U.S. Fire Administration
Working for a fire-safe America

National Wildfire Evacuation Planning Guidance

1st Edition

FEMA

Mission Statement

We support and strengthen fire and emergency medical services and stakeholders to prepare for, prevent, mitigate and respond to all hazards.

U.S. Fire Administration

Working for a fire-safe America

Disclaimer

Wildfire prevention and management is a multi-agency effort. The Federal Emergency Management Agency (FEMA) coordinates across federal agencies to help state, local, tribal, and territorial partners respond to wildfires nationwide. The ideas presented in this document have been compiled from multiple sources and represent guidelines and best practices related to planning for wildfire evacuations but should not be construed as requirements or absolutes. Since the nature of crises can change, this guidance must not be considered all-encompassing, always taking all unique local circumstances into account.

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Acronym List

ADA	Americans with Disabilities Act
AFN	access and functional needs
AHJ	authority having jurisdiction
ASL	American Sign Language
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
CERT	Community Emergency Response Team
CTN	critical transportation needs
CWPP	Community Wildfire Protection Plan
DEM	digital elevation models
EAS	Emergency Alert System
EMS	emergency medical services
FAC	fire-adapted communities
FEMA	Federal Emergency Management Agency
FSLTT	federal, state, local, tribal and territorial
GIS	geographic information systems
ICS	Incident Command System
IAFC	International Association of Fire Chiefs
IMT	Incident Management Team
IPAWS	Integrated Public Alert and Warning System
MDD	Message Design Dashboard
NFPA	National Fire Protection Association
NGO	nongovernmental organizations
NIMS	National Incident Management System
NOAA	National Oceanic and Atmospheric Administration
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NWR	NOAA weather radio

POD	point of distribution
PPE	personal protective equipment
RTEPM	Real Time Evacuation Planning Model
TCP	traffic control point
TFRA	Temporary Fire Refuge Areas
USFS	U.S. Forest Service
WEA	Wireless Emergency Alert
WUI	wildland urban interface

1. Executive Summary

Wildfires are a threat to communities, particularly in wildland urban interface (WUI) areas, where human development meets or intermixes with vegetation, and in urban areas, where buildings within a city abut an island of green space. Recent catastrophic fires show the devastating consequences of these fast-moving natural disasters. This document provides an adaptable framework to guide agencies at all jurisdictional levels – federal, state, local, tribal, and territorial – in developing and implementing effective evacuation plans. This guidance includes a Wildfire Evacuation Plan Template that can be used as a starting point for agencies in creating, implementing, and refining evacuation plans that are both comprehensive and adaptable for their own use. The purpose of this guidance, framework and the planning template is simple but critical: to save lives.

At its core, the guidance provides tools and strategies for agencies to proactively assess wildfire risks, prepare to safely evacuate community members, and coordinate evacuations across multiple stakeholders. It emphasizes the need for consistent terminology and processes to reduce confusion during emergencies, enabling clear communication between responders and the public. Using this guidance, agencies can enhance readiness by identifying vulnerabilities, mitigating risks, and ensuring evacuation strategies for all community members, including those with access and functional or critical transportation needs.

This guidance advocates for the proactive identification of vulnerabilities and the establishment of strategies to address them to include the appropriate role of Temporary Fire Refuge Areas (TFRAs). They serve as vital safe havens when evacuation routes are compromised or time is insufficient, offering temporary protection from immediate threats like flames and heat. The framework emphasizes planning for both notice evacuations, where advance warning allows phased responses, and no-notice evacuations, where rapid fire spread demands immediate action with little to no preparation time. These scenarios require distinct strategies to ensure timely and safe community egress, as well as alternative options to protect people from harm.

Public engagement and education are cornerstones to protecting life safety both before and during wildfire incidents that may require evacuation. A key pillar of wildfire preparedness is fostering a culture of shared responsibility. In addition to providing guidance and issuing wildfire warning messages, it is essential for agencies to emphasize the importance of individual preparedness such as creating defensible spaces, structural hardening, maintaining emergency kits, and heeding evacuation orders. This partnership between local agencies and the public strengthens resilience and ensures more effective evacuations.

The benefits of building a solid evacuation plan are far-reaching: enhanced public safety, streamlined operations, reduced confusion, and a stronger foundation for interagency collaboration. While no plan can fully eliminate the dangers of wildfires, this guidance equips communities to face these events with greater preparedness and confidence.

2. Introduction

2.1. Purpose and objectives

The increasing frequency and intensity of wildfires are impacting WUI areas more than ever before. The 2018 Camp fire, which resulted in 85 fatalities and the destruction or damage of over 19,000 buildings;[1] the 2023 Lahaina fire, which resulted in over 100 fatalities and the destruction of 2,200 structures;[2] and the 2025 Palisades/Eaton fires, which resulted in 30 fatalities and the destruction of over 16,000 buildings;[3,4] demonstrate the need to create an adaptable wildfire evacuation planning framework. This document aims to assist fire departments, law enforcement agencies, emergency management agencies, and other organizations at all jurisdictional levels—to include federal, state, local, tribal and territorial—in planning, executing, and communicating effective evacuation plans.

The objectives of this guidance are to:

1. **Enhance Public Safety:** Assist in creating evacuation plans that will help to increase the safety and well-being of all community members, including vulnerable/higher risk populations, pets, and livestock during incidents that require evacuations.

2. **Encourage Operational Preparedness:** Help prepare organizations to handle diverse scenarios, including both notice and no-notice wildfire events, through a flexible framework.

3. **Assist in Facilitating Interagency Communication and Coordination:** Promote collaboration between various stakeholders, including local response agencies private sector, and community organizations. Specifically, coordination with FCC, cell carriers, and radio/TV broadcasters for troubleshooting and collaboration.

4. **Minimize Confusion:** Promote consistent terminology and procedures to reduce confusion among the public. Common terminology will also help to accommodate the needs of transitory and multilingual populations.

This guidance is rooted in the principles of the National Incident Management System (NIMS)[5] and emphasizes consistency, standardization, and flexibility. By incorporating lessons learned from large-scale fire disasters affecting communities, this guidance provides a consistent framework for local wildfire evacuation planning. Each local stakeholder involved in wildfire evacuation planning will need to consider how to most appropriately apply this guidance and framework and will likely need to make adaptations that account for the unique considerations in their community.

[1] Federal Emergency Management Agency. (2022). *Paradise, California: Rebuilding Resilient Homes after the Camp Fire* (Interagency Recovery Coordination Case Study). U.S. Department of Homeland Security. https://www.fema.gov/sites/default/files/documents/fema_paradise-california-rebuilding-resilient-homes_case-study.pdf
[2] Maui Emergency Management Agency. (2024). *Maui Wildfires 2023* (After-Action Report). County of Maui. https://www.mauicounty.gov/DocumentCenter/View/151355/MEMA-2023-Wildfire-After-Action-Report
[3] The California Department of Forestry and Fire Protection (CAL FIRE). (2025, May). Palisades Fire. https://34c031f8-c9fd-4018-8c5a-4159cdff6b0d-cdn-endpoint.azureedge.net/incidents/2025/1/7/palisades-fire
[4] The California Department of Forestry and Fire Protection (CAL FIRE). (2025, May). Eaton Fire. https://34c031f8-c9fd-4018-8c5a-4159cdff6b0d-cdn-endpoint.azureedge.net/incidents/2025/1/7/eaton-fire
[5] Federal Emergency Management Agency. (2025, February). *National Incident Management System*. U.S. Department of Homeland Security. https://www.fema.gov/emergency-managers/nims

2.2. Audience

This document is intended primarily for experts and authorities having jurisdiction in wildfire evacuation planning including:

- Fire departments and/or districts.
- Emergency management.
- Law enforcement agencies.
- Federal, state, local, tribal, and territorial (FSLTT) government authorities having jurisdiction in wildfire evacuation planning.

2.3. Scope

This guidance covers the lifecycle of wildfire evacuation planning:

1. **Pre-evacuation preparation:** Help agencies plan for evacuations during notice and no-notice wildfire events.
2. **Real-time evacuation execution:** Provide guidance on decision-making tools and communication strategies, meant to be used during an evacuation event.
3. **Post-evacuation recovery:** Ensure smooth repopulation and evaluation of evacuation operations.

By integrating insights from research, post-incident after action reviews, and existing plans and templates, this document provides organizations with actionable, evidence-based strategies to help communities with planning. For entities and communities with existing wildfire evacuation planning, this document is not meant to make irrelevant or supersede existing wildfire evacuation planning efforts within a jurisdiction, rather, this document is intended to supplement and inform continuous improvement of efforts. For entities and communities new to wildfire evacuation planning, this guidance and framework provide a comprehensive starting point and reference throughout the planning process and production of a Wildfire Evacuation Plan that can integrate with Emergency Operation Plans, Community Wildfire Preparedness Plans (CWPPs), community risk-reduction plans and other relevant planning efforts.

2.4. How to use this guidance

Planning, response, and other organizations can use this guide as:

- **A planning tool:** To help inform and guide discussion around key planning concepts during evacuation plan development.
- **An operational resource:** To provide an initial framework for decision making around wildfire evacuation during emergencies as a part of the planning process.
- **An educational resource:** To serve as a resource in educating and training personnel and the public about evacuation preparedness and operations.

A Wildfire Evacuation Plan Template is included in the main body of this guidance document. The various appendices provide more in-depth context, resources, and implementation guidance related to the planning framework. It is recommended that any organization using the Template for planning thoroughly review the related information in the appendices.

2.5. Key challenges

1. Rapid onset of fires and no-notice incidents

Wildfires, especially those driven by high winds, escalate rapidly, leaving minimal time for coordinated evacuation efforts. Recent catastrophic fires have demonstrated the need to reassess wildfire evacuation planning to avoid loss of life from extreme fire behavior.

2. Limited egress routes

Many regions have limited road networks that often become congested during evacuations, leading to gridlock and increased risk. Strategic planning must address traffic flow, alternative routes, and alternate evacuation strategies like TFRAs.

3. Varied community needs

Communities are not homogeneous. Evacuation plans must account for the following:

- Older adults, children, and people with disabilities who may require more assistance.
- Visitors unfamiliar with local geography and evacuation protocols.
- Residents dependent on public transportation or lacking access to private vehicles.
- Populations within hospitals, nursing homes, correctional facilities and other facilities that may require special considerations.
- Daytime versus nighttime population considerations and means of egress.
- Large animal populations that may require trailers or other special considerations.

4. Communication barriers

Clear, consistent messaging is critical for success. Delays in the message approval and dissemination process, delays and failures in alerting systems, poorly crafted public messaging, and an absence of multilingual communication, can hinder timely evacuations.

2.6. The importance of consistency and standardization

Disasters demand swift and decisive action under extreme conditions. However, the absence of consistent evacuation terminology and processes across jurisdictions often creates confusion. This confusion intensifies as people move from one jurisdiction to another or travel across jurisdictions for leisure. This evacuation guide suggests standardized terminology meant to support the following:

- Improve public comprehension of messages about wildfire evacuation.
- Enhance interoperability between neighboring jurisdictions.
- Strengthen trust and credibility with communities through plain language messaging.

The following sections provide detailed guidance and resources to help agencies at all levels execute effective evacuation plans.

2.7. Limitations of this guide

The harsh realities of wildfire evacuations

Utilizing this evacuation planning guidance or the framework below cannot guarantee the preservation of life during wildfire evacuations. Additionally, not all the components contained in the framework are equal in their life-saving usefulness. Considering all factors, however, the guidance helps create a viable evacuation plan.

While some aspects of fires can be managed, some fire behaviors are beyond human control. Wildfires, particularly those driven by intense winds and occurring with little warning, historically remain among the most devastating and unpredictable natural disasters. Their speed and ferocity can create conditions that overwhelm even the most meticulously crafted plans. Fast fires can block escape routes, outpace warnings to citizens, and force split-second life and death decisions.

Community preparation and personal responsibility are paramount in the effort to increase survival rates. Preparedness, therefore, is not just a plan; it is a shared responsibility and a public safety imperative. Agencies can issue warnings, coordinate evacuations, provide tools for safety, and execute the best response plans, but survival often depends on the actions of individual residents and communities. Creating defensible space,

using fire-resistant building and landscaping materials, packing emergency kits, developing personal and family evacuation plans, and responding promptly to evacuation orders should not be viewed as optional steps; they are vital measures that are key to saving lives. Without individual readiness, even the most robust evacuation plan will struggle to prevent tragedy.

Evacuations will never be seamless or entirely safe. Wildfires are inherently chaotic. The potential for very rapid spread of fire demands constant vigilance and proactive measures from every stakeholder—agencies, residents, and entire communities. This guidance aims to minimize risks, but the grim truth remains that lives will still be lost, and devastation will still occur. Confronting these realities with honesty and resilience is the only way to foster a culture of preparedness and build the systems necessary to protect as many lives as possible.

3. Terminology Standardization

3.1. Common definitions and key terms

Borrowing from the lessons learned during past disasters and the success of NIMS, wildfire evacuation planning efforts must employ consistent and standardized terminology to ensure clear communication among responders, agencies, and the public. Discrepancies in language during high-pressure situations lead to confusion, delays, and safety risks. This section outlines suggested key terms and definitions critical to the creation and implementation of evacuation plans.

Access and functional needs (AFN) populations:

Refers to groups of people who may require additional support or accommodations during an emergency due to physical, developmental, or cognitive disabilities, chronic health conditions, limited English proficiency, age, or other factors that could hinder their ability to evacuate or access essential services and information; essentially, anyone with needs that may make it difficult to self-care during a crisis. This includes older adults, children, pregnant women, people with disabilities, unhoused populations, and those with limited transportation access. For more information, go to Appendix E: AFN/CTN Populations and Other Special Considerations.

Contraflow:

A traffic management technique that allows vehicles to travel in the opposite direction of normal traffic flow. Contraflow lanes can be used to evacuate people in the event of a major emergency, such as a hurricane or wildfire. For more information on traffic management, go to Appendix C.5: Managing Traffic Flow During Evacuations.

Critical transportation needs (CTN) populations:

Encompasses any evacuees with limited or no access to transportation and those who require assistance to evacuate safely. A significant percentage of the jurisdictionally supplied evacuations may directly support individuals who need transportation assistance, including accessible transportation. Jurisdictions must consider these needs during planning to account for any resource shortages of either transportation or medical/healthcare personnel. Additionally, jurisdictions should regularly review and deconflict contracts for transportation support in planning for CTN populations. For more information, go to Appendix E: AFN/CTN Populations and Other Special Considerations.

Data interoperability:

Ways in which data is formatted allow diverse datasets to be merged or aggregated, permitting the rapid sharing of evacuation and emergency data across agencies.

Decision points:

Critical markers (criteria) that support decision-making on emergency notifications, evacuation orders or other incident management actions. Decision Points may be tied to geographical locations, fire behavior observations or predictions, or specific life safety or incident management objectives. They may be determined or supported by fire behavior models and weather forecasts. (Decision Points are also sometimes referred to as 'management action points.') For more information, go to Appendix C.6 Determining Decision Points for Evacuating Zones.

Evacuation order

A directive to leave immediately due to imminent danger. Compliance is essential for personal safety. While an Evacuation Order can be preceded by an Evacuation Warning, it may not be if conditions dictate immediate issuance of evacuation orders.

Evacuation shelter

Serves the general population in an existing facility (or facilities), such as a school, community center, convention center or church that the Authority Having Jurisdiction (AHJ) has temporarily converted for use as a shelter for disaster survivors.

Evacuation warning

A notification issued when there is a **potential for issuance of an evacuation order**. Residents requiring more time to evacuate, such as people with disabilities or who have livestock, may be advised to leave earlier.

