe during an incident and that jurisdictions can allocate resources appropriately to conduct an efficient response to an incident.

Tourist Populations

In some jurisdictions, evacuation of the tourist population occurs prior to the general population. Officials warn tourists to leave an area with enough notice of an event and if lodging is not adequate to shelter-in-place through an incident. In such an instance, tourist populations evacuate alongside self-evacuees, but they would fall into critical transportation populations (relying on air or rail travel). If unable to evacuate these populations prior to an incident, impacted jurisdictions should identify this population as non-resident, evacuate them, and advise host jurisdictions to help them coordinate their departure to their home destinations. To enhance efforts to care for tourist populations, jurisdictions should include travel industry associations or similar groups in their planning process. Working with such groups can also facilitate a smoother process to return tourists home after an incident if broader travel services are interrupted.

Tracking/Evacuee Accountability

Using tracking or accountability tools ensures the safety of evacuees as they move through the evacuation and recovery process in several ways:

- Allows impacted and host jurisdictions to follow the movement of evacuees, as well as their animals (including household pets and service and assistance animals), luggage, and durable medical equipment.
- Helps to provide displaced individuals with access and functional needs with the support needed to return successfully to the community, preventing unnecessary placement of individuals in institutional settings such as hospitals or nursing home facilities.
- Provides information for family reunification purposes.

- Supports recordkeeping efforts for Federal reimbursement policies.

Tracking should begin as soon as possible and may occur in the impact area prior to the point at which evacuees board transport or at arrival points, such as transfer points and reception processing sites, welcome centers and information points, shelters, or any facility or point of entry into a host jurisdiction that assists evacuees. When planning to use a nonprofit or nongovernmental tracking/accountability system, jurisdictions must plan to deconflict any access issues or privacy issues so that they can quickly assist evacuated residents as needed.

Traffic Management

To minimize traffic congestion and decrease clearance times, mobile message boards and signage along evacuation routes can inform self-evacuees of traffic hazards, the location of welcome centers and information points, shelters, fueling exits, and hospitals. When planning for traffic management, jurisdictions should identify challenges of overlapping routes for different modes of transportation (e.g., do evacuation routes go over drawbridges or rail crossings for subway or commuter rail lines?) and consider whether additional or specific resources may help address these considerations. Effective traffic management allows a jurisdiction to evacuate more people from a community in an efficient manner, which reduces the burden on jurisdiction personnel and resources. Failure to organize efficient traffic management efforts increases resource burdens, causes longer evacuation times, could lead to increased accidents and higher congestion, and could leave evacuating residents in vulnerable conditions during an incident.

Zonal Approach

Evacuation and shelter-in-place zones promote phased, zone-based evacuation targeted to the most vulnerable areas, which allows jurisdictions to prioritize evacuation orders to the most vulnerable zones first and limit the need to evacuate large areas not under the threat. Zones help:

- Jurisdictions to understand transportation network throughput and capacity, critical transportation and resource needs, estimated evacuation clearance times, and shelter demand.
- Planners to develop planning factors and assumptions to inform goals and objectives.
- Community members to understand protective actions to take during an emergency.
- Shelters to limit traffic congestion and select locations suitable for the evacuated population.



In Practice: Virginia “Know Your Zone”

Coastal Virginia faces high waters and storm surge from hurricanes and coastal storms, and downriver flooding from heavy storms impacts inland communities. The Virginia Department of Emergency Management (VDEM) utilizes an evacuation zone strategy. This tiered approach consists of four zones, A through D. Using these zones evacuates only those areas who need to evacuate and supports improved traffic efficiency.

To educate the public about which zone they reside in, Virginia launched a “Know Your Zone” public information campaign. The campaign established a website where people can search their address and determine which evacuation zone they reside in. VDEM conducted media outreach and produced signs, including placards atop gas pumps, and distributed bill inserts advertising the campaign and the website. Additionally, Virginia distributed stickers for placement on residential trash bins indicating which zone the residence is in. Survey results indicated that after six months, nearly 23 percent of responders correctly identified their evacuation zone.



Figure 4: Placing a “Know Your Zone” sticker on a residential trash can in Zone C (Photo Courtesy of VDEM)

Evacuation and shelter-in-place zones work with evacuation phases, are interdependent with evacuation routes and transportation modes, and rely on many of the same information sources and assessments.

Zones should be easily recognizable by both first responders and community members. Public messaging campaigns help communicate zone assignments to the public, ideally before a hazard strikes, through “know your zone” campaigns or other preparedness and outreach initiatives.

The mechanism for identifying zones will vary from jurisdiction to jurisdiction. For example, one jurisdiction may use well-known police districts to assign evacuation zones, whereas other jurisdictions may use neighborhoods. When possible, jurisdictions should consider mapping zones using geographic information systems (GIS).

Generally, considerations to select zone boundaries include:

- Neighborhood boundaries
- School districts
- Fire/police districts
- ZIP codes
- USACE hurricane evacuation zones
- U.S. Census Blocks:

<https://www.census.gov/geographies/reference-maps/2010/geo/2010-census-block-maps.html>



Figure 5: A “Know Your Zone” sticker on a residential trash can in Norfolk, Virginia (Photo Courtesy of VDEM)

- U.S. Census Tracts: <https://www.census.gov/geographies/reference-maps/2010/geo/2010-census-tract-maps.html>
- Existing preparedness plans and documentation (e.g., existing evacuation plans).

Jurisdictions may need additional research studies to select zone boundaries. Additional resources for evacuation and shelter-in-place zone research include:

- Real Time Evacuation Planning Model: <http://rtepm.vmasc.odu.edu/>
- State Departments of Transportation
- National Oceanic Atmospheric Administration (NOAA) Hurricane Evacuation Studies: <https://coast.noaa.gov/hes/hes.html>
- State and jurisdictional evacuation plans and other related plans
- Hazus: <https://www.fema.gov/hazus>
- Hurricane Evacuation (HURREVAC): <http://www.hurrevac.com/>
- Sea, Lake, and Overland Surges from Hurricanes (SLOSH): <http://www.nhc.noaa.gov/surge/slosh.php>.



In Practice: Incorporating Critical Considerations in Evacuation Planning and Operations – California and Colorado Wildfires

Los Angeles County, California:

This is the most populated county in the United States, with over ten and a half million residents spread throughout its 4,751 square miles. The Los Angeles County Operational Area encompasses the unincorporated areas of the county, 88 independent cities and over 200 Special Districts, with the Los Angeles County Office of Emergency Management serving as the Operational Area Coordinator.

In 2018, Los Angeles County assisted neighboring counties and its own municipalities in battling the Woolsey Fire, which burned over 96,000 acres in 17 days and displaced 296,000 citizens in Los Angeles and neighboring Ventura counties. Throughout the Los Angeles County portion of the Woolsey Fire, both the unincorporated areas and the independent local cities are protected by the Los Angeles County Fire Department and the Sheriff's department, because the independent cities contract for public safety services from the county. This makes response very homogenous, as a single first responder agency and law enforcement agency are responsible for service delivery across a very diverse jurisdictional area.

In the event of a need for a wildfire evacuation in the Los Angeles County Operational Area, typically the Fire Department leadership element identifies the need for the evacuation, the boundaries for the area under threat, and the timing and duration of the evacuation. This is communicated to the law enforcement leadership, who then executes the evacuation and maintains the perimeter until it is lifted. In complex and or extended evacuations, the Unified Command conducts a daily evacuation planning meeting to assess and determine the evacuation plan. To facilitate the evacuation, law enforcement coordinates with first responders to identify, issue, and regularly update a list of roads that are safe to use as evacuation routes. Two of the most emphasized lessons learned are the need for increased coordination for quicker incorporation of GIS data into analysis and identification of the safest

evacuation routes, and the use of multiple forms of communication to keep residents informed regarding the timing and location of the evacuated areas.

The county also encompasses the City of Los Angeles, which contains a large population and a world-class emergency management system and capabilities unto itself. While the city and county continue to incorporate ways to care for individuals with access and functional needs and individuals who are homeless, these two populations can still be disproportionately impacted by the effects of an incident.

Due to the geographic conditions of Los Angeles County (a coastal area with many surrounding areas also potential fire zones), residents are more likely to travel further outside the incident area, with other factors such as the cost of independent sheltering (e.g., hotels) as contributing factors. This dispersal makes it more difficult to maintain regular contact through the usual evacuee accountability tools such as the American Red Cross Safe and Well tool. The City of Los Angeles, as well as the county, regularly hosts a large international tourist population throughout the year. To ensure their safety during an incident, the City and County regularly interface with foreign consulates to distribute incident information and provide services to tourists who are impacted during an incident. These jurisdictions also utilize portable message boards on highways and public alert systems such as Integrated Public Alert and Warning System (IPAWS), as well as traditional advisories to the public through media outlets to provide accurate information and instruction in a timely manner.

Larimer County, Colorado:

Larimer County is a mostly suburban and rural county, which also includes the city of Fort Collins, and is geographically approximately half the size of Los Angeles County but faces the similar threat of wildfires. In recent years the county has faced several wildfires that burned acreage across several portions of the communities within the county. As the county monitors the expansion of a fire, all responders are empowered with the ability to call for an evacuation. The county uses a tiered evacuation approach. The first focus directs citizens out of an immediate impact zone and directs them to an Evacuation Point – an area out of danger where they are met with someone who can provide additional information or resources. If the evacuation is prolonged individuals are then directed to an Evacuation Center where evacuees can receive water and food and use power sources to charge mobile devices allowing them to receive information. If an overnight or multi-day evacuation is necessary, citizens are then directed to shelters in nearby communities.