Evacuation zone

A designated area within a community used for evacuation planning and implementation. For more information, go to Appendix C4 Creating, Labeling and Managing Evacuation Zones.

Geographic Information Systems (GIS)

A computer system that analyzes and displays geographically referenced information that is applied to support wildfire planning, analysis, communication, information sharing and mapping of evacuation routes, evacuation zones and hazards.

Integrated Public Alert and Warning System (IPAWS)

FEMA's national system for local alerting that provides authenticated emergency and life-saving information to the public through mobile phones using Wireless Emergency Alerts (WEA),[6] to radio and television via the Emergency Alert System (EAS),[7] and on the National Oceanic and Atmospheric Administration's (NOAA's) Weather Radio (NWR).[8] Learn more from the IPAWS 101 Fact Sheet[9] and also go to Appendix D.2 Real-Time Alerts and Notifications for more details and resources.

Mutual aid

A voluntary agreement between agencies to share resources and services to help each other when needed.

Notification channels

Communication channels capable of pushing emergency messaging to the public. Each has their own advantages and disadvantages and planners should be familiar with each to understand which to employ. For more information on notification channels, go to Appendix D.2 Real-Time Alerts and Notifications.

Point of distribution (POD)

A designated, centralized location where people can pick up necessary items after a crisis. These locations provide access to life-sustaining supplies like food, water, and sometimes other essential items, following a disaster or emergency when normal distribution channels are disrupted.

Shelter-in-place

The use of a structure to temporarily separate individuals from a hazard or threat. This should be a last resort, only when evacuation or other options pose greater risks.

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[6] Federal Emergency Management Agency. (2023, October). *Wireless Emergency Alerts*. U.S. Department of Homeland Security. https://www.fema.gov/emergency-managers/practitioners/integrated-public-alert-warning-system/public/wireless-emergency-alerts

[7] Federal Emergency Management Agency. (2023, October). *Emergency Alert System*. U.S. Department of Homeland Security. https://www.fema.gov/emergency-managers/practitioners/integrated-public-alert-warning-system/public/emergency-alert-system

[8] National Weather Service. (2025, July). NOAA Weather Radio. U.S. Department of Commerce, National Oceanic and Atmospheric Administration. https://www.weather.gov/nwr/

[9] Federal Emergency Management Agency. (2024, January). *IPAWS 101: America's System for Local Emergency Alerts*. U.S. Department of Homeland Security. https://www.fema.gov/sites/default/files/documents/fema_ipaws_101-slicksheet_042024.pdf

TFRA or equivalent

A pre-identified or ad-hoc space or building in which evacuees can shelter during a fast-moving wildfire, particularly when a planned escape route becomes compromised or there is no time to evacuate safely. It is an area that provides a temporary level of protection from the immediate life-threatening effects of direct flame. These areas are Typed based on capacity and level of protection. For more information on TFRAs, go to Appendix C.3 Temporary Fire Refuge Areas.

Traffic control points (TCP)

A critical location where emergency responders, usually law enforcement or other emergency personnel, are stationed to manage the flow of traffic. These points are established to regulate the flow of vehicles and pedestrians and to ensure the orderly and safe movement of residents or visitors out of a threatened area, while also allowing entry of emergency vehicles.

Vulnerable/higher risk populations

Groups of people who are more likely to experience poor physical, psychological, or social health. These populations are often at a higher risk due to a combination of social, health, and/or economic factors. For more information on these populations, go to Appendix E: AFN/CTN Populations and Other Special Considerations.

Wildland urban interface (WUI)

The geographical area where human development, including structures and other infrastructure, meets or intermixes with undeveloped wildlands.

The WUI is often further distinguished into two WUI types based on housing densities as outlined by the National Institute of Standards and Technology (NIST) (WUI Definitions website):[10]

- Interface: High-density development adjacent to undeveloped wildland vegetation.
  - There is a clear line of demarcation between residential, business, and public structures and wildland fuels; wildland fuels do not generally continue into the developed area.
  - ≥ 3 structures/acre (741 structures/km^2).
  - ≥ 250 people/mi^2 (96 people/km^2).
  - Structures that directly abut wildland fuels.
  - Fire protection of the structures from both an interior fire and an advancing wildland fire provided by the local fire department.
- Intermix: Lower-density housing mingled with undeveloped wildland vegetation.
  - There is no clear line of demarcation; wildland fuels are continuous outside of and within the developed area.
  - ≥ 1 structures/40 acres (6.18 structures/km^2).
  - (28 to 250) people/mi^2 [(11 to 96) people/km^2].
  - Structures are scattered throughout a wildland area.
  - Fire protection districts provide life and property protection and may also have wildland fire protection responsibilities.

[10] NIST Engineering Laboratory/Fire Research Division. (2023, August 25). *WUI Definitions*. U.S. Department of Commerce, National Institute of Standards and Technology (NIST). https://www.nist.gov/el/fire-research-division-73300/wildland-urban-interface-fire-73305/hazard-mitigation-methodology-9

3.2. General fire evacuation scenarios

No-notice fire incidents:

Events where there is insufficient time to evacuate to safety before fire overruns the egress arteries of a community. These events can involve public notification under some conditions. These are often wind-driven fire events, referred to as fast fires.

Notice fire incidents:

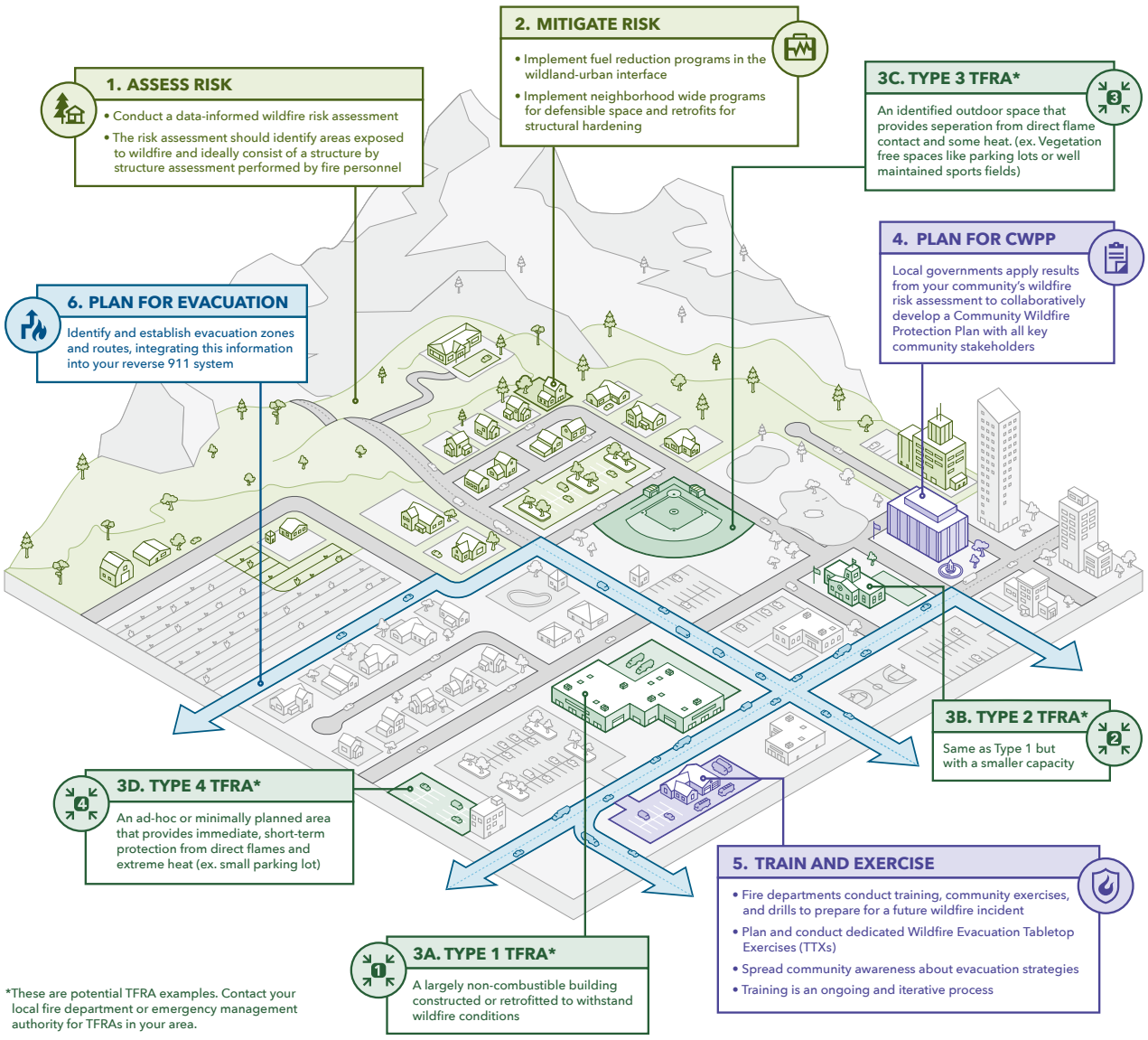
Events where there is sufficient time to evacuate to safety. These are situations where advance warning allows for a phased approach to evacuation. These evacuations may often be recommended by a fire department/ District Incident Management Team (IMT) and are typically executed in conjunction with local law enforcement and emergency management. These types of evacuations often allow a community to prepare ahead of time.

4. Evacuation Planning Framework and Template

4.1. Purpose

Evacuation planning is a critical component of wildfire preparedness, especially for communities within WUI areas. The Wildfire Evacuation Plan Template included in this guidance is a starting point for agencies to create, implement, and refine evacuation plans that are both comprehensive and adaptable for their own use. The essential components of community preparedness and wildfire evacuation planning are represented in the figure below.

Figure 1. Community wildfire preparedness: Illustrates the various components of wildfire planning and preparedness within a single community.



As you begin the planning process, it is imperative to have all the right partners at the table. Every jurisdiction is different in its approach to evacuations; however, go to Appendix A for a Wildfire Collaboration Partners for a list of possible partners that should be considered when assembling a planning team.

This framework and template are designed to be flexible and scalable to the unique characteristics of a community or jurisdiction. By applying this framework as a starting point, agencies can:

- **Facilitate Interagency Coordination**
  - Collaboration among agencies minimizes miscommunication and operational delays. Coordinated efforts lead to a unified response, reducing the likelihood of critical gaps or overlaps in evacuation strategies.
  - Effective interagency coordination is particularly important in multijurisdictional scenarios, where consistency in terminology and strategy can prevent operational inefficiencies and save lives. Go to Appendix A for a Wildfire Collaboration Partners list.
  - Collaboration across agencies to ensure that messaging is consistent across agencies.
  - An effective way to ensure coordination during events is to work across agencies to hold tabletop or practice exercises with all stakeholders. For more information on coordination and training, go to Appendix B: Building Preparedness for Wildfire Evacuation.

- **Proactively mitigate risks through informed planning**
  - Effective evacuation planning ensures communities are better prepared to face emergencies, reducing the potential for loss of life. Planning helps identify vulnerabilities in advance, allowing organizations to address potential issues before disaster strikes. This proactive approach reduces the burden on emergency response systems and increases the resilience of affected communities. For more information, go to Appendix B: Building Preparedness for Wildfire Evacuation and Appendix C: Implementing the Framework and Template.
  - Include development and socialization of state and local plans. These would include state response plans, state interoperability plans, and PACE (Primary, Alternate, Contingency and Emergency) plans to ensure all stakeholders can talk to each other before, during and after the event.

- **Establish clear evacuation zones and egress routes**
  - Clearly defined evacuation zones and egress routes provide clarity during high-stress situations, helping residents better understand options available to them in quickly changing conditions. This clarity minimizes confusion, reduces delays, and ensures that resources are allocated to the right areas during an evacuation. Clearly defined evacuation zones also help responders coordinate efforts across different jurisdictions more effectively. When evacuation zones are communicated effectively, it fosters confidence among residents and helps motivate action when orders to evacuate are issued. For more detailed information, go to the Ensuring Safe Egress: Egress Route Planning section and Creation, Labeling and Managing Evacuation Zones section of Appendix D.

- **Ensure effectiveness in evacuation preparedness**
  - Considering vulnerable/higher risk populations ensures no one is left behind during an evacuation. Effective planning ensures that older adults, those with health issues, are transportation dependent, or have disabilities are accounted for. Effective planning for the whole community reflects commitment to protecting all its residents, enhancing overall resilience and cohesion during emergencies. For more information on vulnerable/higher risk populations, go to Appendix E: AFN/CTN Populations and Other Special Considerations.

4.2. Wildfire evacuation plan template

Section 1: Overview and objectives

The introduction of an agency's wildfire evacuation plan should set the stage for the document by providing essential context, purpose, and guiding principles. It should clearly communicate why the plan is needed, its objectives, and who it serves. Here is a breakdown of key elements to include:

I. Purpose:
   a. Statement of Purpose: Explain the overall aim of the evacuation plan, such as safeguarding lives, property, and critical infrastructure during wildfire emergencies.

II. Guiding principles:

   a. Reference key principles that shape the plan, such as:

      i. Public safety as the highest priority.
      ii. Transparency and accountability in decision-making.
      iii. Interoperability across agencies.

III. Key objectives:
   a. Identify key objectives that inform the plan, such as:
      i. Enhance community safety by supporting timely, organized evacuations.
      ii. Provide a structured approach to evacuation planning, execution, and recovery.
      iii. Support effective coordination among agencies, stakeholders, and the public.
      iv. Define who has the legal authority to issue an evacuation warning/order.
      v. Address the need of the entire community, including people who are at higher risk and AFN populations, CTN populations, special-use facilities, livestock, and other local community considerations.

IV. Scope of the plan:
   a. Define the geographical area and populations covered by the plan, such as residential communities, businesses, tourists, and vulnerable/higher risk groups.
   b. Highlight all wildfire incidents (e.g., notice and no-notice evacuations, varying fire intensities and speeds, and WUI-specific challenges).
   c. Specify whether the plan aligns with broader state, regional, or national guidelines.

V. Importance of wildfire evacuation planning:
   a. Summarize the need for evacuation planning in the selected area.
   b. Emphasize the need for proactive planning due to the unpredictable and rapid progression of wildfires.
   c. Highlight the consequences of inadequate evacuation preparation, using historical examples.

VI. Intended audience:
   a. List the stakeholders and groups expected to use the plan or that engage in its creation. Consider including:
      i. Emergency management agencies
      ii. Fire departments and/or districts
      iii. Law enforcement agencies
      iv. Land management agencies
      v. Local and state government officials
      vi. Transportation departments, public utilities, and school districts
      vii. Medical facilities and nursing homes

viii. Large commercial and/or private facilities (e.g., resorts, universities, or factories)
ix. Federal agencies
x. Tribal nations
xi. Community and faith-based organizations
xii. Nongovernmental organizations (NGOs) such as local Red Cross or animal/vet groups, etc.
xiii. The public

b. Go to Appendix A for a Wildfire Collaboration Partners for additional potential stakeholders.