To implement evacuation plans, once an order is given, incident managers establish evacuation zones for internal planning purposes. These zones are used to inform first responders as to which areas and structures should be evacuated. The zones are generally made up by subdivisions or neighborhoods within a community. Larimer County utilizes mobile networks to push emergency information to community residents, and tourist populations. The county uses an opt-in text messaging number. This widely advertises the service where people can text to receive emergency notifications and necessary actions if an incident occurs. In addition to its citizens, Larimer County utilizes community associations and trained units such as of the Sheriff's Posse, the Horseman's Association and the Humane Society to assist in the evacuation of household pets and livestock. These organizations help citizens transport livestock and larger animals to nearby fairgrounds or other spaces that can accommodate the needs of those animals. Household pets are often kept with their owner at shelter locations, though they may be in kennels in a separate part of the building or with Humane Society personnel.

Planning Principles

A shared understanding of evacuation and shelter-in-place planning principles is essential to effective planning. These principles provide a foundation for the planning process and establish a common operational picture (COP) that is scalable and translatable across a multi-jurisdictional evacuation. The 12 principles below support successful evacuation and shelter-in-place plans.

Defined Authorities

Evacuation and shelter-in-place planning should be consistent with existing jurisdictional and regional authorities, roles and responsibilities, as defined in current statutes, regulations, delegations of power, MOUs/MOAs, policies, jurisdictional charters, bylaws, and other guidance documents. Evacuation and shelter-in-place efforts for small-scale incidents are typically handled at the lowest possible jurisdictional level. Local incident commanders or public safety officials (e.g., fire chief, police chief, public health official) implement them and do not require the support of higher-level authorities, such as elected officials at the local or state level (e.g., mayor, county executive, judge, governor). For community-level or larger-scale events affecting multiple jurisdictions, higher-level authorities are often necessary to issue evacuation orders. State assistance may be needed to supplement local resources and services to safely evacuate or shelter the population in place. Depending on the incident and threat/hazard, the responsible authority will declare an evacuation and/or shelter-in-place. Federal authorities may assist state, local, tribal, and territorial governments if their resources have become, or will soon become, overwhelmed.

Shelter-In-Place – First/Default Option

Jurisdictions should always consider shelter-in-place as the first/default option, when feasible. This may mean looking at risk more closely and when possible, advising populations to shelter-in-place. Shelter-in-place involves the use of a structure, including homes, to temporarily separate individuals from a hazard or threat. Shelter-in-place is appropriate when conditions require that individuals seek protection in their homes, places of employment, or other locations when a hazard or threat is imminent or occurring. Individuals with access and functional needs should be a priority for restoration of services and safety checks, as they may be at greater risk throughout a prolonged shelter-in-place order. When populations shelter in place, jurisdictions reduce costs, resource requirements, and negative impacts of evacuations, while promoting improved response and quicker re-entry (for those who spontaneously evacuate) and recovery.

Common Understanding

Establishing a common understanding of a plan's goal and operational procedures is important to overall coordination. Plans need to be viable for each locality to support and integrate with the applicable region, state, and interstate plans. Using common terms and strategies helps align planning concepts into one cohesive approach.

Unified Coordination Process

Most jurisdictions identify the need for a common mechanism to coordinate across jurisdictional boundaries. This may be a coordination team concept or an existing mechanism facilitated by the state. Jurisdictions within a geographic or political region should develop individual plans using common language, formatting, and a unified coordination process.

Zone-based Operational Strategies

Plans should articulate operational strategies, include jurisdictional priorities, and provide decision support guidance to promote phased, zone-based evacuation or shelter-in-place for notice and no-notice events. Evacuation and shelter-in-place zones allow jurisdictions to focus efforts on the most vulnerable areas and people and pre-plan and model evacuation clearance times and shelter demand, while helping to reduce the need for mass evacuations. Evacuation and shelter-in-place zones should be simple, easy to understand, and recognizable for planners, communities, and the media. Zones may include political subdivisions, fire districts, ZIP codes, well-known communities, or other easily recognizable boundaries or subdivisions.

Well-developed and socialized zones can serve as a shorthand for communities to make important evacuation or shelter-in-place decisions in disasters. Phases, used in conjunction with zones, maximize resources to move people to safety or have them shelter-in-place while reducing stressors on the transportation networks. Phases help jurisdictions plan, organize, respond, and delegate evacuation and shelter-in-place strategies, messages, tasks, and decisions.

All-Hazard Planning

Plans should include all-hazard planning to address various threats and indicate when shelter-in-place or evacuation is appropriate. Jurisdictions should consider existing concepts, plans, assessments, systems, resources, and practices (such as security and traffic management plans, hurricane or nuclear/chemical plant evacuation plans and zones, Hazard Identification and Risk Assessment, Threat and Hazard Identification and Risk Assessment, Hazard Identification and Vulnerability Assessment, and capabilities assessments). These documents identify the chain of command early in the planning process to facilitate initial information gathering for plan development. Planners should also consider the results of catastrophic events such as threats from external nation states or catastrophic natural disasters (e.g., major hurricanes or earthquakes). Such events require increased resource commitments over longer periods of time due to the incident's source and severity and may constrain resource availability (e.g., National Guard). These incidents may result in a larger Federal presence and jurisdictions should establish a common process for integrating this increased presence into their protective actions plans.

Whole Community Approach

Local jurisdictions should include the whole community in developing evacuation and shelter-in-place plans, including private and nonprofit sector stakeholders, faith-based organizations, organizations serving people with disabilities, organizations addressing access and functional needs populations, and others that address individuals with LEP, limited access to transportation, and/or limited access to financial resources. To provide perspective and solicit buy-in, jurisdictions should engage stakeholders early and throughout the entire planning process. Whole

community stakeholders will have diverse individual needs during an evacuation. Accounting for the characteristics and needs of the actual community, as well as the resources owned and operated by nongovernmental entities, is vital for an effective evacuation.

Flexibility and Scalability

Plans should be flexible and scalable to engage the appropriate protective action based on the incident. Similarly, if the regional, inter-jurisdiction coordination mechanism (evacuation coordination team) becomes active, the state (with other jurisdictions) should coordinate the response efforts in a unified decision-making process as described above in principle 0. This unified decision-making process must take a more strategic approach to the evacuation mission and how it may affect the region as a whole. Local, state, and Federal jurisdictions need to work together in large-scale evacuation efforts to help move the displaced population.

Critical Transportation Needs (CTN)

Plans should account for CTN populations that focus on individuals with evacuation needs. A CTN population encompasses any evacuees with limited or no access to transportation and those who require assistance to evacuate safely. A large percentage of the jurisdictionally supplied evacuation support may directly support individuals who require transportation assistance, including accessible transportation. Jurisdictions must consider these needs during planning to account for any resource shortages of transportation and assisting medical/healthcare personnel. Additionally, jurisdictions should regularly review and deconflict contracts for transportation support in planning for CTN.

Service and Assistance Animals and Household Pets

Animals require their own resources and supportive services. Planners should make accommodations for individuals evacuating with animals and address the specific needs associated with pets and service and assistance animals. While service animals are trained to do a specific task, assistance animals do not need to be trained to perform an emotional or physical benefit. Under the Rehabilitation Act and the ADA, individuals with service animals will evacuate and remain with their animals at all times. Previous disasters demonstrated that many individuals refuse to evacuate if they are forced to leave their household pets behind. Therefore, accommodating household pets and service animals is a critical component of evacuation operations. Planners should account for needs associated with household pets and service animals throughout the planning process.

Evacuee Tracking/Accountability

Evacuee tracking can become a part of evacuation operations based on jurisdictional capacities, capabilities, and resource needs. FEMA's National Mass Evacuation Tracking System (NMETS) is a software- and paper-based no-cost option available to jurisdictions. Jurisdictions should consider specific requirements for using the software, such as equipment and training that would incur a cost. Jurisdictions should also consider the significant time investment to assemble and train for NMETS, which must be completed prior to incidents, during the steady state. Along with electronic systems, jurisdictions can use redundant tracking systems. Jurisdictions should assure residents that the systems are accessible, will protect their PII, and will facilitate

reunification and ensure safety during an evacuation. Tracking allows jurisdictions to associate records of displaced persons with their personal belongings, companions, and pets. Without tracking, the situational awareness, accountability, and reunification become more challenging.

Mass Care

Jurisdictions should coordinate mass care efforts internally and externally, as well as concurrently with sheltering/evacuation planning, so that populations evacuating from a disaster area have safe and accessible locations to seek refuge. Understanding the destination of evacuees avoids prolonged separation of families, as does the establishment and operation of shelter sites. The shelter sites must be accessible and accommodate various needs that displaced populations may have. Jurisdictions should coordinate assignment of displaced persons in shelters prior to the evacuees departing an embarkation point. Jurisdictions should also balance this effort with allowing shelters to plan to accept self-evacuees. Public information strategies should share this information with the displaced population, using alternative formats to address the communication needs of the whole community.

Appendix A. Acronym List

ADA	Americans with Disabilities Act
CERRA	Crisis Event Response and Recovery Access
COG	Continuity of Government
COOP	Continuity of Operations Plan
COP	Common Operational Picture
CPG	Comprehensive Preparedness Guide
CSEPP	Chemical Stockpile Emergency Preparedness Program
CTN	Critical Transportation Needs
DHS	Department of Homeland Security
DoD	Department of Defense
DOT	Department of Transportation
EMAC	Emergency Management Assistance Compact
EMI	Emergency Management Institute
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPCRA	Emergency Planning and Community Right-to-Know Act
ESF	Emergency Support Function
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
GATES	Global Air Transportation Execution System
GEAR™	Geocentric Environment for Analysis and Reasoning
GIS	Geographic Information System
HHS	Health and Human Services

HIPAA	Health Insurance Portability and Accountability Act of 1996
HURREVAC	Hurricane Evacuation
IPAWS	Integrated Public Alert and Warning System
JPATS	Joint Patient Assessment and Tracking System
LEP	Limited English Proficiency
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
NDMS	National Disaster Medical System
NGA	National Governors Association
NMETS	National Mass Evacuation Tracking System
NOAA	National Oceanic and Atmospheric Administration
NWS	National Weather Service
PETS	Pets Evacuation and Transportation Standards Act of 2006
PII	Personally Identifiable Information
REPP	Radiological Emergency Preparedness Program
RHRC	Regional Hub Reception Center
SEOC	State Emergency Operations Center
SLOSH	Sea, Lake, and Overland Surges from Hurricanes
TRAC2ES	TRANSCOM Regulating and Command and Control Evacuation Systems
TRANSCOM	U.S. Transportation Command
TTY	Text telephone
USACE	U.S. Army Corps of Engineers
VDEM	Virginia Department of Emergency Management
VMS	Variable-Message Sign
ZIP	Zone Improvement Plan

Appendix B. Terminology

Jurisdictions are encouraged to use the terms and definitions below.