VII. Outline key local challenges in wildfire evacuation:
a. List key challenges specific to the local area.
b. Consider using the following process flow from ignition to verification of a fire to help identify and organize key challenges in these areas:
i. Detecting a wildfire and its projected spread
ii. Deciding who/when to evacuate
iii. Notifying the public
1. Providing timely and accurate information under rapidly changing conditions
2. Notifications to a diverse and dispersed public
3. Using simple, clear communication vs. confusing jargon.
iv. Household reaction times/compliance
1. Information overload and "alert fatigue" can create confusion, fear and even cause people to ignore alerts.
2. Trust and misinformation. In the absence of clear and frequent communication, residents may turn to unofficial sources, which can spread rumors and inaccurate information. These inaccurate sources can cause people to make poor decisions about their safety.
v. Household mobility
vi. Egress
c. Examples of challenges include:
i. Rapid onset and unpredictable behavior of wildfires.
ii. Limited egress routes and traffic congestion.
iii. Fire overrunning community and/or egress arteries before community evacuation can be completed.
iv. AFN and CTN populations with special evacuation needs.
v. Communication barriers and the need for multilingual, accessible messaging.
vi. Inoperable or destroyed communications infrastructure.
vii. Operating and communicating in an area deenergized and without power due to public safety power shutoffs or impacts from a wildfire.
viii. Variable distribution of population across the evacuation area, depending on the time, day, and/or season.

VIII. Acknowledgments and references:
a. Recognize any contributing agencies, stakeholders, or reference materials used to develop the plan.
b. Include citations for standards, guidelines, or best practices that influenced the plan's development.

Section 2: Hazard identification, risk assessment and mitigation

This section should help identify and address the specific risks and vulnerabilities of a community for which an agency is planning. It ensures that the plan is built on a comprehensive understanding of the hazards and the resources needed to mitigate them. (Note: Evacuation Plans and/or Hazard Identification and Risk Assessments should align with or complement other plans held by the jurisdiction or community, such as Emergency Operations plans.) Go to Appendix C.1 Wildfire Hazard Identification and Risk Assessment and Mitigation for more information and resources. Key components of this section could include:

I. Hazard identification:
   a. Analyze and map contributing hazard factors specific to the jurisdiction (e.g., wildfire history, vegetation, weather patterns, topography, and location of WUI). These may often be found in local CWPPs and Hazard Mitigation Plans as well. For more information, go to the USFA document Creating a Community Wildfire Protection Plan.[11]
   b. Identify areas of importance or any WUI zones, structure separation distance, critical infrastructure, and areas with limited egress routes.

II. Community vulnerability assessment:
   a. Identify and map populations in a jurisdiction. The planning agency should understand population densities and the demographics that may need extra assistance during an evacuation such as AFN and CTN populations, including older adults, people with disabilities, and residents without access to transportation. Multi-family structures, nursing homes, mobile home parks, jails, daycare centers, schools, camps, parks and recreational areas also present unique planning challenges.
   b. Identify and map tourist-heavy areas and areas or venues that may have a large number of transitory visitors (e.g., when/where large events take place), or other factors that may contribute to elevated populations in an area that may need to be evacuated.
   c. Identify and map community critical infrastructure (e.g., bridges, tunnels, pump houses, reservoirs, fire stations).
   d. Identify and map special use facilities that may require special assistance and planning during wildfire evacuations. (e.g., hospitals, prisons). Contact these facilities to get information about their evacuation plans.
   e. Identify and map all available ingress/egress routes available to the planning agency.
      i. Document road type and capacity.
      ii. Integrate destination types and distances (e.g., a neighboring town/city, evacuation shelters, etc.)
      iii. Consider route-quality attributes to account for how likely a route might be to experience congestion, degradation, burn over, etc.
      iv. Identify chokepoints in evacuation routes. (Note: some chokepoints may exist beyond the jurisdiction of the planning agency but should still be identified and communicated.)
      v. Consider the impact that population density and timing have on route capacity.
      vi. Identify traffic control points and intersections, which represent a bottleneck but also an opportunity for continuous flow management.
      vii. For more information on ingress/egress route assessment, go to FEMA's guidance on Critical Transportation.[12]
      viii. For more information visit FEMA's Resilience Analysis and Planning Tool.[13]

[11] U.S. Fire Administration. (2020, May). *Creating a Community Wildfire Protection Plan*. U.S. Department of Homeland Security, Federal Emergency Management Agency. https://www.usfa.fema.gov/downloads/pdf/publications/creating_a_cwpp.pdf
[12] U.S. Department of Homeland Security. (2019). *Planning Considerations: Evacuation and Shelter-in-Place: Guidance for State, Local, Tribal, and Territorial Partners*. https://www.fema.gov/sites/default/files/2020-07/planning-considerations-evacuation-and-shelter-in-place.pdf
[13] Federal Emergency Management Agency. (2024). *Resilience Analysis & Planning Tool Resource Center*. U.S. Department of Homeland Security. https://rapt-fema.hub.arcgis.com/

III. Mitigation strategies:
   a. Identify and map proposed wildfire mitigation measures. These may often be found in local CWPPs or Hazard Management Plans as well. These may include, but are not limited to, the following:
      i. Fuels/vegetation reduction projects to change fire intensity or behavior.
         1. Implement reduction projects along evacuation routes and other areas meant to facilitate evacuation or shelter of a community.
      ii. Fuel breaks to interrupt fire spread pathways into a community.
      iii. Defensible space initiatives.
      iv. Structure hardening, particularly of care facilities such as hospitals.
      v. For more information go to:
         1. The FEMA Homeowner's Guide to Reducing Wildfire Risk Through Defensible Space[14]
         2. NIST's Hazard Mitigation Methodology[15]
         3. National Fire Protection Association's Preparing Homes for Wildfire[16]
         4. Insurance Institute for Building and Home Safety's Home Mitigations That Matter[17]
   b. Define agency responsibility and timelines for mitigation project implementation.

IV. Preparedness Measures:
   a. Communicate information to the public, including visitors.
   b. Efforts may involve creation of distributed systems of TFRAs to create more evacuation contingencies appropriate to the local incident and jurisdiction. For more information on TFRAs, including TFRA typing, see Appendix D.3: Temporary Fire Refuge Areas (TFRAs).

Section 3: Evacuation zones and decision points

This section should cover planning and operational specifics, defining how and when evacuations will be initiated and organized. It should provide actionable guidance for creating and managing evacuation zones, as well as setting clear criteria for activation. Go to Appendix C.4: Creating, Labeling, and Managing Evacuation Zones and Appendix C.6: Determining Decision Points for Evacuating Zones for more information.

I. Identify and Include Stakeholders:
   a. Authorities responsible for ordering evacuations
   b. Agency(s) responsible for conducting/orchestrating evacuations

II. Evacuation Zone Designation:
   a. Explain the methodology for defining evacuation zones, using the agency's completed risk and community analysis from the earlier section.
   b. Include criteria such as population density, population vulnerability, critical infrastructure, fire risk, egress limitations, and proximity to high-risk areas when creating evacuation zones.
   c. Identify and map Evacuation Zones. The boundaries of these zones are based on the characteristics of a community, typically using known landmarks and divisions, and should be easy to communicate to the public. An agency may also consider the organizational structure of the community's public

[14] Federal Emergency Management Agency. (2025, April). *Marshall Fire Mitigation Assessment Team: Homeowner's Guide to Reducing Wildfire Risk Through Defensible Space* (DR-4634). U.S. Department of Homeland Security. https://www.fema.gov/sites/default/files/documents/fema_marshall-fire-mat-homeowners-guide-defensible-space.pdf
[15] NIST Wildland-Urban Interface Fire Group. (2022.) *Hazard Mitigation Methodology (HMM)*. U.S. Department of Commerce, National Institute of Standards and Technology, Engineering Laboratory, Fire Research Division. https://www.nist.gov/el/fire-research-division-73300/resources/hazard-mitigation-methodology-hmm
[16] National Fire Protection Association (NFPA). (2025). *Preparing Homes for Wildfire*. https://www.nfpa.org/education-and-research/wildfire/preparing-homes-for-wildfire
[17] Hedayati, F., Quarles, S.L., and Hawks, S. (2023). *Wildland Fire Embers and Flames: Home Mitigations That Matter*. Institute for Building and Home Safety. https://ibhs1.wpenginepowered.com/wp-content/uploads/Home-Mitigations-that-Matter-FINAL.pdf

safety agencies. Transportation, ingress/egress routes, community shelter and refuge areas, and mutual aid issues may also be considerations in this process.

i. Identify and map TFRAs in each evacuation zone.

III. Mapping and Communication of Evacuation Zones:

a. Detail how evacuation zones will be visually represented (e.g., color-coded maps, different symbology).
b. Specify how evacuation zone information will be shared with the public and stakeholders (e.g., websites or printed materials).
c. Identify who will monitor active wildfires in neighboring jurisdictions and near decision point landscape features.
d. It is recommended that these evacuation zones—as well as their associated status maps—be housed in a feature service. A feature service allows users to serve feature data and nonspatial tables over the internet or intranet and makes the data available for use in web clients, desktop applications and field applications. Feature services can easily be shared between agencies, consumed by other applications, and contribute to common operating picture creation and data interoperability.

IV. Decision Points for Implementing Evacuation:

a. Define thresholds and decision points for initiating evacuation orders and evacuation warnings (e.g., based on fire proximity, behavior, weather conditions, or any combination of like factors) for each evacuation zone.
b. Ensure the authority responsible for ordering an evacuation understands the decision points.
c. Identify procedures for notifying key personnel (fire and law enforcement supervisors, emergency management, dispatch supervisors, etc.)
d. Incorporate fire modeling tools to predict timelines and find decision point locations.
e. Incorporate evacuation modeling tools to estimate evacuation clearance times and develop time-based evacuation planning assumptions.
f. By locating and mapping decision points for evacuation zones, agencies ensure flexibility for rapid decision-making during a no-notice fire incident

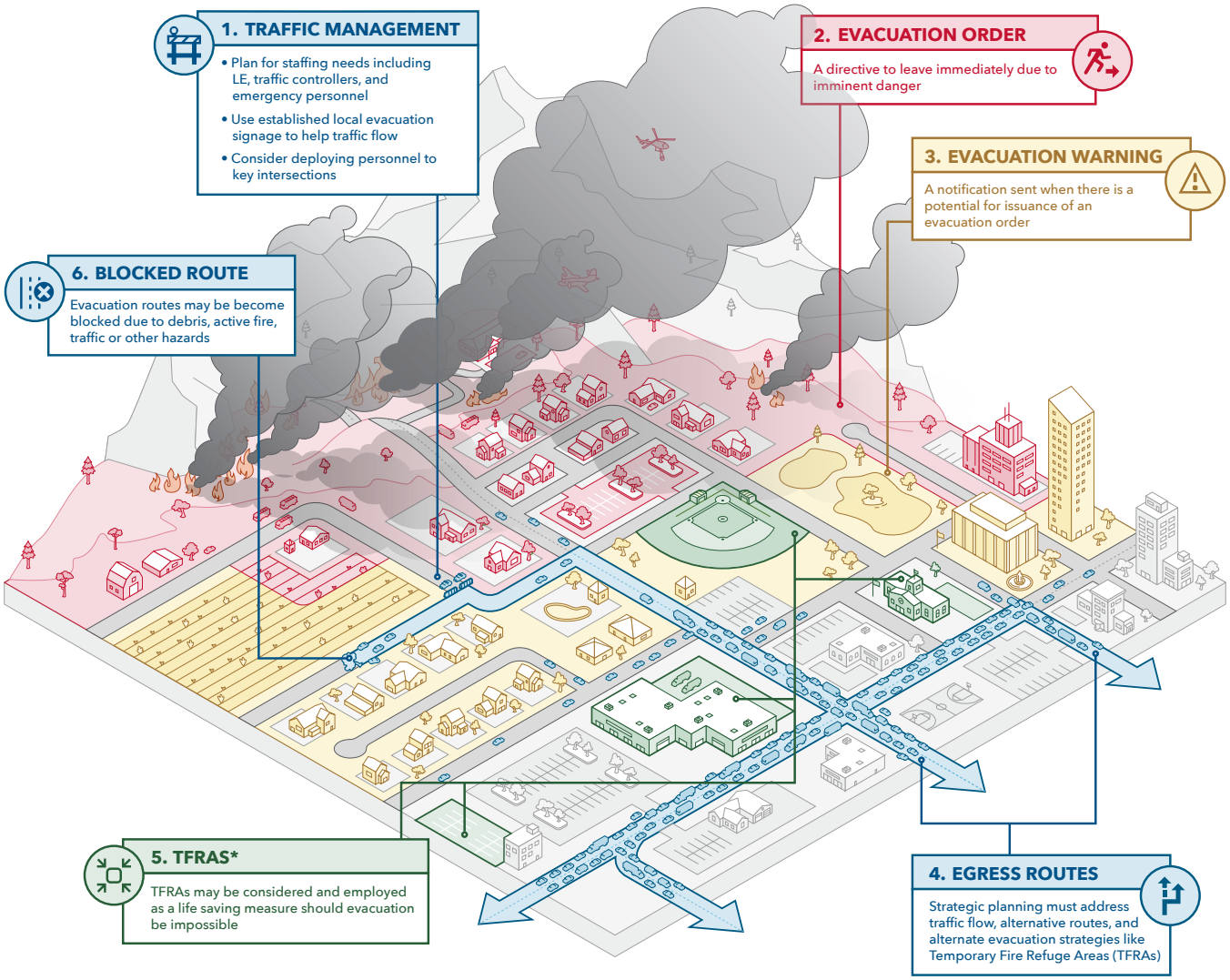
V. Outline procedures for prioritizing evacuations:

a. If applicable, include criteria for staggered evacuations to reduce congestion and improve traffic flow.
b. Detail considerations of evacuation procedures for vulnerable/higher risk populations and those with AFN and/or CTN.

VI. Coordination with mutual aid partners:

a. If applicable, define roles and responsibilities for multi-agency operations within and adjacent to evacuation zones.
b. Detail protocols for interagency communication and information sharing.
c. Interagency coordination should include receiving communities.
d. Include adjacent states, jurisdictions and municipalities that have an Alert Escalation Plan - Memorandum of Understanding (MOU). An Alert Escalation Plan ensures that if a local alerting authority (AA) is unable to send an alert to their community, they can escalate the request to neighboring IPAWS AAs with established, shared alerting permissions.

Figure 2. Active wildfire evacuation considerations within a community.



*These are potential TFRA examples. Contact your local fire department or emergency management authority for TFRAs in your area.

Section 4: Routing and traffic management

This section of an evacuation plan focuses on how to develop evacuation plans for evacuees to physically move to safety. It should address evacuation strategies, logistical challenges, and route planning to ensure safe and efficient evacuations. For more information and resources, go to Appendix C.5: Managing Traffic Flow During Evacuations.

I. Route identification and designation:
   a. Identify and map routes of egress for an area undergoing an evacuation.
      i. Account for factors like road capacity, road condition, route direction, terrain, and potential choke points.
      ii. During any route planning, consider the inevitability of routes being blocked by trees, powerlines, locked gates, and vehicles.

b. Make sure any analysis is encompassing of all routes as during an incident, routes can become compromised, necessitating more than one option.
c. Often, egress traffic movement will require coordination beyond a single jurisdiction. Coordination with jurisdictions beyond the area of impact is crucial to planning efforts for effective mobilization of any community.

II. Traffic flow management:
   a. Outline measures to prevent congestion.
      i. Consider Contraflow, staggered or any combination of evacuation methods, and traffic signal adjustments.
      ii. Consider pre-deployment of traffic control devices.
      iii. Consider plans for placing and connecting generators to traffic signals in case of power outage.
      iv. Specify the role of traffic control personnel and the placement of signage to guide evacuees.
      v. Those involved in guiding evacuees along evacuation routes should be provided with appropriate personal protective equipment (PPE) and training on how to use PPE and how to understand when a situation is life-threatening.
      vi. Engage in long-term planning efforts that allow for the widening of roads to enable faster evacuations and managing vegetation along main evacuation routes.
   b. Ensure ingress for firefighting resources and response units.

III. Staging areas and checkpoints:
   a. If needed, identify and map locations for staging evacuees and managing the flow of vehicles (e.g., large parking lots or open fields).
   b. Identify and map staging areas for responding resources, including fire apparatus, law enforcement, horse trailers for large animal rescue teams, etc.
   c. Include checkpoints for verifying evacuation progress and providing real-time information.
   d. If needed, identify and map shelter locations and define shelter capacity limits.
   e. Identify and map TFRAs along the evacuation route.

IV. Develop multiple scenarios:
   a. Develop and include several scenarios that allow for evacuations under different circumstances.
      i. Scenarios should consider:
         1. Blocked evacuation routes.
         2. Fast moving fires requiring shelter-in-community (i.e., TFRA) orders.
         3. Fires approaching from different directions.
         4. Different evacuation types such as phased evacuations.
         5. Loss of communications, power, and/or the internet.

V. Staffing and equipment plan:
   a. Outline a staffing and equipment plan that places law enforcement, responders, and any appropriate equipment at critical traffic control points and choke points to help facilitate traffic flow.
      i. This staffing and equipment plan should help give a realistic sense of the resources needed to control traffic flow during evacuations and execute other locally specified evacuation operations.
      ii. Define evacuation tasks and who is responsible for each piece of the evacuation process.

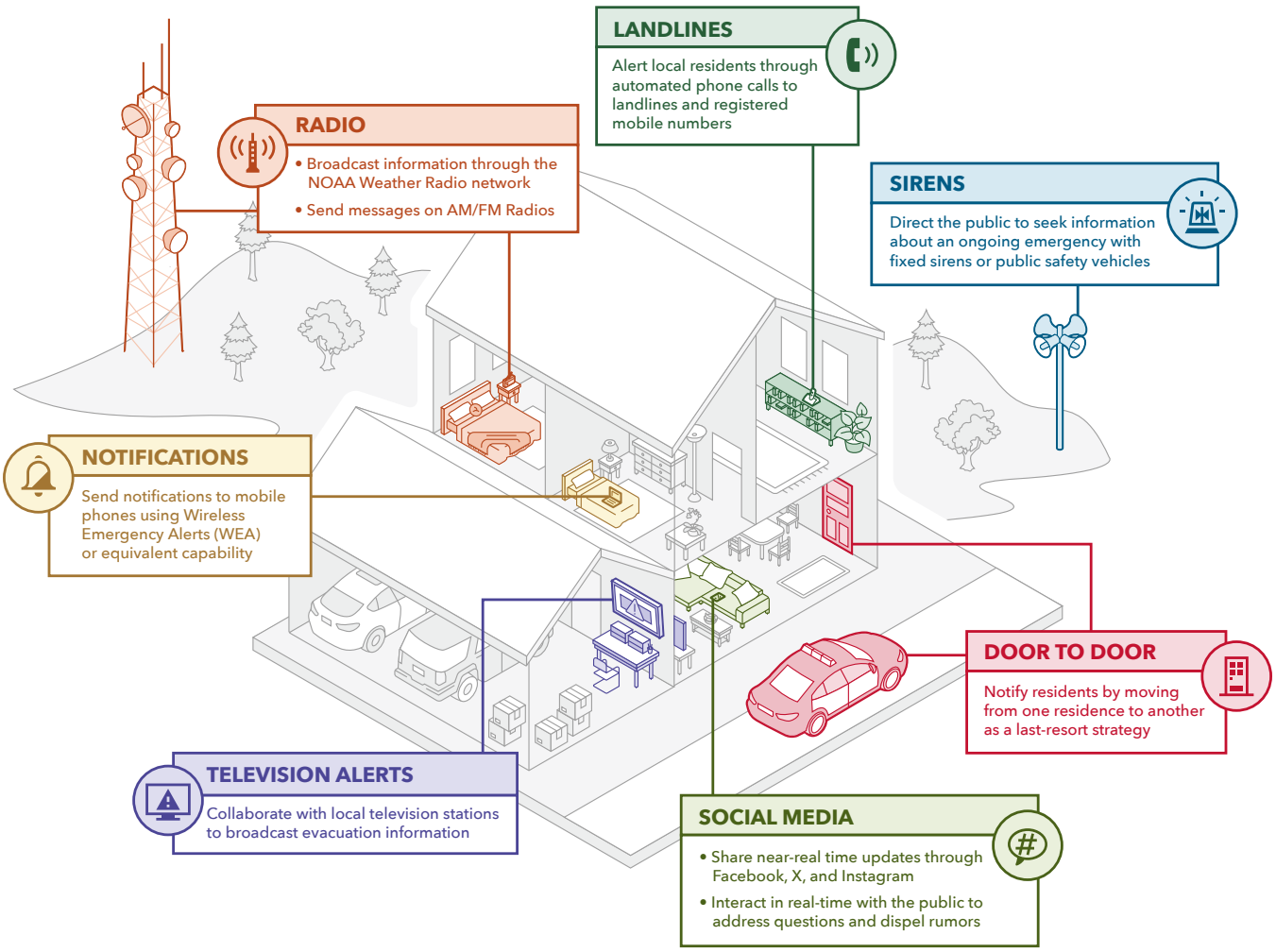
VI. Integration of real-time data:
   a. Define how an agency will make data-driven go/no-go decisions for evacuations.
      i. Obtain fire spread simulations.
      ii. Understand minimum time to evacuate from decision points. Utilize evacuation modeling tools to develop evacuation clearance times.
      iii. It is important to know that if you have a minimum evacuation time of two hours, consider allowing added time to account for unforeseen issues, inefficiencies, bottlenecks, etc.
   b. Identify the process for obtaining traffic monitoring systems data (e.g., traffic cameras or other) to track congestion and dynamically adjust evacuation strategies.
   c. Include communication protocols for sharing real-time traffic updates with evacuees and responders.
   d. Consider including cameras, sensors, or other real-time data sources to help support evacuation operations and decision-making.

VII. Special considerations:
   a. Plan for the coordination of transit for evacuees at TFRAs when conditions are safe.
   b. Address needs for oversized vehicles (e.g., RVs or trailers) and emergency vehicle access.
   c. Consider pets, livestock and service animals.
   d. Plan for pedestrian evacuations if vehicle transport is unavailable.
   e. Integrate mutual aid and coordination.
   f. Collaborate with law enforcement and transportation agencies to ensure seamless traffic management.
   g. Establish clear roles for each agency involved in route management.
   h. Account for variable distribution of population across the evacuation area depending on the time, day, and/or season.
   i. Consider staging tow trucks, saw teams, or other heavy equipment to clear stalled/abandoned vehicles.
   j. Voluntary Organizations Active in Disaster (VOADs), schools, local public health department, local police, fire, and emergency medical services (EMS) agencies.

Section 5: Communication and public notifications

This section of an evacuation plan should focus on how information will be communicated to the public and stakeholders both before and during a wildfire evacuation. It ensures that evacuees have timely, clear, and accessible information to act efficiently and effectively. For more detailed information and resources, go to Appendix D: Communication and Messaging Strategy.

Figure 3. Types of communication and public notifications for wildfire evacuation planning.



I. Pre-evacuation public education options:
   a. Outline community outreach efforts to educate residents about evacuation zones, routes, shelters, TFRAs, opt-in notifications, and procedures.
      i. Include trusted sources in the community such as faith-based groups, senior centers, etc.
   b. Document the languages in which communications will be published and determine the education materials that will need to be translated prior to an event.
   c. Detail a plan to provide resources such as printed maps, multilingual guides, infographics, and workshops.
      i. Include strategies to build awareness by educating the public about evacuation decision points and protocols.

II. Public emergency messaging systems:
   a. Detail the platforms and specific personnel to be used for issuing alerts, including opt-in messaging Wireless Emergency Alerts (WEA), Emergency Alert System (EAS), sirens, and social media. For more information, visit Appendix D.2: Real-Time Alerts and Notifications.
   b. Specify criteria for issuing alerts and how they will escalate (e.g., "Ready," "Set," "Go" phases). For more information go to Appendix D.1: Pre-Evacuation Education and Community Involvement.
   c. Ensure adequate and reliable communications infrastructure and equipment are available to deliver

messaging. Understand how alerting platforms can be affected by lack of power and/or cell service. Plans should include back-up strategies to alert the public when power and cell service are not available. Additionally, emergency managers and alerting authorities should use multiple pathways and redundancy to improve the likelihood of receipt by the public.

III. Message clarity and consistency:
   a. Develop pre-scripted messages to ensure uniformity across communication platforms.
   b. Use plain language and include critical details such as source, hazard, location, time, and guidance with what people should do.
      i. Non-English speakers, people with disabilities, and those with limited access to technology will also need to receive notification in ways that are accessible to them.
   c. FEMA's Message Design Dashboard (MDD) allows alerting authorities to more streamline the prescripted messaging process. FEMA MDD landing page: https://www.fema.gov/node/ipaws-message-design-dashboard-now-available.
   d. For more information go to Appendix D.2: Real-Time Alerts and Notification.

IV. Real-time updates:
   a. Detail the plan for how ongoing updates will be provided during an evacuation (e.g., road closures, fire progression, and safe routes).
      i. Consider probable lack of cell service.
      ii. Consider integration with widely used public alerting platforms such as Watch Duty.

V. Communication with partners and stakeholders:
   a. Detail a protocol for intra- and inter-agency communication, ensuring responders and partners are updated on evacuation status.
   b. Consider including pre-identified evacuation radio frequencies/talk groups for use by responders coordinating evacuations.
   c. Specify tools like radios, apps, or communication hubs to streamline information sharing.
   d. Establish a primary, alternate, contingency, and emergency (PACE) plan for inability to use primary communication methods during an emergency.

VI. Post-evacuation messaging:
   a. Include guidance on repopulation timelines, safety checks, and accessing resources after the evacuation ends.
   b. Use the same channels to provide consistent messaging during the recovery phase.

VII. Reunification centers:
   a. If applicable, identify and map centers for displaced families and individuals to reunite with loved ones, including pets.
   b. It is important to remember that the process for establishing reunification centers should be a consideration during the initial evacuation phases.

Section 6: AFN/CTN populations and other special considerations

This section should address the unique challenges and planning requirements for ensuring effective evacuation strategies for everyone in the community. It prompts an agency to include plans for supporting populations with disabilities and others with access and functional needs, and critical transportation needs. It also includes planning for pets and large animals during evacuations. Establishing partnerships with local animal shelters, advocacy groups, and non-profits will help bolster resources during evacuations. Consider developing mutual aid agreements for interjurisdictional support for AFN populations and pet/livestock evacuation capacity. For more detailed information and resources, see Appendix E: AFN/CTN Populations and Other Special Considerations.

I. Identification and mapping:
   a. Leverage local data, census information, and community input to identify areas with populations with disabilities, mobility limitations, and other access and functional needs.
   b. Include institutional settings with internalized populations in hazard identification and risk assessments (e.g., nursing homes, group homes, assisted living facilities, schools, day care facilities, and prisons.)
   c. Utilize community-based organizations such as recreation facilities, libraries, and faith-based organizations to gather AFN and CTN information.

II. Transportation and assistance:
   a. Partner with local EMS and transit agencies, where possible, to establish accessible evacuation transportation plans. Consider the use of private ambulances for homebound populations on long-term care or hospice, to supplement EMS capacity.
   b. Include resources like wheelchair-accessible vehicles and staff trained in supporting individuals with sensory or cognitive disabilities.
   c. Coordinate assistance for people dependent on public transportation or without vehicles, such as tourists.

III. Shelter preparedness:
   a. Designate shelters that meet Americans with Disabilities Act (ADA) standards and include accessible amenities.
   b. Stock medical supplies, sensory kits, and charging stations for assistive devices.

IV. Communication accessibility:
   a. Provide evacuation alerts in multiple formats consistent with community needs, (e.g., American Sign Language (ASL) via pre-recorded messages on websites, large print, multiple languages, and audio).
   b. Translate materials into the most common languages spoken in the community.

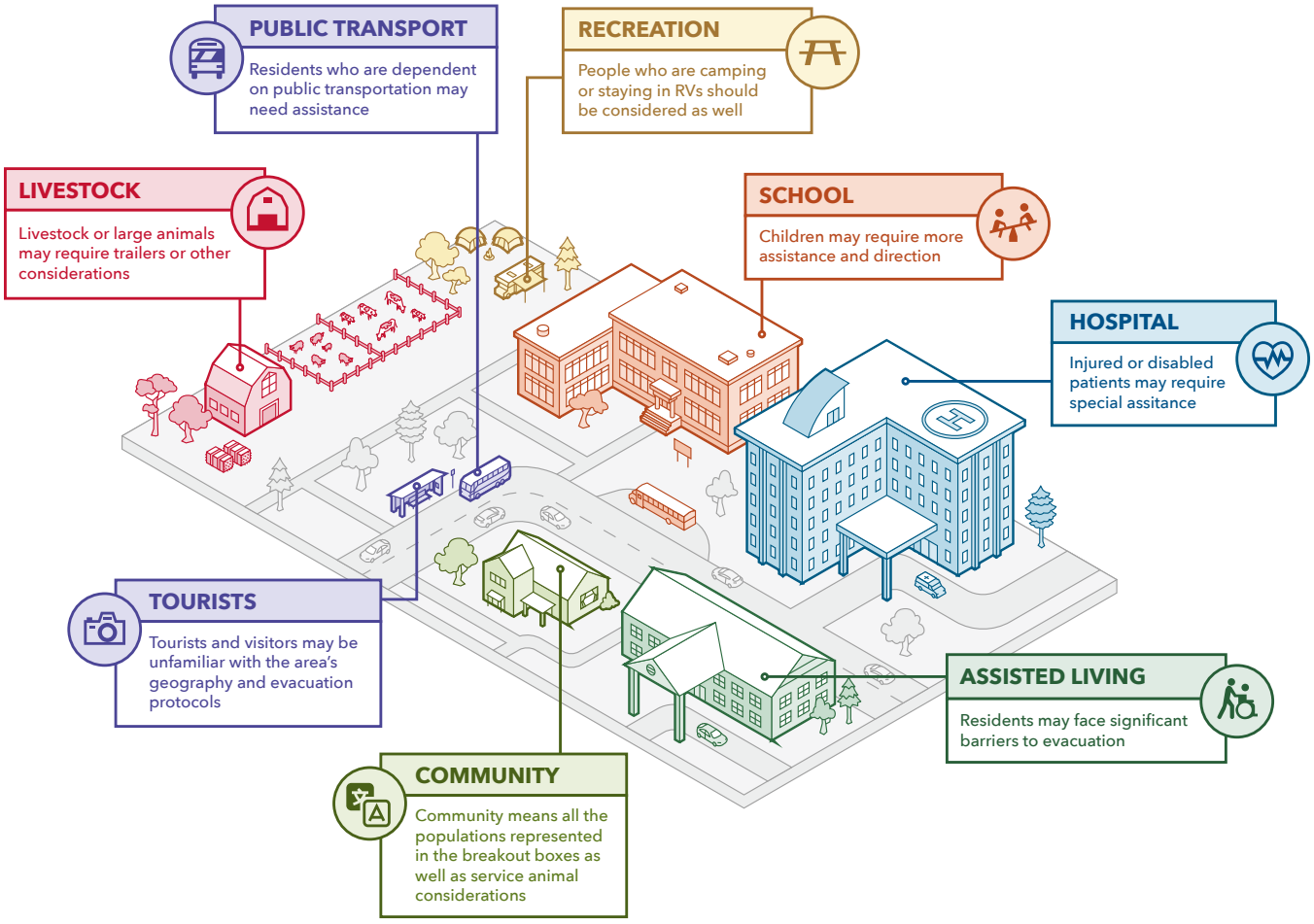
V. Pet evacuations:
   a. Designate pet-friendly shelters and publicize their locations in public education materials. When there is a pet shelter, the pets are housed apart but not far from the general public shelter. Pets are not allowed in the main living shelter.
   b. Ensure shelters are equipped with basic pet care supplies and provide guidance for owners to prepare their animals (e.g., identification tags, and vaccination records). Refer to https://www.ready.gov/pets, "Prepare Your Pets for Disasters" which includes tips for large animal preparedness.