Animal: Animals include household pets, service and assistance animals, working dogs, agricultural animals/livestock, exotic animals, and animals housed in shelters or rescue organizations.

Arrival Point: Any facility or point of entry into a host-state/jurisdiction that assists evacuees. Arrival points may include transfer points and reception processing sites (for transportation-assisted evacuees), welcome centers and information points (for self-evacuees), shelters, and other congregate facilities.

Common Operational Picture (COP): A shared understanding among on-scene and off-scene support personnel of an incident, including assumptions, facts, availability and location of resources, personnel, and the status of requests for assistance. A COP is established and maintained by gathering, collating, synthesizing, and disseminating incident information to all appropriate parties involved in an incident.

Critical Transportation Needs (CTN) Population: Evacuees with limited or no access to transportation who require assistance to evacuate safely. CTN populations may include, but are not limited to, homebound populations; individuals with access and functional needs, including individuals who do not speak English; individuals with household pets; unaccompanied minors; and individuals with no access to a vehicle or a ride with a friend/family.

Embarkation Point: An intake, processing, and departure site designated for the movement of government transportation-assisted evacuees, their animals (including household pets and service and assistance animals), their luggage, and/or their durable medical equipment. Embarkation modes of transportation include air, ground, and maritime. Government transportation-assisted evacuees may be registered, tracked, assessed for issues or needs, and placed on transport for evacuation to an arrival point.

Evacuation Clearance Time: The estimated time to evacuate people from the time an evacuation order is given until the time when the last evacuee can either leave the evacuation zone or the remaining population must shelter in place. The calculation is based on various factors such as the type of hazard or threat, level of notice of the incident, population characteristics of the area at the time, and public behavior.

Evacuation Coordination Group: A simple mechanism to exchange evacuation and shelter-in-place information across borders. The group's coordination encourages real-time decision making and establishes a clear and consistent message to the regional public regarding recommended actions, consistent with the National Incident Management System and Incident Command System.

Evacuation Order: A jurisdictionally initiated action for an organized, phased, and supervised withdrawal, dispersal, or removal of people from dangerous or potentially dangerous areas and their reception and care in safe areas.

Evacuation Transportation Site (also called **Evacuation Assembly Point** or **Pickup Point**): A temporary location exclusively for evacuation embarkation and transportation coordination in a field setting. Basic life-sustaining services are not generally available.

Evacuation Zone: A defined area to which residents may be directed to evacuate, depending upon the impacts of the hazard (e.g., tides, storm intensity, path, hazardous material exposure).

Host Jurisdiction: Jurisdictions tasked as destination locations for evacuees with government-coordinated or -sponsored evacuation sites. These jurisdictions “host” evacuees requiring shelter.

Individuals with Access and Functional Needs: Individuals having access and functional needs may include, but are not limited to, people with disabilities, older adults, and populations having LEP, limited access to transportation, and/or limited access to financial resources to prepare for, respond to, and recover from the emergency. Such needs are met by providing physical, programmatic, and effective communication access to the whole community by accommodating individual requirements through universal accessibility and/or specific actions or modifications. This includes assistance, accommodation, or modification for mobility, communication, transportation, safety, health maintenance, etc.; due to any situation (temporary or permanent) that limits an individual’s ability to act in an emergency.

Individuals with a Disability: Individual who has a physical or mental impairment that substantially limits one or more major life activities (an “actual disability”), or a record of a physical or mental impairment that substantially limits a major life activity (“record of”), or an actual or perceived impairment, whether or not the impairment limits or is perceived to limit a major life activity, that is not both transitory and minor (“regarded as”). Individuals with disabilities have civil rights protections that may not be waived under any circumstances, including throughout emergencies and disasters.

Information Points (also called **Welcome Centers**): Located on or near main evacuation routes, interstate highways, and state borders. These facilities are generally state-sponsored and located at state points of entry (e.g., rest areas, tourist centers) and provide self-evacuees:

- Information and/or directions to shelter facilities
- Access to restroom facilities
- A temporary rest during their evacuation
- A place to recharge mobile telephones or other electronic devices
- Limited access to food and water.

No-Notice Incident: An incident occurring with little or no warning and requiring rapid assessment, decision making, communication, and implementation of protective action.

Notice Incident: An incident where jurisdictions have warning of an impending hazard. The officials have time to prepare in advance, assess, communicate, and implement protective action measures. Typically, initial preparation discussions regarding the impending hazard occur as soon as the jurisdiction receives first notice of impact.

Pass-Through Community: Communities that are not evacuating their populations but are located on the evacuation routes of evacuating populations. Evacuees “pass through” these

communities en route to their final destinations. These communities may assist in facilitating evacuation operations.

Reception Center (also called **Community Reception Center**): An interim site along an evacuation route that provides mass care and other emergency services to evacuees arriving in a host location via government transportation. A Reception Processing Site may be located within an impact jurisdiction (although outside the impact area) or in a host jurisdiction. These locations provide life-sustaining services, such as food, water, basic medical support, and assignment and transportation to a shelter. Additional services may include disaster and local weather information, reunification, and crisis counseling. Temporary sleeping space may also be provided while evacuee needs are evaluated or if evacuees arrive late at night. Jurisdictions should arrange separate areas for unaccompanied minors, people without identification, and individuals subject to judicial and/or administrative orders restricting their freedom of movement. These sites may also process evacuees returning to the impact jurisdiction.

Re-Entry: The coordinated movement of first responders, recovery resources, and the public back into a community once a threat or hazard dissipates and the event causing the evacuation ends.

Refuge of Last Resort: A venue that is used by individuals when a hazard is imminent or occurs with no warning. These are not shelters and are meant to provide temporary and limited protection as an incident occurs.

Self-Evacuees: The evacuees with the means and capability to evacuate the impacted area without government-provided transportation assistance. The primary modes of transportation during an evacuation are foot, bike, car, train, and bus.

Shelter (Mass Care): A facility where government agencies and/or pre-established voluntary organizations process, evaluate, and provide disaster services to evacuees without an endpoint destination. Meals and water should be available, as well as basic first aid, pet sheltering (if applicable), sleeping quarters, hygienic support, and basic disaster services (e.g., counseling, financial assistance, and referral). Durable medical equipment, communication aids and other necessary support assistance will be available at these locations as well.

Shelter Demand: The estimated percentage or number of people in a population who will require mass care services in public shelters. A general rule of thumb is to plan for approximately 10-15 percent of the population, but this can vary widely based on socioeconomic factors, hazard specifics, and other variables.¹⁶

Shelter-in-Place: The use of a structure to temporarily separate individuals from a hazard or threat. Sheltering in place is the primary protective action in many cases. Often it is safer for individuals to shelter-in-place than to try to evacuate. Sheltering in place is appropriate when conditions necessitate that individuals seek protection in their home, place of employment, or other location when disaster strikes.

Spontaneous Evacuation: When individuals in threatened areas observe an incident or receive unofficial notice of an actual or perceived threat and, without receiving instructions to do so,

¹⁶ Estimated figure based on modeling conducted by the American Red Cross.

elect to evacuate the area. Their movement, means, and direction of travel are unorganized and unsupervised.

Spontaneous Evacuees: Evacuees who will evacuate regardless of directives by public officials due to perceived risk of danger.

Transfer Point (also called **Assembly and Transfer Center**): If applicable, locations where transportation-assisted evacuees move from their initial evacuation modes of transportation onto other transportation to a reception processing site or a shelter. Depending on drive times and/or distances, relief drivers and/or vehicles may be needed to comply with state and/or Federal safety regulations.

Unaccompanied Minor: A non-emancipated child, who is under the age of 18 and is the responsibility of a parent, legal guardian, or relative, who arrives at a shelter or other evacuation site without their parent, legal guardian, or other relative. These individuals should be put under the charge of local Child Protective Services and registered with the National Center for Missing and Exploited Children database to allow quicker identification and reunification.

Zero Hour: The time at which the evacuation operation must stop due to unsafe conditions from the impacts of a threat or hazard. Zero-hour actions are part of the Impact Phase and end prior to the incident impact, when all evacuation operations have or should have ceased (at the end of an operational period) to ensure the safety of first responders.

Appendix C. Authorities

In addition to the statutes, regulations, Executive orders, and Presidential directives outlined in the National Response Framework, this Appendix provides additional legal bases for evacuation operations and activities.