VI. Service animals:
   a. Service animals are not pets and are permitted by law to always remain with their owners and are allowed entrance to all public shelters.

VII. Large animal evacuations:
   a. Identify and map staging areas for large animals, such as fairgrounds or agricultural facilities.
   b. Consider partnering with veterinary services and agricultural extension offices to determine the best practices for large animal transport and care.
   c. Detail public education efforts for evacuation practices for large animals.

VIII. Community engagement:
   a. Work with community partners to hold engagement sessions on evacuation procedures with vulnerable/higher risk populations and pet/livestock owners.
   b. Include evacuation drills to simulate AFN-specific scenarios.

Figure 4. Access, functional, and critical transportation needs and other special considerations for wildfire evacuation planning.



Section 7: Repopulation and recovery

The Repopulation and Recovery section should focus on planning considerations for the post-evacuation phase. For an agency to successfully plan for evacuations, repopulation must be considered. In the section below, an agency will find evacuation plan ideas that incorporate reentry considerations and long-term community rebuilding while prioritizing safety and community reunification.

I. Hazard clearance:
   a. Detail a plan to clear each evacuation zone of hazards such as active fire, hotspots, and debris.
      i. Utilize field data collection capabilities to ensure evacuation zones are made safe.
      ii. Include consideration of contaminated air, water, and soil, as well as open or damaged utility systems and the user of proper PPE.
   b. Coordinate inspections with utility companies to address downed power lines, gas leaks, and compromised water systems.
   c. Coordinate with EPA or other specialists to clear lithium-ion battery hazards.
   d. Plan for close collaboration with jurisdiction's policymakers, since hazard clearance is largely policy driven. (e.g., elected officials would make the determination on whether debris removal on private property will occur in cooperation with the jurisdiction, or at the individual property owner's expense; whether permitting fees will be waived, etc.)

II. Structural integrity checks:
   a. If applicable, establish protocols for assessing the safety of residential, commercial, and public structures, including bridges and roadways.

III. Clear reentry instructions:
   a. Develop phased repopulation plans, prioritizing essential personnel and services before allowing the public to return.
   b. Use multiple communication channels to inform residents of accessibility for everyone.

IV. Community resources:
   a. Identify, map, and include in communication plans the locations of centralized hubs for distributing food, water, powering cell phones, and emergency supplies—also known as Points of Distribution (PODs).
   b. Consider coordinating with non-profits and community organizations to aid returning vulnerable/higher risk populations.

5. Summary

The intensifying severity of wildfires across all landscapes demands that communities, agencies, and stakeholders adopt a unified approach to wildfire evacuation planning. This document outlines a robust framework, emphasizing the need for consistent terminology, interoperable data systems, and technology-driven solutions to enhance public safety and operational efficiency.

Effective evacuation planning requires standardization. By aligning terminology and protocols across jurisdictions, agencies can eliminate confusion, improve coordination, and foster public trust. Clear, universally understood language ensures that residents and responders can act decisively, even in high-stress situations, while enabling seamless collaboration between agencies during multijurisdictional emergencies.

Another factor is the integration of data and technology. Leveraging tools such as GIS, fire behavior and spread modeling, and real-time traffic monitoring provides actionable insights that guide every stage of evacuation from preparation and execution to recovery. Housing these data in GIS services and interoperable platforms not only facilitates rapid information sharing but also establishes a common operating picture crucial for coordinated responses.

This framework underscores the importance of ensuring that all community members, including vulnerable/higher risk populations and those with individual needs, are accounted for. By adopting these strategies, agencies strengthen community resilience, reduce barriers to safety, and affirm their commitment to protecting every individual.

Incorporating these best practices lays the foundation for proactive wildfire evacuation planning. Standardized language, community-level planning, and advanced data-sharing methods empower communities to evacuate as safely as possible, respond swiftly, adapt to evolving conditions, and recover with more confidence. Together, these efforts build the infrastructure needed to safeguard lives and resources, creating a legacy of preparedness and resilience for future generations.

Appendix A. Wildfire Collaboration Partners

As you begin this process, it is imperative to have all the right partners at the table. Every jurisdiction is different in its approach to evacuations; however, the following lists of possible partners should be considered:

Traditional

- Fire departments (local and county)
- Neighboring fire departments (local and county)
- Law enforcement (local, state, county)
- Emergency management (local, state, county)
- Federal land management agencies
- Tribal partners

Non-traditional

- Public works
- Planning/zoning/code enforcement
- Water departments/irrigation districts
- Key private landowners
- Homeowner/Neighborhood Associations
- Community Wildfire Protection Plan (CWPP Partners)
- Interested/invested community members
- Utility providers (gas, pipeline, electric, etc.)
- Natural Resources or Conservation Department/conservation districts
- School districts
- Farmers and ranchers
- 4H/cooperative extension service/animal control
- Fish and wildlife agencies (state and federal)
- Department of Transportation/highway/roads
  - Identify agency contacts and process for requesting modifications of traffic and/or closures.
- NGOs
- Universities - fire modeling programs, early fire detection networks
- National Guard units - especially aviation units
- Faith-based and cultural groups
- Business owners and operators – especially large employers
- Health and human services organizations
- Large animal rescue teams
- National Weather Service
- News media

Appendix B. Building Preparedness for Wildfire Evacuations

Developing a wildfire evacuation plan is an inter-agency community process and is essential to Community Wildfire Protection Planning (CWPP).

B.1. Training and exercises for first responders and agencies

Training for emergency responders focuses on equipping them with the skills and tools necessary to manage complex evacuation scenarios efficiently. A well-structured training program ensures consistency in terminology, decision-making, and coordination across multiple agencies.

Training and exercising wildfire evacuation with emergency responders and educating the public are integral to ensuring the success of wildfire evacuation plans. These efforts enable personnel to execute their duties effectively while empowering residents to respond confidently and decisively during emergencies. A comprehensive approach to training, exercising, and public education can bridge gaps in readiness, enhance coordination, and foster a culture of preparedness within communities.

B.1.1. Standardized training modules

- **Evacuation terminology and protocols:** Familiarizing responders with common terms such as "Evacuation Warning," "Evacuation Order," and "TFRAs" ensures clarity during communication. This uniformity reduces confusion and enhances public trust in evacuation directives.
- **Decision-making tools:** Advanced tools like fire behavior models, GIS, and other platforms in use by agencies can enable first responders to make informed, data-driven decisions during fast-moving wildfire events. First responders should familiarize themselves with the subject matter experts in their jurisdiction or agency to help them use decision support tools correctly and effectively.
- **Coordination principles:** Incorporating Unified Command and Incident Command System (ICS) protocols into training ensures seamless collaboration between fire departments, law enforcement, and emergency management agencies. These principles are particularly critical in multijurisdictional wildfire incidents.

B.1.2. Scenario-based exercises

- **Tabletop simulations:** Tabletop exercises allow responders to simulate various wildfire scenarios, including no-notice and notice fire events. These exercises test decision-making, resource allocation, and communication strategies under controlled conditions.
- **Real-time simulations:** Full-scale simulations involving multi-agency coordination and live public communication provide hands-on experience in managing evacuation efforts. Incorporating realistic elements, such as dynamic fire spread models, enhances the effectiveness of these drills.
- **Field drills:** Organizing large-scale field drills allows responders to practice evacuation route management, TFRA use, and public notification systems. These drills should involve community volunteers to replicate real-world conditions. Coordinating with other response agencies (e.g., air support, utilities, etc.) should be included as a planning protocol.
- **Communication activities:** Simulations and drills should include integration of different communication channels and messages, based upon different thresholds or decision point criteria to escalate public action.

B.1.3. Interdisciplinary training

- **Assisting Vulnerable/Higher Risk Populations:** Training responders to assist individuals with disabilities, older adult residents, and non-English speakers ensures effective evacuation strategies. Modules should include sensitivity training and techniques for addressing individual needs.

- **Handling pets and livestock:** Wildfire evacuations often include challenges related to pets and large animals. Training responders to handle these situations efficiently can reduce resistance to evacuation orders and ensure the safety of animals and their owners.

B.1.4. After action reviews

- After-action reviews conducted following real fire incidents, training, and exercises offer valuable insights into strengths and weaknesses. These reviews should focus on identifying gaps, updating training modules, and improving future responses.

B.2. Public education and community engagement

Public education initiatives empower residents to take proactive steps in wildfire preparedness, reducing risks and enhancing safety. Community engagement ensures that educational efforts resonate with diverse populations and address specific local challenges.

B.2.1. Awareness campaigns

- **Evacuation campaign and programs:** Campaigns like "Ready, Set, Go!" educate residents on the importance of preparation and evacuation protocols. This structured messaging provides clear action steps for each phase of an emergency. The program provides fire departments and their communities with the resources they need to prevent, respond to, and protect themselves from wildland fire risk.
- **Diverse media outreach:** Using various communication platforms, including social media, radio, television, and printed materials, supports broad outreach. Tailored messaging can reach specific segments of the population and business community effectively.
- **Resident outreach and opt-in:** Planners should consider outreach to their residents to learn what are the most effective and efficient alerting forms within their own local community. Outreach can also be used to encourage residents to opt-in to notifications.

B.2.2. Workshops and town halls

- **Practical guidance:** Hosting workshops and town halls provide residents with hands-on guidance on creating family evacuation plans, packing emergency kits, identifying evacuation routes, and understanding their local jurisdiction's plans and terminology. Interactive sessions enhance understanding and retention.
- **Targeting higher risk groups:** Specific workshops for families with pets or livestock, individuals without vehicles, or non-English-speaking residents address unique challenges and promote inclusivity.

B.2.3. Multilingual resources

- Educational materials should be translated and available in multiple languages to reflect the community.
- Partnering with cultural organizations can enhance the reach and impact of these efforts, ensuring that no population is left uninformed.

B.2.4. Evacuation drills

- **Community participation:** Encouraging residents and businesses to take part in evacuation drills familiarizes them with routes, safety zones, and procedures. These drills also allow agencies to assess public understanding and find areas for improvement.

B.2.5. Using technology in training and education

- **Integrating modern technology** into training and public education enhances engagement and effectiveness, providing innovative ways to prepare responders and residents.
- **Mobile applications/education on the go:** Mobile platforms offering preparedness tips, checklists, and interactive learning modules keep residents informed and engaged.

- **Online learning platforms:** Webinars and e-learning courses provide flexible, accessible training options for both responders and the public. These platforms allow individuals to learn at their own pace while supporting access to updated materials.

B.3. Collaboration with community partners

Effective training and public education efforts often rely on partnerships with local organizations, schools and businesses.

B.3.1. Schools and universities

- **Integrating preparedness into curricula:** Including wildfire preparedness in school curriculums educates children early on and encourages them to bring lessons home to their families.

B.3.2. Nonprofits and faith-based organizations

- Partnering with nonprofits and faith-based groups extends the reach of educational campaigns. These organizations can also provide resources and support during evacuations.

B.3.3. Private sector involvement

- **Sponsorship and resources:** Engaging local businesses to sponsor public education campaigns or provide training materials can alleviate resource constraints for agencies.
- **Employee preparedness programs:** Businesses can integrate wildfire education into workplace safety training, ensuring employees are prepared at both work and home.

Appendix C. Implementing the Framework and Template

The following sections are meant to help fire departments, districts, emergency management agencies, and law enforcement organizations operationalize the evacuation framework through added context for many of the elements the framework.

C.1. Wildfire hazard identification and risk assessment and mitigation

Wildfire hazard identification and risk assessment is a cornerstone of community wildfire resilience and serves as the foundation for informed decision-making and proactive planning. This process evaluates the likelihood, exposure, and potential impacts of wildfires on a community, providing for identification of mitigation opportunities. By identifying areas of high hazard and vulnerability, a wildfire hazard assessment empowers communities to prioritize resources, develop targeted mitigation strategies, and enhance preparedness for wildfire events.

C.1.1. Understanding the hazard

The foundation of any wildfire hazard identification and risk assessment begins with understanding the landscape's susceptibility to extreme fire behavior. Hazard identification recognizes areas where conditions are primed for wildfires to ignite and spread. Fire hazard identification and risk assessment is a complex field that requires specialized expertise. Emergency managers, community leaders, and others involved in evacuation planning and community risk assessment should engage their local and state fire service experts to help characterize the local fire hazards. Currently, there are no national standards for assessing community-level WUI fire hazards. A range of components influence local hazard and evacuation capacity. The NIST Community WUI Fire Hazard Evaluation Framework[18] provides an introduction to these topics.

Wildfire behavior is influenced by three primary factors: fuel, topography, and weather. By analyzing and modeling these variables, agencies can predict how fires might behave under different scenarios.

Vegetation, or fuel, plays a pivotal role. Dense, dry vegetation — whether it is grasses, shrubs, or forests — provides the combustible material that drives wildfire intensity. Homes, fences, recreational vehicles, sheds, and other human-made objects are also fuel. Different fuel types burn at varying rates and intensities. Agencies must gather detailed fuel data to understand local conditions. Analysis of the combustibility of homes, proximity and connection should be included in any risk assessment.

Topography is equally critical. Fires burn faster uphill due to preheating of vegetation. South-facing slopes, which receive more sunlight, tend to have drier fuels, further increasing fire risk. Digital Elevation Models (DEMs) can provide a clear picture of terrain features that might worsen fire spread.

Weather completes the triad. Wind speed and direction can drive fire fronts rapidly, while humidity and temperature influence fire behavior and fuel moisture levels. Include long-term analysis of weather trends, e.g., what are the 50-year windstorm events? By incorporating seasonal and long-term weather trends, agencies can refine hazard predictions and prepare for periods of heightened risk.

[18] Maranghides, A., Link, E., Mell, W., Hawks, S., Wilson, M., Brewer, W., Brown, C., Vihnaneck, R. and Walton, W. (2021). *A Case Study of the Camp Fire - Fire Progression Timeline: Appendix C. Community WUI Fire Hazard Evaluation Framework* (NIST Technical Note 2135 Supplement). U.S. Department of Commerce, National Institute of Standards and Technology. https://doi.org/10.6028/NIST.TN.2135sup

Practical application: There are a range of software applications that allow agencies to simulate fire behavior using a variety of inputs. These simulations can highlight areas of high fire intensity, guiding mitigation efforts such as fuel reduction treatments or the placement of firebreaks to protect evacuation corridors. Every jurisdiction will need to use data and software appropriate for their own level of knowledge and needs. For more information, see the NIST "Community WUI Fire Hazard Evaluation Framework" referenced above, as well as this Quantitative Wildfire Risk Assessment[19] resource from the Interagency Fuel Treatment Decision Support System[20] that is used by the U.S. Forest Service (USFS).

Data resources:

- LANDFIRE for vegetation and fuel data.
- U.S. Geological Survey DEMs for topography.
- NOAA for historical and current weather patterns.