- The **Air Carrier Access Act**, as amended, requires carriers to permit service animals to accompany passengers with a disability (with some caveats for “unusual or exotic” service animals), addresses emotional support and psychiatric service animal transport in aircraft cabins, and provides guidance on carrying service animals.
- The **Americans with Disabilities Act (ADA)** provides regulations for accessibility and care for populations covered under this law that must continue to be met during the times of a disaster and during mass care support operations.
- The **Animal Welfare Act**, as amended, and associated regulations, requires that federally established standards of care and treatment be provided for certain warm-blooded animals bred for commercial sale, used in research, transported commercially, or exhibited to the public.
- The **Civil Rights Act of 1964** prohibits discrimination against individuals on the basis of race, color, and national origin by recipients of federal financial assistance.
- The **Emergency Management Assistance Compact (EMAC)** (Pub. Law 104-321) is a national interstate mutual aid agreement that enables states to share resources during times of disaster, providing timely and cost-effective relief to states requesting assistance from member states who understand the needs of jurisdictions struggling to preserve life, the economy, and the environment.
- **Executive Order 13166 – Limited English Proficiency** improves access to federally conducted and federally assisted programs and activities for persons who, because of national origin, have LEP.
- **Executive Order 13347 – Individuals with Disabilities in Emergency Preparedness** strengthens emergency preparedness with respect to individuals with disabilities.
- The **Fair Housing Act**, as amended, requires reasonable accommodations and modifications to housing policies (e.g., no pet fees, pet deposits, pet rent) for animals that serve individuals with disabilities, including in the aftermath of disasters.
- The **Health Insurance Portability and Accountability Act of 1996 (HIPAA)** considers legal and/or logistical constraints in the ability of host medical facilities to support evacuee healthcare needs. It was enacted to amend the Internal Revenue Code of 1986 to improve the portability and continuity of health insurance coverage in group and individual markets, to combat waste, fraud, and abuse in health insurance and health care delivery, to promote the use of medical savings accounts, to improve access to long-term care services and coverage, to simplify the administration of health insurance, and for other purposes.

- The **Health Research Extension Act** requires all Federal grantee institutions to have disaster plans that address the well-being of both animals and personnel during unexpected events that compromise ongoing animal care.
- The **Marine Mammal Protection Act**, as amended, establishes procedures, practices, and guidance for rescuing and rehabilitating stranded maritime mammals. Contingency plans for rehabilitation hospitals must include evacuation or shelter-in-place for emergency events.
- The **Rehabilitation Act of 1973**, as amended prohibits discrimination against individuals on the basis of disability by federal agencies and by recipients of federal financial assistance.
- The **Pets Evacuation and Transportation Standards (PETS) Act of 2006**, as amended, authorizes FEMA to provide rescue, care, shelter, and essential needs for individuals with household pets and service animals, and to the household pets and animals themselves, following a major disaster or emergency.
- The **Privacy Act of 1974 (U.S.C. §552a)** addresses records management of individuals and the sharing and disclosure of such information.

The following Federal laws and programs also impact evacuation planning. Check whether these impact your jurisdiction when planning evacuation and shelter-in-place actions.

- The **Chemical Stockpile Emergency Preparedness Program (CSEPP)** includes evacuation and shelter-in-place planning for communities surrounding the Army's chemical warfare agent stockpiles.
- The **Emergency Planning and Community Right-to-Know Act (EPCRA)** requires local governments to prepare chemical emergency response plans (to include evacuation and shelter-in-place).
- The **Radiological Emergency Preparedness Program (REPP)** includes emergency protective action (evacuation and shelter-in-place) planning requirements for incidents involving commercial nuclear power plants.

Additional state, local, tribal, and territorial laws and authorities may also exist.

Appendix D. Job Aids

Command Job Aid

A Command Job Aid is a quick-reference tool for key decision makers and elected and appointed officials on evacuation concept implementation. Their decisions are often critical to the success of a plan, as seen in recent events. In addition, education of key officials is vital to issuance of orders.

This tool lists considerations for threats that could trigger a large-scale shelter-in-place and/or evacuation operation. The Command Job Aid provides reminders of key actions when implementing protective actions. Additionally, this tool guides coordination between the Emergency Manager and the elected official(s) to help them effectively make executive decisions and take executive actions necessary throughout the operational process.

The following job aid is an example developed for a State Emergency Operations Center (SEOC). Other state, local, tribal, and territorial partners are encouraged to tailor the sample job aid below to the relevant jurisdiction(s). In using this tool jurisdictions should note that any text or numbers in blue is an example and are the data points that can be adjusted for individual jurisdiction use.

Sample Command Job Aid

Phase	Time	Questions for <i>[Jurisdiction Authority]</i> Consideration
Mobilization Phase	Potential Impacts within 120 Hours	<ul style="list-style-type: none"> <input type="checkbox"/> What are the potential impacts of the event? <input type="checkbox"/> Is sufficient information and monitoring of the forecasted threat/hazard in place/available? <input type="checkbox"/> Is the <i>[Jurisdiction Emergency Operations Center (EOC)]</i> activated per an Emergency Operations Plan (EOP) or another plan? <input type="checkbox"/> Are any critical staffing, resource shortages, infrastructure challenges, etc. likely to impact the ability to respond to the forecasted incident? Have these been communicated to partners? <input type="checkbox"/> What special contracts are being considered for implementation in support of the planned response? What are the lead and lag times? <input type="checkbox"/> What threshold/conditions will trigger jurisdiction officials to declare an emergency? <input type="checkbox"/> Is shelter-in-place a viable strategy for the threat? <input type="checkbox"/> Is evacuation required for impacted zones? <input type="checkbox"/> What is the capacity of the receiving zone to accept evacuees? <input type="checkbox"/> What is the recommended time/condition for the <i>[Jurisdiction Authority]</i> to communicate the recommendation to the Governor to declare a State of Emergency? <input type="checkbox"/> Other jurisdiction questions
Mobilization Phase	Potential Impacts within 96 Hours	<ul style="list-style-type: none"> <input type="checkbox"/> What is the current feedback on evacuation and shelter-in-place of functional and medical needs residents, hospitals, long-term care facilities, and the general public if needed? <input type="checkbox"/> What mass care resources does the jurisdiction have in place to receive evacuees? What are the projected resource requirements? <input type="checkbox"/> What public messaging efforts are underway at the local and state levels? <input type="checkbox"/> Are any forecasted or actual needs not being met? Have these been communicated to partners? <input type="checkbox"/> Other jurisdiction questions

Phase	Time	Questions for <i>[Jurisdiction Authority]</i> Consideration
Mobilization Phase	Potential Impacts within 72 Hours	<ul style="list-style-type: none"> <input type="checkbox"/> Is contraflow or emergency shoulder use potentially required? What preparatory actions are required? <input type="checkbox"/> What protective measures are being taken in the neighboring zones? What is the potential impact on <i>[Jurisdiction]</i>? <input type="checkbox"/> What actions are underway that will ensure retail fuel is available along evacuation routes? <input type="checkbox"/> What is the status of mass care shelters? What are the anticipated shelter requirements? <input type="checkbox"/> Are any forecasted or actual needs not being met? Have these been communicated to partners? <input type="checkbox"/> Other jurisdiction questions
Evacuation and Shelter-in-Place Phase	Potential Impacts within 48 Hours	<ul style="list-style-type: none"> <input type="checkbox"/> What is the status of functional and medical needs, long-term care facilities, and hospital evacuations? <input type="checkbox"/> What is the status of general population shelters? <input type="checkbox"/> Have any voluntary evacuations been initiated by local jurisdictions? What is the status of evacuation considerations by local jurisdictions? <input type="checkbox"/> What is the plan for staging resources/teams? <input type="checkbox"/> What critical infrastructure is in the potentially affected area and what protective measures are underway? <input type="checkbox"/> Are any forecasted or actual needs not being met? Have these been communicated to partners? <input type="checkbox"/> Other jurisdiction questions
Evacuation and Shelter-in-Place Phase	Potential Impacts within 24 Hours	<ul style="list-style-type: none"> <input type="checkbox"/> What is the status of traffic along the evacuation routes? <input type="checkbox"/> Is contraflow underway? <input type="checkbox"/> Are any life safety issues unresolved? <input type="checkbox"/> What conditions will require zero hour sheltering of response personnel and cessation of field operations? <input type="checkbox"/> Have zero-hour conditions been communicated to response staff? To the public? <input type="checkbox"/> Are any forecasted or actual needs not being met? Have these been communicated to partners? <input type="checkbox"/> Other jurisdiction questions
Impact Phase	Arrival of Impact	<ul style="list-style-type: none"> <input type="checkbox"/> Have field operations ceased for zero hour? Have responders sought refuge? <input type="checkbox"/> Has the public been advised to seek a refuge of last resort? <input type="checkbox"/> What is the status of infrastructure? <input type="checkbox"/> Are any forecasted or actual needs not being met? Have these been communicated to partners? <input type="checkbox"/> Other jurisdiction questions

Phase	Time	Questions for [Jurisdiction Authority] Consideration
Mass Care Phase	Pre-/Post-Impact	<input type="checkbox"/> What is the status of mass care for government-assisted evacuees? For self-evacuees? <input type="checkbox"/> How long until re-entry can begin? What conditions must be met to begin re-entry? <input type="checkbox"/> Are the communication and traffic flow resources in place and/or staged to support re-entry when needed? <input type="checkbox"/> What infrastructure/systems assessments are underway? When will they be complete? <input type="checkbox"/> What is the status of public messaging? <input type="checkbox"/> Are any forecasted or actual needs not being met? Have these been communicated to partners? <input type="checkbox"/> Other jurisdiction questions
Re-Entry Phase	Post Impact – Recovery	<input type="checkbox"/> Other jurisdiction questions

Essential Elements of Information

The tables below provide a quick reference of the information needed to inform response and create a COP.

Mobilization and Evacuation Phase

Essential Element of Information	Timeline	Responsible Entity	Specific Information	Methodology/ Source
Activation of EOC	Approximately 72 hours prior to event	Evacuating jurisdiction(s)	<ul style="list-style-type: none"> Forecast pre-evacuation and implications for impeding operations Hazard onset and timing Zones impacted Priorities of elected officials/executives 	<ul style="list-style-type: none"> National Weather Service (NWS) Predictive modeling Existing maps Census data Council of Governments
Local, State, Tribal or Territorial of Emergency Declaration	Approximately 72 hours prior to event	Evacuating jurisdiction(s)	<ul style="list-style-type: none"> Forecast pre-evacuation and implications for impeding operations Hazard onset and timing Zones impacted Priorities of elected officials/executives 	<ul style="list-style-type: none"> NWS Predictive modeling Existing maps Census data Council of Governments

Planning Considerations: Evacuation and Shelter-In-Place

Essential Element of Information	Timeline	Responsible Entity	Specific Information	Methodology/ Source
Evacuation Warning Order Timing	Contact made 8 hours prior to anticipated event/incident and updated twice per operational period	Evacuating jurisdiction(s)	<ul style="list-style-type: none"> • Hazard onset and timing • Zones impacted • Time of day • Routes available • Estimated affected population, including estimates of those with access and functional needs and specific demographics (e.g., languages spoken) • Communication status • Priorities of elected officials/executives 	<ul style="list-style-type: none"> • Predictive modeling • Existing maps • Census data • DOT • Universities/ Colleges • Council of Governments
Boundaries of Potential or Actual Incident Area (storm surge area, plume, fires, flooding, terrorist threat)	Initial estimate following notification and updated every operational period Modeling data as soon as available	Evacuating jurisdiction(s)	<ul style="list-style-type: none"> • Geographic limits of damage and zone impacts • Description of the potential or actual severity of damage • Estimated percentage of population evacuated, in need of evacuation, or sheltering in place 	<ul style="list-style-type: none"> • Predictive modeling • Remote sensing • Forecast data • On-scene reports via rapid assessment teams • Media • Public (via 9-1-1 and jurisdictional hotlines)
Hazard-specific information	Initial estimate no later than 4 hours after notification and updated every operational period	Evacuating, pass-through, and host jurisdictions	<ul style="list-style-type: none"> • Number or estimate of affected structures • Potential or actual estimated impacts to roads and other critical infrastructures • Potential or actual impacts associated with the release of hazardous materials or radiological incidents • Personal safety issues • Public health concerns 	<ul style="list-style-type: none"> • Predictive modeling • NWS • Jurisdictional EOC • Department of Agriculture • Public Health Departments • Department of Health and Human Services – Centers for Disease Control

Essential Element of Information	Timeline	Responsible Entity	Specific Information	Methodology/ Source
Weather	As soon as possible prior to evacuation and ongoing as required	Evacuating, pass-through, and host jurisdictions	<ul style="list-style-type: none"> Forecast pre-evacuation and implications for impeding operations 	<ul style="list-style-type: none"> NWS
Mass Care Information	Initial estimate following notification and updated every operational period	Evacuating, pass-through, and host jurisdictions	<ul style="list-style-type: none"> Estimated percentage of population evacuated, in need of evacuation, or sheltering in place Number of shelters (and type) currently open, on standby, or closed/full 	<ul style="list-style-type: none"> Jurisdictional EOC Shelters
Government Services Closures	Initial estimate following notification and updated every operational period	Evacuating jurisdiction(s)	<ul style="list-style-type: none"> County government closures County school closures County government fuel availability Emergency services suspense of services Public safety communication outages 	<ul style="list-style-type: none"> Jurisdictional EOCs Media Public (via 9-1-1 and jurisdictional hotlines)

Re-Entry Phase

Essential Element of Information	Timeline	Responsible Entity	Specific Information	Methodology/ Source
Initial Needs and Damage Assessments	Initial estimate within 6 hours following incident (post-landfall) and updated every 12 hours	Evacuating, pass-through, and host jurisdictions	<ul style="list-style-type: none"> Rapid needs assessment and preliminary damage assessment teams' reports Damages reported by local, state, and Federal agency EOCs Request for support to the state and Federal entities from local jurisdictions 	<ul style="list-style-type: none"> Rapid needs assessment and preliminary damage assessment teams Media Social media accounts Public (via 9-1-1 and jurisdictional hotlines) Jurisdictional EOC reports

Planning Considerations: Evacuation and Shelter-In-Place

Essential Element of Information	Timeline	Responsible Entity	Specific Information	Methodology/ Source
Status of Declarations	As soon as information becomes available and updated every operational period.	Evacuating, pass-through, and host jurisdictions	<ul style="list-style-type: none"> • Status of local emergency declarations • Status of state emergency declarations • Status of presidential disaster declarations • Jurisdictions included • Types of assistance authorized • Special cost-sharing provisions regarding direct Federal assistance 	<ul style="list-style-type: none"> • EOCs • Coordinated Communication with emergency managers at all levels • FEMA declarations • The White House
Status of Key Personnel	Post-notification and updated every operational period	Evacuating, pass-through, and host jurisdictions	<ul style="list-style-type: none"> • Incident Commander • Elected or appointed officials • Staffing needs for response operations 	<ul style="list-style-type: none"> • ESF #1 through ESF #N
Major Issues/ Shortfalls	Initial assessment following notification and updated every operational period	Evacuating, pass-through, and host jurisdictions	<ul style="list-style-type: none"> • Actual or potential resource shortfalls • Anticipated requirements for mutual aid • Status of request for support under the EMAC 	<ul style="list-style-type: none"> • ESF #1 through ESF #N • Rapid needs assessment team reports
Access Points to Disaster Area	Post-evacuation/ incident and updated every operational period	Evacuating jurisdiction(s)	<ul style="list-style-type: none"> • Location of access points • Credentials needed to enter • Best routes to approach the disaster area 	<ul style="list-style-type: none"> • Transportation • Public works • Military support • Law enforcement • Hospitals, clinics, and other healthcare facilities

Essential Element of Information	Timeline	Responsible Entity	Specific Information	Methodology/ Source
Status of Infrastructure	Initial estimate following notification and updated every operational period	Evacuating, pass-through, and host jurisdictions	<ul style="list-style-type: none"> • Status of life-safety infrastructure, including water mains, wastewater treatment, and other public utilities • Status of electrical generating facilities and distribution grid • Households without electric power • Households without natural gas • Status of natural gas transmission facilities and distribution pipelines • Status of refineries, gasoline, and oil distribution systems 	<ul style="list-style-type: none"> • Transportation • Public works • Energy • Private utilities and municipal utility districts
Status of residents	Initial estimate following notification and updated every operational period	Evacuating, pass-through, and host jurisdictions	<ul style="list-style-type: none"> • Confirmed and unconfirmed casualties • Primary threats to life safety 	<ul style="list-style-type: none"> • Jurisdictional EOCs • Media • Public (via 9-1-1 and jurisdictional hotlines)
Government Services Closures	Initial estimate following notification and updated every operational period	Evacuating jurisdiction(s)	<ul style="list-style-type: none"> • Government closures • School closures • Government fuel availability • Emergency services suspense of services • Public safety communication outages • Search and rescue operations 	<ul style="list-style-type: none"> • Jurisdictional EOCs • Media • Public (via 9-1-1 and jurisdictional hotlines)

Planning Considerations: Evacuation and Shelter-In-Place

Essential Element of Information	Timeline	Responsible Entity	Specific Information	Methodology/ Source
Status of Operations Outside of Region	Initial determination following notification and updated every operational period	State-level emergency management organization	<ul style="list-style-type: none"> • State priorities • Priorities outside of the state • Major operations in support of affected jurisdictions • ESFs that have been activated • Status of request for support under the EMAC 	<ul style="list-style-type: none"> • Emergency manager
Status of Re-entry Operations	Initial determination following notification and updated every operational period	Evacuating, pass-through, and host jurisdictions	<ul style="list-style-type: none"> • Status of life-safety infrastructure and roadways • Best routes to approach the disaster area 	<ul style="list-style-type: none"> • Transportation • Public works • SEOC and local EOC reports

Appendix E. Execution Checklists

Execution checklists are critical operational documents that translate the high-level key agency roles and responsibilities explained throughout a plan into tactical, operationally-driven checklists that outline options for specific actions.

This Appendix offers execution checklist examples to use when developing jurisdictional plans and during planning and executing evacuation and shelter-in-place operations. These examples and considerations are not prescriptive or comprehensive. Jurisdictions should combine, edit, or delete emergency support function (ESF) actions as needed to align with their annex and jurisdictional EOP.

These checklists serve as a direct aid during response operations and can support emergency managers and ESF partners in conducting timely decisions and executing appropriate actions to further life-safety operations. Execution checklists provide a sequential, time-phased reference for actions expected of individual ESFs. The intent is to guide a broad summary of actions for decision makers, liaisons, field staff, and other stakeholders when facing a threat that could initiate large-scale evacuation and/or shelter-in-place operations. As activities vary according to the incident, execution checklists should be interpreted as flexible considerations.

ESF #1—Transportation (Evacuation and Shelter Phase) Checklist

ID	Primary Agency	Support Agency	ESF #1—Transportation Evacuation and Shelter-in-Place Phase Actions	Completed (✓)
			Activate personnel and transportation partners to support the Evacuation and Shelter-in-Place phase.	
			Implement contraflow operations if authorized, in close coordination with: <ul style="list-style-type: none"> • ESF #5—Information and Planning • ESF #7—Logistics • ESF #13—Public Safety and Security • ESF #15—External Affairs. 	
			Implement access controls to close transportation infrastructure, entrances, and/or exits determined unsafe, in conjunction with ESF #13—Public Safety and Security.	
			Adjust traffic signal timing and implement other systems to expedite outbound traffic flow and public transit, in conjunction with: <ul style="list-style-type: none"> • ESF #5—Information and Planning • ESF #13—Public Safety and Security. 	