C.1.2. Identifying populations and assets at risk

Once the hazard and likelihood of wildfires are understood, the next step is to identify **what** is at risk. Imagine a wildfire spreading across a region—what infrastructure, natural resources, or populations lie in its path? This involves layering hazard maps with community resources data, such as homes, schools, shelters, hospitals, etc.

Infrastructure mapping: Critical infrastructure, such as water supply systems, communication networks, and transportation hubs, must be identified and prioritized. Damage to these systems can exacerbate the crisis by delaying response efforts or disrupting evacuation. Include an assessment of power distribution equipment and powerlines as potential ignition sources.

Population analysis: Beyond mapping population density, it is essential to identify vulnerable/higher risk groups. Older adult residents, people with disabilities, and transportation-dependent populations often face more barriers during evacuations and recovery.

GIS tools: GIS software is valuable for wildfire hazard identification and risk assessments, allowing agencies to visualize relationships between vulnerable assets and fire-prone areas by layering infrastructure, population data, and hazard zones in their locational context. GIS supports advanced analyses, such as identifying assets near high-risk zones, optimizing egress routes, and tracking changes like urban expansion or vegetation growth. For example, GIS can simulate fire spread scenarios and overlay these with community resource maps to find gaps in emergency planning, while real-time data from sensors enhances situational awareness during wildfires. The flexibility and analytical power of GIS make it indispensable for data-driven decisions that save lives and protect resources.

Data resources:

- Local GIS databases for infrastructure and zoning.
- State specific geospatial hubs.
- Census data for demographic information.
- Natural resource inventories for forests, watersheds, and parks.

[19] US Department of the Interior & US Department of Agriculture. (2025, version 3.11). *About Quantitative Wildfire Risk Assessment (QWRA)*. https://iftdss.firenet.gov/firenetHelp/help/pageHelp/content/30-tasks/qwra/qwraabout.htm
[20] US Department of the Interior & US Department of Agriculture. (2025, version 3.11). *Interagency Fuel Treatment Decision Support System (IFTDSS)*. https://iftdss.firenet.gov/

C.1.3. Evaluating susceptibility to damage

Exposure alone does not determine risk — it is the vulnerability of exposed assets that dictates potential damage. Vulnerability assessments can evaluate how susceptible communities, egress routes, and infrastructure are to wildfire impacts. To conduct this work, agencies can start by collecting data on building materials, proximity to vegetation, and fire-resistance measures for structures in the wildland, wui, or fire-prone areas. Field surveys and inspections can provide insight into weaknesses along egress routes and on buildings, such as wooden shingles or highly combustible landscaping.

Agencies can also assess community preparedness by evaluating the availability of emergency services, defensible space requirements, and the existence of actionable evacuation plans. This often involves collaborating with local, regional, state and federal fire departments and emergency management teams to understand response capacity.

Data resources: Much of this type of data needs to be collected by the agency creating the evacuation plan and may include the following:

- Local inspection records.
- State specific geospatial hubs.
- Emergency response agency data.

C.1.4. Assessing community vulnerability

A crucial component of vulnerability assessment involves conducting a Community Vulnerability Assessment, which systematically identifies and maps populations and facilities that may require added support during a wildfire event:

Population mapping: Planning agencies should identify and map population densities and demographics that may need extra assistance during evacuations. This includes older adults and people with disabilities, limited mobility, language barriers, economic challenges, or other considerations. Using census data and community health records, agencies can locate vulnerable/higher risk populations and determine the resources needed to support their safe evacuation. Population mapping should also include a temporal assessment of how population densities vary over different time scales.

Visitor and event mapping: Tourist-heavy areas, seasonal influxes of visitors, and large public events can significantly increase the population density of certain areas. These temporary population surges must be accounted for in evacuation planning. Agencies should collaborate with local tourism boards and event organizers to identify high-risk periods and ensure plans are adaptable.

Special use facilities: Facilities such as hospitals, prisons, and long-term care homes often require tailored mitigation, hardening, and evacuation strategies due to their unique needs. Agencies should map the locations of these facilities and assess their emergency response plans. For instance, hospitals may need added transportation resources for non-ambulatory patients, while prisons require secure transport and containment protocols.

Data resources:

- Census and health services for population and population mobility data.
- State specific geospatial hubs.

C.2. Ensuring safe egress: Egress route planning

Evacuation planning is one of the most critical aspects of wildfire preparedness. Without clear, accessible, and redundant egress routes, communities can face catastrophic consequences during a wildfire event.

Egress routes can be main thoroughfares designed to handle high traffic volumes during an evacuation. Highways and major roads are typically prioritized for this purpose. However, their capacity must be tested through traffic simulations to ensure they can handle sudden surges in use. Alternative routes should be considered as often egress routes become inaccessible due to fire, traffic jams, accidents, or "rush hour" high traffic volume.

When feasible, direct evacuees along familiar, public, primary routes and avoid routing people onto unfamiliar gated or private "back-entry" roads. However, route assignments must remain incident-specific: if a familiar route is compromised or likely to become a fatal funnel (i.e., concentrate evacuees into a narrowing, high-risk corridor), designate a safer alternative and communicate it clearly with map-based instructions and plain-language messaging across all channels.

Ongoing maintenance: Regular inspections are essential to ensure routes stay clear of debris and overgrown vegetation. Signage must be updated and visible. This is especially important in areas with diverse language needs.

Other discussion: Predefined egress routes are necessary, but it is important to understand that during an egress routes may become compromised. This means that more than just primary routes must be identified. Also, during a live evacuation, changes in egress route availability must be efficiently communicated to the public, as well as orchestrated via active traffic management and re-direction on the ground.

Data resources:

- State transportation agencies for road network data.
- State specific geospatial hubs.
- Census and health services for population mobility data.
- Fire behavior models for overlaying hazard zones on egress routes.
- Evacuation transportation models, such as Real Time Evacuation Planning Models.

C.3. Temporary Fire Refuge Areas (TFRAs)

Many local jurisdictions are using a variety of alternative and temporary locations or areas to augment evacuation options, particularly in no-notice or fast-moving fires within communities. The concept of these alternative locations or designations varies depending on a multitude of variables within the jurisdiction and the planning they have undertaken for no-notice, fast-spreading fires.

The purpose of this section is to harmonize the concept of these alternative and temporary locations and achieve a basic shared understanding of the concept behind them and their usage. For reference, related terminology used in local jurisdictions includes but is not limited to: Areas of Last Resort, Community Refuge Area, Temporary Evacuation Point, and TFRAs. To achieve consistency in wildfire evacuation terminology, TFRAs is the selected term for this guidance, and more detailed definitions are provided here.

TFRAs are designated or impromptu locations that serve as a temporary location (some sheltered and some not) during a wildfire when evacuation out of the impact area is not possible, or when escape routes are compromised. TFRAs may offer varying degrees of protection from flames, radiant heat, smoke, and embers, depending on the behavior and spread of the fire in context with the TFRA location, type, preparation, and capacity. TFRAs may serve as a contingency in wildfire evacuation planning during sudden, no-notice fire events where individuals may be trapped by rapidly spreading fire. Early evacuation is still the safest and preferred course of action; however, TFRAs may serve as an alternative to ensure survival when all evacuation options are exhausted.

TFRAs can be classified into four distinct types that provide consistent definitions on their capacity and use, which are outlined in the following tables. These definitions for TFRAs by type facilitate common understanding between agencies and the public and ensure that refuge options are clearly understood. Each type is defined by its capacity, level of preparation, and ability to protect occupants, ranging from minimally planned, ad-hoc areas to purpose-built, fire-resistant structures.

Type 1 and Type 2 TFRAs represent the most resilient of wildfire refuge areas, designed to withstand flame impingement, radiant heat, and prolonged ember exposure. Their robust construction and large capacity make them the safest and most reliable option for protecting significant numbers of people. Establishing these areas will require investment in preparation and infrastructure by planning agencies. These areas reflect their role as a long-term solution in wildfire-prone areas, offering not just immediate shelter but also the potential for safety until rescue or evacuation can occur. Their high level of fire resistance sets them apart as the gold standard for community resilience.

Type 3 and Type 4 TFRAs exist to address the reality that wildfires can escalate quickly, leaving people with no time to reach safety. In such scenarios, any area offering even temporary relief from flames can be lifesaving. Their minimal protection level reflects their outdoor and/or unplanned nature, but they are included in the TFRA framework to acknowledge that even basic refuge might provide lifesaving shelter. However, their limitations — small capacity, lack of indoor space, and vulnerability to smoke and heat — make them far less reliable than Type 1or 2 TFRAs.

In the tables below, each type (Type 1, Type 2, Type 3, and Type 4) is explored in detail, including its definition, capacity, protection level, examples, usage, preparation, and the reasoning behind its classification. Factors related to the TFRA types that should be considered during wildfire evacuation planning are also outlined according to TFRA type.

Table 1. TFRA Typing Table: definition, usage, construction type, protection level, capacity and preparation for Type 1, Type 2, Type 3, and Type 4 TFRAs.

	Type 1	Type 2	Type 3	Type 4
Definition	A **largely noncombustible building** constructed or retrofitted to withstand wildfire conditions, offering the greatest capacity among the four types. (The only difference between Type 1 and 2 is capacity.)		An **identified outdoor space** that provides separation from direct flame impingement and some heat. Ember and smoke exposure will be heavy.	An **ad-hoc** or minimally planned area that provides immediate, **short-term protection** from direct flames and extreme heat during a wildfire emergency. Not recommended as a primary shelter.
Usage	If evacuation is impossible, Type 1 and 2 TFRAs are potential options for survival when time permits. They are ideal for densely populated areas, areas where evacuation is likely to take a large amount of time, regions with high wildfire risk, and can serve as a last resort of shelters for large groups.		Used during an incident when evacuation and other refuge options are inaccessible.	A last-resort option for individuals caught in rapidly deteriorating conditions. Spontaneously identified during an emergency when other options are inaccessible.
Construction type	Type 1 construction is the gold standard for these TFRAs. Type 2 - 4 construction may also be suitable. Jurisdictions should consult with local fire authorities to ensure the selected construction meets the needs demanded by the potential fire intensity for a given area.		Large open areas like large parking lots, gravel areas, or fields like those found in the middle of tracks, football fields, baseball diamonds or similar well-maintained, short grass outdoor areas like golf courses.	Small areas located in neighborhoods or to pull off roads, free of most burnable vegetation but may only be suitable for a few families. Officials should work to educate the public on what these areas look like to empower on-the-fly decision making during a wildfire emergency.

	Type 1	Type 2	Type 3	Type 4
Protection level	**High:** built or modified to noncombustible standards, incorporating hardening measures and defensible space zones as recommended by local fire codes and wildfire experts.		**Basic:** offers minimal shielding from heat, smoke, and embers, primarily relying on natural or incidental features to reduce immediate exposure to flames.	**Minimal:** provides little to no protection from flames, radiant heat, and smoke, but seeking refuge in areas devoid of burnable vegetation or other fuels may still provide life-saving shelter.
Capacity	**Extra Large**: capable of sheltering many people, potentially thousands, depending on the size and design of the building.	**Large**: capable of accommodating larger groups, typically numbering in the hundreds, depending on the size and layout of the area.	**Medium**: capable of accommodating larger groups or multiple families, typically numbering in the dozens.	**Small**: capable of accommodating individuals or small groups, typically ranging from a few people up to a dozen.
Preparation	Construction or retrofitting adheres to strict **fire-resistant standards**, including noncombustible materials (e.g., metal roofing, masonry walls), ember-resistant vents, and sealed windows to prevent ember intrusion. **Air-handling units** should be able to filter smoke. In many cases, turning off HVAC units may limit ember and smoke exposure inside the building. A **defensible space** zone — from 0 to 5 feet and outwards to 100 feet, depending on local guidelines — is maintained around the building, free of flammable vegetation, debris, or vehicles. **Regular maintenance and inspection** ensure that fire-resistant features remain intact, and access routes are clear. **Always consult local fire agencies** when determining areas suitable as Type 1 and 2 TFRAs.		These areas should be **regularly mowed**, free of dense and burnable vegetation and structural surroundings. If these TFRAs are located in sports fields or other areas where vegetation may exist, it is recommended that **grass is well-watered** and irrigation may exist.	**Little or none:** Type 4 TFRAs are not pre-planned or maintained. Their effectiveness may depend entirely on the immediate surroundings and the individual's ability to identify a relatively safe spot under pressure. Because they are impromptu, no resources are available, and like all other TFRAs, safety is not guaranteed. **Public education** plays a key role in their use, equipping people with the knowledge to recognize a potential Type 4 TFRA.

Table 2. TFRA considerations for wildfire evacuation planning by TFRA Type.*

	Type 1	Type 2	Type 3	Type 4
Access Routes	**Accessible routes are critical** for TFRA effectiveness. Agencies should try to ensure that TFRAs have multiple access routes to account for road closures, fallen trees, or other blockages.			
	❯ Routes should **be regularly maintained and inspected** to ensure viability and continued access.		❯ If Type 3 TFRAs are identified, agencies should maintain multiple routes of ingress/egress to these areas.	❯ While access is impromptu, public education can guide individuals to choose safer paths that avoid dense vegetation, steep slopes, or blocking evacuation routes.
Integration into Evacuation Plans	**Public Communication:** Locations, types, and usage guidelines must be clearly conveyed to residents, emphasizing TFRAs as last-resort options when evacuation fails.			
	❯ Agencies should identify, map, and publicize TFRAs, ensuring they are well-integrated into evacuation frameworks. ❯ Pre-planned Type 1 and Type 2 areas should be well planned in advance. ❯ It is understood that authorities may designate additional TFRAs during an event.		❯ If available, authorities should consider identifying outdoor areas that may serve as a TFRA.	❯ Authorities should educate the public about TFRAs types and how to identify Types 3 and 4 when needed.
Examples	❯ Community centers with fire-resistant roofing and ember-proof vents. ❯ Schools constructed with non-combustible materials (e.g., concrete, steel) and surrounded by cleared zones. ❯ Other public buildings retrofitted with wildfire-specific safety features.		❯ Large sports fields with minimal surrounding fuel. ❯ Large, paved parking lots with minimal surrounding fuel.	❯ Small clearings in forested areas with reduced vegetation (recommended width of clearing at least 4x the height of the adjacent fuel). ❯ Roadways with minimal surrounding fuel. ❯ Areas near natural barriers, such as rivers lakes, or rocky outcrops.

*Note: Consideration should be given to the proximity of vehicles to a TFRA, and the potential of wildfire-to-vehicle-to-structure propagation.

When determining locations for TFRAs, ensure that fire departments or other risk management professionals are included in the decision-making and typing process. Agencies should map all TFRAs within their jurisdiction, integrating them into evacuation plans and public outreach efforts. During an emergency, real-time conditions may prompt the designation of additional TFRAs, but pre-planned Type 1 and Type 2 areas are the gold standard of TFRAs.

It cannot be overstated that TFRAs are contingencies; the safest action is to always follow evacuation orders issued by officials in local jurisdictions.

The classification of TFRAs into Types 1 through 4 provides a structured approach to planning, enhancing public safety and agency coordination. Type 3 and Type 4 TFRAs offer minimal protection, while Type 2 and Type 1 TFRAs deliver safer, more reliable options through proactive preparation and infrastructure. By detailing their types, reasoning, and operational needs, this framework ensures communities are equipped with clear, actionable refuge options, reinforcing resilience in the face of growing wildfire threats.

Data resources:

- GIS layers for open spaces and public lands.
- State specific geospatial hubs.
- Vegetation surveys for hazard analysis.
- Emergency management plans for community-specific needs.