Planning Considerations: Evacuation and Shelter-In-Place

ID	Primary Agency	Support Agency	ESF #1—Transportation Evacuation and Shelter-in-Place Phase Actions	Completed (✓)
			<p>Activate mobilized assets, including staging areas, roadway support, and evacuation sites, in conjunction with:</p> <ul style="list-style-type: none"> • ESF #5—Information and Planning • ESF #13—Public Safety and Security. 	
			<p>Activate variable-message signs (VMS) and other messaging capabilities, in conjunction with:</p> <ul style="list-style-type: none"> • ESF #5—Information and Planning • ESF #13—Public Safety and Security • ESF #15—External Affairs. 	
			<p>If necessary, continue to halt work zone activities on primary evacuation routes, in conjunction with ESF #13— Public Safety and Security.</p>	
			<p>Track resource requirements for those with CTN, persons with disabilities, and others with access and functional needs evacuees, those with health and medical needs, and household pets and service animals.</p> <p>Provide information to ESF #13—Public Safety and Security or ESF #8—Public Health and Medical Services, as needed.</p>	
			<p>Survey current resources and request additional resources, as necessary.</p>	
			<p>Maintain streetlights, traffic signals, and other evacuation-related systems in conjunction with private-sector energy businesses.</p> <p>Utilize alternate power sources as available.</p>	
			<p>Coordinate with ESF #13—Public Safety and Security to remove damaged/immobile vehicles from the primary evacuation routes.</p>	
			<p>Determine zero-hour criteria for halting operations and sheltering personnel (wind speed, flooding conditions, inaccessible locations, hazardous material exposure limits).</p> <p>Communicate these criteria to workers, responders and the public, in close coordination with:</p> <ul style="list-style-type: none"> • Relevant authorities • ESF #5—Information and Planning • ESF #15—External Affairs. 	
			<p>Develop transportation objectives and priorities for the Impact Phase.</p>	

ID	Primary Agency	Support Agency	ESF #1—Transportation Evacuation and Shelter-in-Place Phase Actions	Completed (✓)
			Insert additional jurisdictional actions as needed.	

ESF #5—Information and Planning (Mobilization Phase) Checklist

ID	Primary Agency	Support Agency	ESF #5—Information and Planning Mobilization Phase Actions	Completed (✓)
			Activate the EOC (partial or full, depending on scale).	
			<p>Determine the need for contraflow.</p> <p>Begin working with appropriate authorities to activate personnel, procedures, and resources and communicate the contraflow decision and timing to the public and other stakeholders:</p> <ul style="list-style-type: none"> • ESF #1—Transportation • ESF #3—Public Works and Engineering • ESF #7—Logistics • ESF #13—Public Safety and Security • ESF #15—External Affairs. 	
			<p>Alert and activate personnel and partners to report (either in person or virtually) to the EOC.</p> <p>Provide personnel and relevant partners with hazard-and/or incident-specific information.</p>	
			Inform the chief elected or appointed official of the situation; coordinate the emergency declaration process, if required.	
			Establish a regular briefing schedule.	
			Consider contacting the field/regional coordinators to initiate a conference call with area counties and the SEOC.	
			Determine jurisdictional need for support from the state; request activation, if necessary.	
			Coordinate with the state and region regarding shelter vacancies.	
			Actively participate in state, NWS, FEMA, and other agency briefings/calls, upon request.	

Planning Considerations: Evacuation and Shelter-In-Place

ID	Primary Agency	Support Agency	ESF #5—Information and Planning Mobilization Phase Actions	Completed (✓)
			<p>Compare/contrast benefits to evacuation versus sheltering in place: what is the hazard, vulnerability, and anticipated exposure.</p> <p>Determine the appropriate protective action (e.g., shelter-in-place, point-to-point evacuation, or hub and spoke evacuation).</p> <p>Communicate strategy.</p>	
			<p>Determine zones affected (or likely impacted) by the incident.</p> <p>Analyze demographics of impacted zones.</p>	
			<p>Based on projections and demographics of impacted zones, determine type, scale, and resource needs for evacuation sites, to include evacuation transportation sites, Reception Centers, and shelters.</p> <p>Coordinate with the EOC to determine the transportation system to use (e.g., point-to-point, hub and spoke).</p>	
			<p>In coordination with ESF #7—Logistics, identify which sites to use as local forward staging areas.</p>	
			<p>In coordination with ESF #7—Logistics, identify mobilization gaps.</p> <p>Determine the need to activate pre-event, standby contracts, and/or the MOU/MOA to assist with filling identified gaps, as needed.</p>	
			<p>Participate in coordination calls; communicate situation updates with pass-through and host communities and other impacted jurisdictions.</p>	
			<p>Consider a pre-disaster declaration process, support for large evacuation events, and anticipated expenditures for Category B (Emergency Protective Measures) Public Assistance when the threat level exceeds the established threshold.</p>	
			<p>Collect any relevant plans, policies, procedures, and documents.</p> <p>Documents may include a jurisdictional CTN, access and functional needs, or health and medical needs registry, if available.</p>	
			<p>Identify primary motorist and pedestrian evacuation routes, in conjunction with ESF #1—Transportation and with assistance from ESF #3—Public Works and Engineering.</p>	

ID	Primary Agency	Support Agency	ESF #5—Information and Planning Mobilization Phase Actions	Completed (✓)
			<p>In coordination with ESF #13—Public Safety and Security, reassess risk to evacuation and shelter-in-place zones.</p> <p>Identify a phased system for implementation using zonal demographic data.</p>	
			<p>Estimate an evacuation timeframe for zones, in conjunction with ESF #1—Transportation.</p>	
			<p>Mobilize staging areas with resources for the Evacuation and Shelter-in-Place phase, in conjunction with:</p> <ul style="list-style-type: none"> • ESF #1—Transportation • ESF #3—Public Works and Engineering • ESF #6—Mass Care, Emergency Assistance, Temporary Housing, and Human Services • ESF #13—Public Safety and Security. 	
			<p>Communicate with facilities and systems that have individual standard operating procedures.</p> <p>Provide mobilization assistance to health and medical facilities, incarceration facilities, and other facilities and systems, as resources are available and requested, in conjunction with</p> <ul style="list-style-type: none"> • ESF #8—Public Health and Medical Services • ESF #13—Public Safety and Security. 	
			<p>If necessary, coordinate with ESF #1—Transportation and ESF #13—Public Safety and Security to halt work zone activities on evacuation routes.</p>	
			<p>Help mobilize VMS and/or other message signs at pre-designated areas, in coordination with:</p> <ul style="list-style-type: none"> • ESF #1—Transportation • ESF #13—Public Safety and Security. 	
			<p>Survey current resources and activate mutual aid/private sector agreements for additional resource needs.</p>	
			<p>Mobilize the selected evacuation strategy (e.g., point-to-point, hub and spoke).</p> <p>Mobilize selected facilities with staff, infrastructure, and resources.</p>	

Planning Considerations: Evacuation and Shelter-In-Place

ID	Primary Agency	Support Agency	ESF #5—Information and Planning Mobilization Phase Actions	Completed (✓)
			Initiate vehicle tow and breakdown support along routes, in conjunction with: <ul style="list-style-type: none"> • ESF #1—Transportation • ESF #13—Public Safety and Security. Ensure assisting agencies are communicated the nearest evacuation transportation site facilities to relocate stranded motorists.	
			Coordinate the strategy and resources to support evacuation and/or shelter-in-place support for pets, service animals, livestock, and other animals, in close coordination with: <ul style="list-style-type: none"> • ESF #6—Mass Care, Emergency Assistance, Temporary Housing, and Human Services • ESF# 11—Agriculture and Natural Resources. 	
			In conjunction with ESF #15—External Affairs (both local and state), determine messaging for the time-phased, zonal evacuation and sheltering in place.	
			Assess family reunification needs; assist with the program as needed.	
			Determine operational objectives, priorities, and rotation shifts for personnel in the Evacuation and Shelter-in-Place Phase.	
			Insert additional jurisdictional actions as needed.	

ESF #6—Mass Care, Emergency Assistance, Temporary Housing, and Human Services (Mass Care Phase) Checklist

ID	Primary Agency	Support Agency	ESF #6—Mass Care, Emergency Assistance, Temporary Housing, and Human Services Mass Care Phase Actions	Completed (✓)
			From the EOC, regularly provide updates to and receive updates from activated evacuation sites (e.g., evacuation transportation sites, Reception Centers) and other facilities, in coordination with ESF #8—Public Health and Medical Services.	
			Communicate situation updates to and from the EOC, especially for pass-through and host communities and other impacted jurisdictions.	
			Working with the EOC and in conjunction with ESF #15— External Affairs, ensure signage is clear and well posted and evacuation information is regularly updated.	

ID	Primary Agency	Support Agency	ESF #6—Mass Care, Emergency Assistance, Temporary Housing, and Human Services Mass Care Phase Actions	Completed (✓)
			Ensure persons with access and functional needs, and pet populations have suitable accommodations. Request resources as needed.	
			Develop objectives and priorities for Re-Entry phase.	
			Insert additional jurisdictional actions as needed.	

Appendix F. Resources

Training Resources

- **FEMA National Training and Education Division** provides training to the emergency management community, other homeland security professionals, and individuals to enhance their skills for preventing, protecting, responding to, and recovering from manmade and natural catastrophic events. The following evacuation-related training courses can be found at: <https://www.firstrespondertraining.gov/ft/>.
 - MGT-412: Sport and Special Event Evacuation Training and Exercise
- **FEMA Emergency Management Institute (EMI)** is the emergency management community's flagship training institution and provides training to local, state, tribal, Federal, volunteer, public, and private sector officials to strengthen emergency management core competencies for professional, career-long training. The following evacuation-related training courses are at training.fema.gov/emi.
 - G0358: Evacuation and Re-Entry Planning Course

Other Resources

- National Governors Association (NGA) Governors Guide to Mass Evacuation, 2014: <https://www.nga.org/wp-content/uploads/2018/08/GovGuideMassEvacuation.pdf>.
- Crisis Event Response and Recovery Access (CERRA) Framework, March 2018: <https://www.dhs.gov/publication/crisis-event-response-and-recovery-access>

Federal Evacuation Support Resources

Federal support and resources to state, local, tribal, and territorial evacuations may include:

- Transportation technical assistance and analysis for evacuation operations and evacuation route conditions.
- Information and coordination of mass care services for evacuations, including tracking the movement of evacuees, sheltering, feeding, reunification, temporary housing, and human and personal support services.
- Accommodations to ensure that evacuation assistance is inclusive of individuals with disabilities and others with access and functional needs.
- Supplemental assistance to state, local, tribal, and territorial jurisdictions in identifying public health, health maintenance, and medical needs of survivors, including patient movement, as well as reunification of children or older adults with an appropriate adult or family member.
- Support of state, local, tribal, and territorial public safety and security measures (e.g., crowd control, traffic management, control of contraflow lanes in evacuations).
- Information and coordination evacuating animals, including household pets and service and assistance animals.

- Debris removal and clearance of evacuation routes.
- Goods and services to support evacuation efforts and transportation services.
- Military and/or commercial contract aircraft to support evacuation operations.
- Regulatory waivers and exemptions.

Federal evacuation support resources include tracking and manifesting systems, reunification systems, evacuation support contracts, decision support tools, and personnel. These additional resources may be available contingent with, or in anticipation of, a Presidentially declared disaster. For more information and coordination, jurisdictions should contact their FEMA regional offices.

Tracking and Manifesting Systems

Tracking and manifesting systems coordinate the movement of evacuees, animals, and their belongings throughout evacuation and re-entry operations. Most of the tracking systems listed below do not interface with state tracking and manifesting systems.

- **National Mass Evacuation Tracking System (NMETS)**, FEMA: Tracks movement of evacuees, their household pets or service and assistance animals, luggage, durable medical equipment, and essential belongings, as well as assists in linking information of unaccompanied minors to the Unaccompanied Minor Registry hosted by the National Center for Missing and Exploited Children. NMETS can operate independently, using paper-based and/or advanced technology, or in combination to support local-level, state-managed, or multistate evacuation operations. Acquired information may be used to create transportation manifests, determine sheltering requirements, and inform operational decision-making regarding the allocation of emergency resources. The software and basic training are available at no cost to the states, but costs are associated with equipment and training. <https://www.fema.gov/individual-assistance-national-mass-evacuation-tracking-system>
- **Joint Patient Assessment and Tracking System (JPATS)**, Department of Health and Human Services (HHS): Tracks patients moved by the National Disaster Medical System (NDMS) from the point of entry into the patient movement system, to the NDMS health facility, and back to their originating location or destination. NDMS and other HHS teams utilize JPATS for tracking; however, HHS can also provide this tool at no cost to states.
- **Emergency Tracking and Accountability System**, Department of Defense (DoD), National Guard: Captures the names and other available identification information of patients as they proceed through the triage process conducted by the Homeland Response Force and/or Chemical, Biological, Radiological, and Nuclear Response Enterprise.
- **Global Air Transportation Execution System (GATES)**, DoD: The Air Mobility Command's aerial port operations and management information system supports automated cargo; passenger processing when DoD military airframes or DoD-contracted commercial airlines transport evacuees; reporting of in-transit visibility data to the Global Transportation Network; and billing to Air Mobility Command's Financial Management Directorate.
- **TRANSCOM Regulating and Command and Control Evacuation Systems (TRAC2ES)**, DoD: This automated information system combines transportation, logistics, and clinical decision elements into a seamless patient movement automated information system. It

visualizes, assesses, and prioritizes patient movement requirements, assigns resources, and distributes relevant data to deliver patients efficiently. The system automates the processes of medical regulation—assignment of patients to suitable medical treatment facilities—and aeromedical evacuation during peace, war, and contingency operations.

Reunification Systems

A reunification system helps reunite adults, children, and animals and helps displaced survivors establish contact with family, friends, legal guardians, and colleagues. FEMA has the statutory requirement to reunify unaccompanied minors with their custodial parents/legal guardians, as well as to assist with the voluntary reunification of adults with their families, during declared emergencies or disasters.

- **“Safe and Well” Website**, American Red Cross: This service is for those affected by disasters in the U.S, and their loved ones. Registering is voluntary and information is modifiable at any time. The American Red Cross provides registration information, as needed, to other organizations to locate missing persons, help reunite loved ones, or provide other disaster relief services.
- **Unaccompanied Minors Registry**, National Center for Missing and Exploited Children: This service allows the public to report information related to children 18 and under who are separated from their parents, legal guardians, or other relatives because of a disaster. It provides a place for emergency management agencies, law enforcement, shelter staff, hospital employees, schools, childcare institutions, and other organizations to report minors in their care during disasters. With a Presidentially declared disaster, the National Center for Missing and Exploited Children can also activate their Call Center to help locate children and reunify families who were lost or separated during the disaster or subsequent evacuations. The NMETS (see above) includes some elements of the Unaccompanied Minors Registry, allowing the intake of information about children separated from parents/legal guardians.

National Evacuation Contracts

FEMA maintains four evacuation-specific contractual agreements with private-sector vendors for transportation resources and operational planning support capabilities. Each contract provides varying degrees of support, and transportation assets are only provided through the National Medical Transport and Support Contract or the Air Transportation Support Services Contract.¹⁷

- **National Medical Transport and Support Contract**, FEMA: Activated to help patients and individuals who need assistance evacuating from an area at significant risk or to provide pre-hospital care and patient transport services in a region that already affected by a disaster.
- **Evacuation Planning and Operational Support for Motor Coaches Contract**, FEMA: Provides evacuation planning and supports use of motor coaches to evacuate the general population in response to Presidentially declared emergencies and major disasters within the continental United States. This contract provides generalized non-medical evacuation

¹⁷ If necessary, FEMA can contract for additional resources. If commercial transportation is not available, FEMA can request additional transportation assistance from DoD and other Federal agencies for general population and patient evacuation. DoD, through the NDMS, may provide fixed-wing air transportation for patient aero-medical evacuation with available resources, when approved by the Secretary of Defense.

planning for a large-scale motor coach evacuation operation and disaster-specific non-medical evacuation planning and operational support to facilitate the motor coach evacuation of CTN general population evacuees. This contract does not provide motor coaches. This contract includes or may provide:

- Activation of Central Dispatch Operations – Command & Control
- Crisis Action Planning, if no state plans exist
- Contractor evacuation liaison/subject matter expert support at all key motor coach operational sites
- Fleet management coordination (deployment of management staff to motor coach operations sites).
- **Air Transportation Support Services Contract, FEMA:** This provides additional operational flexibility for the safe and efficient transportation of people, teams, equipment, and assets in response to declared or undeclared emergencies within the United States, its territories and possessions. This contract includes or may provide:
 - Aircraft/Aircrew
 - Surface movement of equipment/personnel
 - Operations – aircraft ground support services
 - Operations – passenger service support
 - All-inclusive turnkey operations for FEMA air transportation (fixed- and rotary-wing)
 - Executive jet aircraft, passenger aircraft (medium, large, or jumbo), cargo/freight aircraft, and helicopters
 - Ground support services, ground transportation services, and a cadre of aviation subject matter experts.
- **Aviation Ground Support Contract, FEMA:** Supports the ability to obtain aviation related ground support services at U.S. airports. Contract support includes passenger services for up to 20,000 non-medical CTN evacuees, including individuals with access and functional needs, for a large-scale air evacuation at airfields that have undergone the pre-planning component and/or crisis action or adaptive operational planning for airfields that do not have an evacuation plan. This contract includes or may provide:
 - Passenger manifesting/holding
 - All aviation ground support equipment (e.g., baggage carts), services, and personnel
 - Baggage loading
 - Aviation expertise, liaison, and staff support
 - Aviation SMEs with contingency and emergency airfield operations experience.

Decision Support Tools

Various decision support tools can support evacuation planning and operations:

- **Hurricane Evacuation (HURREVAC), FEMA, USACE, NOAA:** This is a storm tracking and decision support tool of the National Hurricane Program, administered by FEMA, USACE, and NOAA's National Hurricane Center. The program combines live feeds of

tropical cyclone forecast information with data from various state Hurricane Evacuation Studies to help local emergency managers determine the most prudent evacuation decision time and the potential for significant storm effects, such as wind and storm surge.

- **National Disaster Medical System Bed Availability Report:** Over 1,800 civilian hospitals in the U.S. are voluntary members of the NDMS Bed Availability Report, providing approximately 100,000 hospital beds to support NDMS operations in an emergency. When a civilian or military crisis activates the NDMS, participating hospitals communicate available bed types and numbers to the Global Patient Medical Regulating Center. Patients can be distributed to several hospitals without overwhelming any one facility. Participating hospitals report the current number of available beds (within four hours) and the maximum number of beds, by category (burns, critical care, medical/surgical, negative pressure isolation, pediatric intensive care, pediatrics, and psychiatric) that can be available within 24 to 72 hours.
- **TRANSCOM Regulating and Command and Control Evacuation Systems (TRAC2ES), DoD:** This automated information system combines transportation, logistics, and clinical decision elements into a seamless patient movement automated information system. It visualizes, assesses, and prioritizes patient movement requirements, assigns resources, and distributes relevant data to deliver patients efficiently. The system automates the processes of medical regulation (assignment of patients to suitable medical treatment facilities) and aeromedical evacuation during peace, war, and contingency operations.
- **Transportation Analysis Simulation System, U.S. DOT, Department of Energy, and Environmental Protection Agency:** This system includes travel modeling procedures to meet the needs of state departments of transportation and metropolitan planning organizations for more accurate and sensitive travel forecasts for transportation planning and emissions analysis. The system outputs detailed data on travel, congestion, and emissions, which is increasingly important to investment decisions and policy setting. Since the system simulates and tracks travel by individuals, it can evaluate the benefits to and impacts on different geographies and travel markets, as well as evaluate highly congested scenarios and operational changes on highways and transit systems.
- **Nuclear Evacuation Analysis Code, Department of Energy:** Sandia National Laboratories developed this code to analyze shelter-evacuate strategies following an urban nuclear detonation. This tool can model a range of behaviors, including complex evacuation timing and path selection, as well as various shelter or mixed evacuation and shelter strategies. The calculations are based on externally generated, high-resolution fallout deposition and plume data. Scenario setup and calculation outputs make extensive use of graphics and interactive features. This software produces quantitative evaluations of nuclear detonation response options, but the outputs also help communicate technical insights concerning shelter-evacuate tradeoffs to urban planning or response personnel.
- **Real Time Evacuation Planning Model, DHS, through the Virginia Modeling, Analysis, and Simulation Center at Old Dominion University:** Originally developed for the DHS Science and Technology Directorate, this free, hands-on evacuation-planning modeling tool helps municipal and regional planners understand and prepare for emergencies. It estimates the time required for evacuating vehicles to clear a user-defined area for a variety of evacuation scenarios. The number and speed of evacuating vehicles are determined by user-assigned or modified variables, such as the time of day when an evacuation starts, evacuation

rate, the population's participation rate, and the number of people per vehicle, using parameters provided within the model.