C.4. Creating, labeling and managing evacuation zones

Evacuation zones or their equivalent provide a structured approach to wildfire response, enabling targeted evacuation orders and minimizing confusion during emergencies. Creating, labeling, and managing these evacuation zones is a vital part of wildfire preparedness.

Creating evacuation zones: Evacuation zone development should be locally informed and use local landmarks for ease of identification and communication. Agencies should prioritize evacuation zones by critical factors like population density and wildfire hazard levels, as well as egress characteristics, etc. Agencies can then use local landmarks or well-known natural boundaries, such as rivers or ridges, or well-known infrastructure like major roads, to identify and refine zone boundaries. GIS tools allow agencies to layer hazard maps with population and infrastructure data to create logical, manageable evacuation zones.

Labeling evacuation zones: Clear and consistent labeling is essential for effective communication. Alphanumeric systems (e.g., Zone A1, Zone B2) or names based on local landmarks ensure clarity. Publicly accessible maps should depict these evacuation zones and be disseminated through digital platforms, community meetings, and printed materials.

Using evacuation zones: During a wildfire event, evacuation zones facilitate communication about evacuations and fire incidents. They may also enable phased evacuations to prioritize the most at-risk areas or reduce congestion. Agencies can issue evacuation notices by zone, allowing emergency services to focus efforts strategically. However, plain language descriptions about the locations being evacuated should be provided in public-facing messages, rather than communicating solely with evacuation zone identifiers (e.g., Zone 1 or Zone A). See Appendix E: Communication and Messaging Strategy for more information and resources. Regular updates to evacuation zone maps based on changes in land use or infrastructure ensure continued effectiveness.

Other discussion: Scenarios may exist where strict adherence to facilitating evacuation via zones is untenable for a local jurisdiction. In these cases, it is still critical that a plan is documented and made available via a live geographic data service for dissemination to the public and other agencies.

Many agencies may find value in utilizing third-party software applications such as GIS software to help identify, develop, label, and manage evacuation zones.

Data resources:

- GIS layers for open spaces and public lands.
- State specific geospatial hubs.
- Local Community Wildfire Protection Plans.
- Emergency management plans.
- Census data.

C.5. Managing traffic flow during evacuations

Effective traffic flow management ensures safe and efficient evacuations during wildfire events. Without careful planning, gridlock can put lives at risk.

Analyzing road networks: GIS and evacuation modeling software can identify bottlenecks and assess road capacity under evacuation scenarios. Evacuation modeling software and simulation tools allow agencies to model traffic flow, develop evacuation clearance times, and predict potential delays during peak evacuation periods.

Designating routes: Primary routes should accommodate the bulk of traffic, while secondary and alternative routes serve as backups. Temporary one-way traffic measures can maximize capacity, especially on critical arteries.

Traffic control: Deploying personnel to key traffic control points and using dynamic signage systems helps to facilitate smooth traffic flow. Traffic management is inherently resource and staff-intensive, requiring detailed staffing plans to ensure sufficient personnel are available during critical evacuation periods. Agencies must identify staffing needs in advance, including roles for law enforcement, traffic controllers, and emergency personnel, and provide training for efficient coordination. Real-time updates via mobile applications and/or emergency alert systems (when appropriate) keep evacuees informed of route changes and reduce confusion and delays.

Integrating technology: GPS data, traffic cameras, and vehicle monitoring systems provide actionable insights for real-time adjustments, ensuring that traffic moves efficiently away from danger zones.

Other discussion: Evacuations can be chaotic, and access is not always guaranteed. Blocked ingress and egress routes can hamper evacuees' efforts to get to safety and responders' ability to gain access to the incident. Response organizations should consider having heavy equipment staged and ready in case pathways need to be forced open to facilitate continued ingress and egress.

C.6. Determining decision points for evacuating zones

Decision points are predefined critical markers (criteria) that support decision-making on emergency notifications, evacuation orders, or other incident management actions. These points allow for timely evacuations, minimizing risks to human life.

Using Fire Spread Models: Tools like FlamMap and Behave Plus can help simulate fire behavior in planning scenarios to help agencies predict fire movement in a variety of weather conditions. Decision points may be tied to geographical locations, fire behavior observations or predictions, or specific life safety or incident management objectives. They may be determined or supported by fire behavior models and weather forecasts.

Determining decision points: Decision points may include fire reaching specific geographical features and changes in weather conditions, and should be based on evacuation clearance times, the time thresholds for

safe evacuation. Standardized guidance for determining decision points is limited or non-existent; it is often left to the experience and judgment of planners, incident commanders or other emergency officials to consider required evacuation time against estimates of fire arrival time. Determining decision points should be made in collaboration with local, state or federal fire services and experts. Any model has some uncertainty, and fire modeling tools can underpredict observed extreme fire behavior, so modeling and planning benefit from using local knowledge paired with subject matter expertise to estimate expected fire behavior.

Factors to consider when establishing decision points:

- Fire behavior
  - Fuels, topography, rate of speed
- Weather (current and forecasted)
  - Fire weather watch
  - Red flag warnings
- Resource availability
  - National and regional preparedness levels
  - Resources for evacuation operations
- Suppression progress
  - Time to complete mission, existing decision points
- Egress routes
  - Quality of roads and number of egress routes
  - Construction
  - Bridges and bridge load limits
  - Hazards along routes
  - Choke points
- Population
  - Number of homes and percentage occupied
  - Density and zoning
  - High-need individuals
  - Livestock
- Alerting
  - Time needed for notification
  - Method of notification
- Evacuation clearance times
  - Time needed for safe evacuation
    - Reaction time of evacuees
    - Time for evacuees to leave
  - See also NIST TN 2262:[21]
    - Evacuation time equations
    - Section 4.2 Temporal Relationships Among Fire Progression, Notification, Evacuation, and Sheltering
    - Figure 5. Flow chart depicting generalized evacuation scenarios.
- Other values at risk
  - Critical infrastructure
  - Cultural or historical sites

Lead times for evacuations should account for population density, road capacity and evacuation clearance times. Ideally, an agency has a documented plan for when to evacuate based on a range of fire start locations and spread scenarios.

[21] Maranghides, A., and Link, E. (2023, August). *WUI Fire Evacuation and Sheltering Considerations – Assessment, Planning and Execution (ESCAPE)* (Technical Note NIST TN 2262r1). U.S. Department of Commerce, National Institute of Standards and Technology. https://doi.org/10.6028/NIST.TN.2262r1

Dynamic adjustments: During an evacuation, real-time data from field applications, sensors and first responders can enable adjustments to decision points as conditions evolve, ensuring that evacuations remain proactive and effective.

Communication: Clear communication of evacuation orders tied to decision points is critical. Agencies must ensure that residents understand the rationale behind evacuation timing. Agencies also must provide regular updates as conditions change.

Importance of data interoperability and GIS in evacuation planning

Data interoperability is a crucial component in wildfire evacuation planning and response, especially when coordination between neighboring jurisdictions and national entities is required. Sharing standardized, interoperable data ensures that all stakeholders have access to the same authoritative information, which improves decision-making and helps to create a common operating picture.

The role of GIS: A GIS acts as a centralized system of record, storing and visualizing authoritative data that can be shared across agencies. GIS supports consistent data formats, making it easier for neighboring jurisdictions to collaborate and for national organizations to integrate local insights into broader response efforts. However, it is key that data lives in a GIS service accessible online whenever possible. This is particularly valuable during large-scale wildfire events that cross jurisdictional boundaries.

Benefits of data interoperability:

- **Enhanced coordination:** Interoperable data allows for seamless collaboration between local, regional, and national agencies, ensuring that everyone operates from the same data set.
- **Future-ready planning:** GIS archives authoritative data, making it readily available for updates, and scenario modeling. This can be easily used to refine mitigation strategies and evacuation plans.
- **Real-time sharing:** Live data feeds, such as weather updates, fire progression, or traffic conditions, can be integrated into GIS platforms and shared instantly with all stakeholders. This ensures that decisions are based on the most current information available.

Practical application: Agencies can use GIS to develop and share evacuation zone maps, fire spread models, and other data with neighboring jurisdictions and federal entities. For example, a state-level fire agency could provide local offices with real-time hazard maps, while receiving detailed evacuation updates from local jurisdictions.

Appendix D. Communication and Messaging Strategy

Effective communication is essential for public safety agencies when preparing communities for potential wildfire evacuations. A well-developed communication and messaging strategy ensures that residents receive timely, clear, and actionable information which, enhances public safety and enables smooth evacuation operations. This section provides a detailed guide to creating and implementing an effective strategy, focused on pre-evacuation education, real-time alerts, messaging consistency, and post-evacuation communication.

D.1. Pre-evacuation education and community involvement

D.1.1. The importance of pre-evacuation education

Pre-evacuation education is the cornerstone of a community's wildfire preparedness. By equipping residents with knowledge about wildfire risks, evacuation procedures, and personal safety measures, emergency agencies can empower communities to act decisively during a crisis. This education addresses several critical areas:

- **Understanding wildfire risks:** Educating residents about wildfire dynamics, particularly in WUI areas, helps them recognize the unique risks their community faces. Pre-evacuation topics should include the role of weather, vegetation, and topography in fire behavior, as well as the location and reduction of potential ignition sources. It is also imperative to educate the public on evacuation time frames, the importance of early evacuation to avoid fatalities, and reinforcement of wildfire alert and warning messages such as "red flag days."
- **Evacuation readiness:** Providing clear instructions on evacuation protocols, such as what to pack, how to use egress, and where to find official updates, ensures residents know how to act when the time comes.
- **Personal preparedness:** Make sure the public understands that their safety is largely their responsibility. To increase individual resilience and reduce reliance on emergency services, encourage families to create emergency kits, make communication plans together, harden their homes against wildfires, and evacuate early.
- It is also imperative to educate the public regarding anticipated evacuation timeframes; the distinctions between evacuation warnings and evacuation orders; the critical life-safety benefits of early evacuation to reduce the risk of injury and fatalities; and the meaning, significance, and associated protective actions of wildfire alert and warning products, including Red Flag Warnings and other fire-weather advisories.

D.1.2. Methods for Public Outreach

A comprehensive outreach strategy is essential to effectively delivering pre-evacuation education. Agencies should employ a range of communication methods tailored to the needs and preferences of diverse communities:

- **Community meetings:** Host regular town halls and virtual meetings to present wildfire risks, discuss evacuation plans, and answer residents' questions. These sessions also allow agencies to gather feedback and build trust.
  - Give individuals multiple ways to provide input (including anonymous means) to ensure participation from a variety of people and groups.
  - Collaborate with trusted community resources such as faith-based groups and NGOs.
  - Provide sign language interpreters so that the information is accessible to people who are deaf.
  - Incorporate existing campaigns to help with education, including the National Fire Protection Agency's (NFPA) wildfire community preparedness day.

- **Workshops and training programs:** Offer hands-on workshops focusing on home hardening, creating defensible space, and understanding egress routes. These programs should be designed for all age groups and skill levels.
  - Consider community preparedness days as research shows that more participation will occur if others are also taking part.
- **Printed materials:** Distribute flyers, brochures, and checklists at community centers, libraries, and schools. These materials should include clear, step-by-step instructions for evacuation readiness and maps of evacuation zones. If possible, these should be sent to each address in planning areas. Translate the materials into the languages used other than English in your community.
- **Digital platforms:** Leverage websites, social media, and mobile applications to provide up-to-date wildfire information, emergency preparedness tips, and downloadable resources. For example, an interactive and searchable map of evacuation zones available on an agency's website can enhance accessibility.
  - Think about alternative ways of delivering the message if technology is not working due to low service or power outages. If time allows, make plans to post printed materials at community-relevant locations.
- **School, faith-based and NGO partnerships:** Collaborate with local schools, faith-based organizations, and NGOs to introduce wildfire safety programs that educate children and their families. Teaching preparedness from an early age fosters a culture of safety. Faith and community leaders are force multipliers in their local communities and are able to reach target audiences through established social service programs. These organizations act as trusted messengers and are able to amplify messaging, and serve as community mobilizers, validating critical information through shared values.
- **Door-to-door campaigns:** In high-risk areas, personal visits by agency representatives or community volunteers can provide direct guidance, particularly to those who may have difficulty accessing information through other channels.

D.1.3. Ready-Set-Go and other wildfire education programs

Structured public education and risk reduction programs like "Ready, Set, Go!" provide clear, actionable steps for residents, ensuring they have awareness of (**Ready**), preparedness for (**Set**), and an understanding of how to respond (**Go**) to wildfire threats. For program specifics see the Ready Set Go website.[22]

Ready: This phase focuses on wildfire risk awareness and long-term preparation. Residents are encouraged to:

- Create defensible space around their homes by managing vegetation, using fire-resistant building materials, and landscaping.
- Assemble a "go-bag." A go-bag is an emergency kit with essentials like food, water, medication, and important documents in case they need to evacuate.
- Develop a family communication plan that includes meeting places and contact information. Develop a plan for pets, service animals or other animals.
- Sign up for local emergency notification system(s) alerts.

Ready means having your go-bag packed and personal plans in place should a no-notice fire incident occur that requires evacuations.

Set: When wildfire conditions escalate, residents are urged to have situational awareness of events and be prepared to evacuate:

- Monitor local news, weather updates, and emergency notifications closely.
- Alert household members and neighbors.
- Check and load emergency kits and prepare vehicles and pets for evacuation.
- Stay informed about the status of evacuation zones and routes.
- Follow orders and instructions from local officials.

[22] International Association of Fire Chiefs' (IAFC). (2025). *Ready, Set, Go! Program.* https://www.iafc.org/topics-and-tools/resources/resource/ready-set-go-program

Go: This phase emphasizes quick and decisive action when evacuation orders are issued:

- Leave immediately to ensure safety and avoid traffic congestion. Leaving early can help facilitate quicker evacuation.
- Follow designated egress routes and heed instructions from authorities.
- Avoid returning until the all-clear is given by officials.

While "Ready, Set, Go!" is one popular wildfire education and preparation campaign, it is important to note that different jurisdictions employ different education and evacuation campaigns. The Evacuation Terminology Crosswalk table below helps to depict how these different systems align:

Table 3. Crosswalk of evacuation terms.

Evacuation Terminology Crosswalk					
Phase	**Ready, Set, Go!**	**Level**	**Evacuation warning, evacuation order**	**Siren**	**Description**
Awareness	Ready	Level I	N/A	N/A	The time period, including blue-sky days, up to but not including the point when an evacuation warning is issued. Residents should prepare homes and emergency supplies, stay informed about risks, and monitor local updates. This is a constant state.
Preparedness	Set	Level II	Evacuation Warning/ Advisory	N/A	There is an active fire event and/ or evacuation warnings have been issued. Residents should monitor the situation, gather family members, prepare vehicles and pets for evacuation, and stay informed about the status of evacuation zones and routes. Those requiring more time to evacuate should consider leaving.
Action	Go	Level III	Evacuation Order	Hi-Lo "Time to Go"	There is an immediate threat to your home or evacuation orders have been issued for your area. Residents should leave immediately and follow designated egress routes and instructions.

In writing wildfire evacuation plans, take into consideration local understandings and/or history of color symbology if you choose to use color indicators in your plan.

D.1.4. Building trust through transparency

Establishing trust with the community is critical for successful communication. Agencies can build this trust through:

- **Consistent updates:** Regularly share information about wildfire risks, agency preparedness efforts, and community safety measures. Transparent communication reassures residents that their safety is a priority.
- **Active engagement:** Encourage public participation in planning processes through surveys, focus groups, and community advisory boards. This inclusiveness fosters a sense of ownership and collaboration.
  - Consider engaging through trusted community groups like Community Emergency Response Teams (CERT), faith-based organizations or local non-profit agencies to deliver messaging and workshops.
  - Include as many different groups as possible, pet owners, ranchers, seniors, youth groups, people with disabilities, etc.
- **Demonstrated competence:** Showcase agency readiness through training drills, public demonstrations, and the successful management of past emergencies. Confidence in agency capabilities increases compliance during evacuations.