- **Geocentric Environment for Analysis and Reasoning (GEAR™)**,¹⁸ USACE: This software suite simplifies the analysis/decision making process by combining spatial data and decision analysis. GEAR™ spatially and temporally enables decision analysis, allowing users to efficiently and intuitively assess, analyze, and compare alternative outcomes. GEAR™ provides decision, planning, and real-time support for a broad spectrum of mission areas and specific user cases, to include humanitarian assistance and disaster response efforts, medical communities, tactical situational awareness, operational level planning, environmental analyses, sociocultural influences, and resilience and vulnerability analyses.

Personnel

- **Evacuation Liaison Team, U.S. DOT:** The Evacuation Liaison Team is a non-deployable team that supports regional hurricane response efforts by facilitating the rapid, efficient, and safe evacuation of threatened populations.

Additional Federal Evacuation Support Resources

- **Department of Transportation (DOT)** maintains the ability to procure Mass Transit buses in support of evacuation operations.
- **Federal Aviation Administration (FAA)** provides aviation expertise and operational support through the U.S. DOT ESF #1—Transportation function at the local, regional, and national levels. This support includes:
 - Establishing and managing temporary flight restrictions over disaster areas, enabling evacuation and other relief aircraft to conduct missions more safely, flexibly, and rapidly.
 - Revising aircrew rest requirements for operators conducting critical relief missions.
 - Quickly restoring air navigation services, facilities, and systems damaged or otherwise disrupted in the disaster area to ensure that services needed for evacuation flights and other relief missions receive priority.
 - Establishing operational cells at FAA facilities that directly support evacuation and other operational disaster response.
- **Federal Highway Administration (FHWA):** While FHWA does not have regulatory authority to direct movement on highways, in a catastrophic event where Federal agencies are working with state authorities, the FHWA may provide technical support to state officials for highway evacuation operations.
- **Federal Transit Administration (FTA)** regulates transit operations when needed for national defense, in the event of a national or regional emergency, or to establish and enforce a program to improve the safety of U.S. public transportation systems. FTA may not regulate the rates, fares, tolls, rentals, or other charges prescribed by any provider of public transportation.
- **Federal Railroad Administration (FRA)** may stop or limit rail service, including freight and passenger service and some commuter rail service, to abate unsafe conditions. This

¹⁸ GEAR™ is a registered trademark of Reinventing Geospatial, Inc. provided under contract to USACE.

authority applies to all railroad service connected to the general freight and passenger rail system but does not extend to rail rapid transit systems not part of the general railroad system.

Non-Evacuation-Specific Resources

During notice and no-notice incidents, jurisdictions may employ the following non-evacuation-specific resources for evacuation purposes, if needed and available:

- National Disaster Medical System
- Ground transportation (e.g., cars, ambulettes, accessible transport, buses)
- Rail transportation (e.g., Amtrak, commuter trains, streetcars)
- Air transportation (e.g., commercial and military air carriers)
- Maritime transportation (e.g., cruise ships, ferries)
- Ground transportation support services (e.g., fuel)
- Geographic information systems (e.g., GeoHealth Platform).
- National Mass Care Strategy: <https://nationalmasscarestrategy.org/>.

Appendix G. Using the Six-Step Planning Process

Evacuation and shelter-in-place plans should align with and support incident-specific plans developed using the planning process described in CPG 101.¹⁹ The following subsections detail the six steps of the CPG 101 planning process.



Figure 6: Six-Step Planning Process from CPG 101

Step 1: Form a Collaborative Planning Team

The most realistic and complete plans result from a diverse planning team that includes representatives from the whole community. While jurisdictions can engage a large number of partners to develop their Emergency Operations Plan (EOP), they should specifically include partners with key roles in evacuation or shelter-in-place operations. These partners may include:

Public Safety

- State, local, tribal, or territorial law enforcement
- Fire services
- Emergency medical services
- Public works
- Fusion centers
- Transportation sector (e.g., public transportation systems, local transportation departments)
- National Guard
- Public safety communications
- Hospitals and healthcare facilities

Education

- School administration

Other Governments and Agencies

- Elected officials

¹⁹ FEMA. *CPG 101: Developing and Maintaining Emergency Operations Plans*, Version 2.0. Washington, DC. 2010. [fema.gov/pdf/about/divisions/npd/CPG_101_V2.pdf](https://www.fema.gov/pdf/about/divisions/npd/CPG_101_V2.pdf)

Private Sector

- Critical infrastructure owners and operators (public and private)
- Private utilities providers
- Private nonprofit organizations
- Volunteer organizations
- Faith-based organizations
- Human and social services organizations (e.g., organizations that address disability and access and functional needs, children’s issues, immigrant and racial/ethnic community concerns, animal welfare, or service animals)
- Disability services
- Media outlets (including social media).

Step 2: Understand the Situation

This step has two aspects: Jurisdictions need to understand how a new annex will coordinate with existing plans and to understand potential events and their impacts on the community.

Prior to integrating evacuation or shelter-in place into a jurisdiction’s emergency plan or developing relevant annexes, planners should understand their EOP and any relevant supporting plans and annexes, such as mass care and emergency public warning annexes. Annexes supplement the EOP and should be consistent with it, not duplicate or conflict with it. A jurisdiction’s base EOP or supporting plans will address many responsibilities and actions when implementing evacuation or shelter-in-place, as these actions are frequently required regardless of the specific threat or hazard. An evacuation/shelter-in-place annex should therefore address the unique characteristics and requirements not already covered in the EOP or other annexes.

Once assembled, the planning team begins identifying potential consequences and impacts on the community that would require an evacuation or shelter-in-place order and the estimated resources necessary to implement these protective actions.

Step 3: Determine Goals and Objectives

The planning team works proactively with the community to identify capability gaps related to the potential incidents. Planners should consider the following goals and objectives based on the community profile and a shared understanding fostered in Step 2.

- **Operational Priorities:** What the responding organizations are to accomplish to achieve a desired end-state for the operation.
- **Operational Goals:** Broad, general statements that indicate the intended solutions to problems. They are what personnel and equipment resources are supposed to achieve.
- **Operational Objectives:** Specific and identifiable actions carried out during the operation that achieve response goals and determine the actions that participants in the operation must accomplish.

The goals and objectives for the evacuation and shelter-in-place annex to their EOP should align with the planning principles in this document.

Step 4: Plan Development

Based on the information obtained during Step 3, the planning team can begin plan development. Planners should refer to CPG 101 for writing and reviewing checklists, as well as format considerations. Courses of Action should address the overarching evacuation and shelter-in-place operation, to include resource allocation and prioritization efforts.

In addition, planning for evacuation and shelter-in-place protective actions should aim to:

- Reduce the number of people required to evacuate (e.g., create evacuation zones to target geographic areas susceptible to hazards)
- Shelter evacuees as close to the impact area as safely possible to reduce the economic burden and accelerate recovery operations
- Identify suitable shelter options that are not susceptible to incident threats/hazards
- Evacuate communities together to provide an internal support structure
- Disperse evacuee populations among various host communities to reduce the burden on individual jurisdictions and ensure accountability of all evacuated individuals
- Increase interoperability between tracking, reunification, and sheltering systems
- Ensure plan compliance with Federal and state accessibility requirements
- Coordinate evacuation resource allocation (multiple jurisdictions may depend on or compete for the same resources to support evacuation operations) and evacuation route planning
- In a widespread catastrophic event, shelter or evacuate displaced residents who are unable to return to their permanent residence as close to the impact community as possible (preferably within the impact state) to reduce the burden on host jurisdictions, the individuals and to facilitate recovery operations.

Step 5: Plan Preparation, Review, and Approval

Jurisdictions have different processes and procedures to prepare, review, and approve evacuation and shelter-in-place plans. This step involves preparing the plan, reviewing it for conformity to state and Federal regulatory requirements, and submitting it to the appropriate elected officials for approval. During this step, jurisdictions may want to revisit and update the incident analysis brief, update partners, and deconflict plans with local, regional, and state agencies.

Step 6: Plan Implementation and Maintenance

Jurisdictions should implement the plan so stakeholders throughout the whole community know their roles and responsibilities before, during, and after evacuation and shelter-in-place operations. All organizations named in the plan and supporting partners should train, exercise, and communicate the plan. Additionally, jurisdictions should routinely implement continuous improvement measures for their evacuation and shelter-in place plans to maintain an effective plan for protective actions. Jurisdictions can achieve this through tabletop or full-scale exercises or through lessons learned from real-world events.

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