D.2. Real-time alerts and notifications

D.2.1. Preferred channels for notifications

Delivering real-time alerts through diverse communication channels ensures the widest reach and redundancy, even in areas with limited connectivity. Recommended channels for alerts and notifications include the following, but planners should consider outreach to their residents to learn what are the most effective and efficient alerting forms within their own local community. These preferred methods should be documented in emergency operations plans and regularly validate them through exercises and after-action reviews.

- **IPAWS:** IPAWS is FEMA's national system for local alerting that provides authenticated emergency and life-saving information to the public. The IPAWS platform is one of many tools that FSLTT public safety agencies can use to notify the public of disasters and deliver emergency and public safety information. Alerting authorities should consider using additional channels when alerting the public to ensure the widest reach possible. It is important to conduct tests, training and exercises on a recurring basis to make sure that the notification tools are effective and staff know how to use them properly.
  - IPAWS supports wildfire evacuation by providing rapid, reliable, and geographically targeted alerts across multiple platforms, ensuring the public receives timely and actionable information to protect lives and property. IPAWS use includes the following:
    - 1. Rapid dissemination of evacuation orders
      - Immediate Alerts: IPAWS enables authorized officials to send emergency alerts quickly to the public via multiple channels (radio, TV, mobile devices, and more).
      - Targeted Messaging: Alerts can be geographically targeted to reach only those in the affected or at-risk areas, minimizing confusion.
    - 2. Multi-channel communication
      - WEA: Sends short, text-like alerts to cell phones in the evacuation zone, even if cellular networks are congested.
      - EAS: Broadcasts messages over radio and television, reaching people who may not have access to mobile devices.
      - NWR and Other Systems: IPAWS can also push alerts to weather radios and digital signage.
    - 3. Clear, actionable information
      - Evacuation instructions: Messages can include specific evacuation routes, shelter locations, and safety instructions.
      - Updates and all-clear notices: IPAWS can be used to provide ongoing updates, changes in evacuation zones, or all-clear notifications when it's safe to return.
    - 4. Accessibility
      - Multiple languages and formats: Alerts can be issued in multiple languages and accessible formats to reach diverse populations, including those with disabilities.

- 5. Integration with local and state systems
  - Coordination: IPAWS integrates with local and state alerting systems, ensuring consistent messaging and coordination among agencies.

- **WEA:** Geographically targeted messages used to warn the public about imminent or ongoing emergencies, including evacuation orders, without requiring subscriptions; messages range from 90 to 360 characters depending on the recipient's device and are essential for rapidly reaching large audiences in specific areas.
  - Planners should: Use clear, plain language and actionable instructions within the character limits (Include this information: Local, familiar, authoritative source; hazard; hazard impacts; hazard location; Response location; Protective action guidance; Time [when to take action and will this message expire?]; Additional guidance for getting updates)1; Create pre-scripted evacuation and shelter-in-place WEA templates for rapid use; coordinate WEA content with concurrent EAS, social media, and website messaging.
- **EAS:** A national public warning system that allows local jurisdictions to send messages informing their communities about local emergencies via radio and TV broadcasters, cable TV, wireless cable systems, satellite and wireline operators.
  - Broadcast, cable, and satellite operators are the stewards of this important public service, working in close partnership with state, local, tribal, and territorial authorities.
  - Alerting authorities can use EAS to disseminate important messages about wildfires via local TV and radio broadcaster stations.
- **NWR:** NWR, also known as NOAA Weather Radio All Hazards, is an automated 24-hour network of VHF FM weather radio stations in the United States.
  - NWR is a public service that broadcasts weather information and emergencies 24 hours a day.
  - NWR broadcasts can be received on a CB radio, AM/FM radio, scanner, car radio, shortwave receive, or a two-way radio, if the devices have the proper receiver or if the broadcast is simulcast on those frequencies.
  - NWR allows authorities to broadcast "Non-Weather Emergency Messages" (NWEMs) to the public through its network, providing critical emergency information beyond just weather alerts. FEMA uses the IPAWS platform to send NWEMs for broadcast on the NWR.
  - **Note:** Agencies must be approved as IPAWS alerting authorities and use IPAWS-compatible software to originate alerts. Planners should establish clear governance, authorization procedures, and quality-control steps (e.g., pre-scripted templates, message review, and approval workflows) for all IPAWS uses as well as conduct training and exercises.
- **Community/opt-in alerting systems:** Automated phone calls to landlines and registered mobile numbers can provide evacuation instructions tailored to specific areas via a direct line of communication.
  - These systems may see limited enrollment. Agencies should identify strategies to increase community participation.
  - Agencies should also maintain these databases to validate opt-in contact information.
- **TV and radio:** Collaborate with local television and radio stations to broadcast evacuation information. These channels are still vital for reaching residents who may not use digital platforms. It is important to build relationships with TV and radio broadcasters to develop mutual trust and maintain credibility when agencies need emergency information to be shared with the public via broadcasters. Emergency alerts should only be used when there is an imminent threat to life and property to avoid creating alert fatigue among viewers.
  - Plan for an ASL interpreter for live televised broadcasts. Note: ASL interpreters are not needed for EAS messages as these only use recorded audio and text on the screen.
  - Broadcasters should be engaged in planning and exercises to confirm technical readiness and message workflows.
- **Door to door:** Notifying residents of evacuations by moving door-to-door from one residence to another is resource-intensive and often time-consuming but can often be necessary and have a high saturation rate.

- **Sirens:** Sirens can be in a fixed location or on public safety vehicles.
  - For example, some public safety agencies use a distinctive hi-lo siren to notify the public of a mandatory evacuation.
  - Note: Sirens require additional public education, depending on the desired response. They are an alert only tool, they provide no specific information other than the need to become alert and seek more information.
  - Some communities use long-range speaker systems in lieu of sirens.
- **Social media:** Platforms like X, Facebook, and Instagram allow agencies to share updates rapidly. Social media also enables real-time interaction with the public, addressing questions and dispelling rumors. Social media, however, cannot be the only avenue for notification.
- **Visitors, city parks, hiking trails, etc.:** In some cases, visitors, recreators, and the unhoused may require special attention to notify. Notification methods resembling sirens, door-to-door visits and other manual options may be best.

Other discussion: Regardless of the preferred notification platform chosen by an agency, it is important that plans account for scenarios in which power and connectivity are limited or denied.

Accessibility considerations

To ensure everyone has access to real-time notifications, agencies must address the needs of diverse populations:

- **Language accessibility:**
  - Translate alerts into the most spoken languages in the community.
    - Depending on the chosen systems this may not be possible. For example, WEA only support English and Spanish.
    - Understand alerting software limitations for language and be sure to explore workarounds such as standby interpreters and testing WEAs multilingual audio in Spanish.
  - Ensure professional language interpreters, including ASL interpreters, are available for press conferences and public inquiries. While multilingual staff may assist, best practices suggest the use of people with language credentials for emergency information interpretation. Staff may or may not have these credentials.
- **Alternative formats:** Provide alerts in formats accessible to individuals with disabilities, such as audio messages for people who are blind or large-print materials for people with low vision. Provide certified sign language interpreters to translate alerts for people who are deaf or hard of hearing.
  - Plan for loss of power and how to deal with communications in these scenarios.
- **Low-tech solutions:** Use sirens, loudspeakers, and community bulletin boards to reach residents in areas with limited internet or mobile connectivity.
  - In extreme fire scenarios or during no-notice fire events, door-to-door alerts may make the most sense and be fastest.
  - NWR.

D.2.2. Criteria for issuing alerts

Clear protocols for issuing alerts prevent confusion and ensure timely action. To avoid confusion, make sure that plans delineate who has the authority to issue an evacuation advisory, warning or order, who can approve public alert messaging, and who has the authority to issue these alerts across platforms.

- **Decision points:** Establish and communicate predefined thresholds that activate alerts, such as fire proximity or wind speed changes or ignitions detected/confirmed.
- **Phased messaging:** Align alerts with the "Ready, Set, Go!" or other frameworks to provide clear instructions at each stage of the evacuation process.
- **Verification:** Ensure all information is accurate, verified, and consistent across platforms before dissemination to prevent the spread of misinformation.

D.2.3. Ensuring message clarity

Effective alerts must be concise, plain, and actionable:

- **Source, hazard, location, time, guidance:** Every alert must address these critical questions **every** time.
- **Avoid jargon:** Use language that is easy to understand, even under stress.
  - Use local landmarks to identify areas at risk or where to go.
- **Visual aids:** Include short links to maps, diagrams, or images to supplement textual information.

D.3. Evacuation messaging consistency

D.3.1. The importance of standardized messaging

Inconsistent messaging can lead to confusion or misunderstanding and can delay action. Standardizing evacuation messages ensures uniformity across all communication platforms and agencies:

- **Pre-scripted templates:** Develop a library of customizable message templates that address various scenarios, such as no-notice evacuations, or shelter-in-place orders.
  - Translate templates into locally relevant languages.
- **Training and coordination:** Ensure all personnel, from dispatchers to field officers, are trained in the use of standardized messages. FEMA's IPAWS MDD is a wonderful tool to help agencies train and craft appropriate and effective messages. The MDD can be accessed in the IPAWS Alerting Authority Assistive Tool Platform (ATP)[23] (free registration required).
- **Collaborative tools:** Use shared digital platforms—such as the Message Design Dashboard—to draft, approve, and disseminate messages, thereby minimizing delays and errors.
  - USFA Wildfire Evacuation Outreach Materials[24] (Wildfire evacuation messages and outreach materials to share with communities before, during and after a wildfire)

The MDD and the information in the "IPAWS Best Practices" document[25] that provides guidance on crafting effective alert and warning messages are based upon research and public message testing detailed in "The Warning Lexicon: A Multiphased Study to Identify, Design, and Develop Content for Warning Messages".[26] At its core, an effective and complete warning message includes 5 Key Content Elements and the MDD assists when crafting an evacuation warning by prompting for that complete information and formatting it in an order proven to be most effective for people to quickly and accurately understand the message. The graphic below from the IPAWS MDD shows the complete information elements in the order that helps people to quickly understand a warning message:

Figure 5. A template message from the IPAWS MDD showing all five key content elements in order.

[23] Federal Emergency Management Agency. (2025). *IPAWS Alerting Authority ATP (Assistive Tool Platform).* U.S. Department of Homeland Security. https://atp.aws.fema.gov/

[24] U.S. Fire Administration. (2022, October 4). *Wildfire Evacuation.* U.S. Department of Homeland Security, Federal Emergency Management Agency. https://www.usfa.fema.gov/wui/outreach/wildfire-evacuation.html

[25] U.S. Department of Homeland Security's Federal Emergency Management Agency. 2023. IPAWS Best Practices: Integrated Public Alert & Warning System (IPAWS) Guidance and Techniques for Sending Successful Alerts, Warnings, and Notifications. https://www.fema.gov/sites/default/files/documents/fema_ipaws-best-practices-guide.pdf

[26] Sutton, J., Olson, M.K., Waugh, N.A. (2023). The Warning Lexicon: A Multiphased Study to Identify, Design, and Develop Content for Warning Messages. *Natural Hazards Review, 25*(1). https://doi.org/10.1061/NHREFO.NHENG-1900

For more information on the MDD, see the MDD slide deck from the IPAWS 2023 User Conference.[27]

D.3.2. Examples of messaging

Using the IPAWS Best Practice guidance and the MDD, effective evacuation warning message examples will be generated as follows:

360 Character template:

"[Warning Source Name/Agency]: WILDFIRE EVACUATION WARNING for [location] at [#:## AM/PM] PREPARE to leave. Gather loved ones, pets, and supplies. Monitor local media and CHECK [URL] for more information."

90 Character template:

"[Warning Source Name/Agency]: WILDFIRE EVACUATION ORDER for [location] at [#:## AM/PM] LEAVE now. MOVE in [add directions/roads]. CHECK [URL] for more information"

An example of a real-world effective evacuation warning sent via IPAWS to WEA as it would appear on a mobile phone is shown in Example 1.

Figure 6. Evacuation warning message example, from FEMA MDD.28

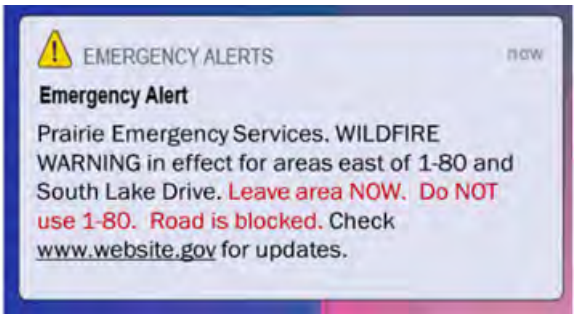


Figure 7. Immediate evacuation message example, from 90-Character and 360-Character Message Template for Immediate Evacuation.[29]

Component	90-character message template	360-character message template
Immediate evacuation	[AGENCY NAME]: EVACUATE NOW from [LOCATION] due to [HAZARD]. Effective until [TIME].	[AGENCY NAME]: Evacuate immediately from [LOCATION] due to [HAZARD]. This order is effective until [TIME]. Leave now and follow directions from emergency personnel. Roads may be blocked or congested, so plan your route accordingly. Call [XXX-XXX-XXXX] or visit [WEBSITE OR SOCIAL MEDIA] for updates. Stay informed via local news or official channels. (350 characters)

[27] Sutton, J. (2023, September 27). *Message Design Dashboard (MDD)* [Conference presentation]. IPAWS 2023 User Conference. https://www.fema.gov/sites/default/files/documents/fema_message_design-dashboard.pdf
[28] Federal Emergency Management Agency. (2025). *IPAWS Alerting Authority ATP (Assistive Tool Platform).* U.S. Department of Homeland Security. https://atp.aws.fema.gov/
[29] Federal Emergency Management Agency. (2024, October 10). *MDD-Based IPAWS Message Templates for WEA/EAS.* U.S. Department of Homeland Security. https://www.fema.gov/sites/default/files/documents/fema-resilience-mdd-based-ipaws-message-template-10-10-2024.pdf

D.4. Post-evacuation messaging

D.4.1. Repopulation and recovery information

Clear communication during the recovery phase is essential for a smooth transition back to normalcy:

- **Repopulation plans:** Share phased reentry plans, prioritizing essential services before the public. Remind people they should not return home until authorities say it is safe to do so.
- **Safety updates:** Provide information about hazards, such as damaged infrastructure or lingering hotspots.
  - Consider that water and food in evacuated areas may be contaminated.
  - Promote safety during clean-up. This includes wearing protective clothing and using a respirator to limit exposure.
- **Resource availability:** Publicize the locations of aid centers offering food, water, and emergency supplies.
  - Understand that an area may likely still be without power during the repopulation phase.

D.4.2. Reinforcing public trust post-disaster

Transparent, consistent and empathetic communication after an evacuation strengthens community trust. Below are a few examples of topics or approaches to use at community meetings or in other communications to help reinforce public trust in agencies after an incident:

- **Acknowledging challenges:** Recognize the hardships faced by residents and express gratitude for their cooperation.
- **Providing support:** Highlight available mental health resources and recovery assistance programs.
- **Learning from feedback:** Ask for public input on the evacuation process to identify areas for improvement.

D.5. Communication and messaging conclusion

Effective communication is essential to executing effective evacuations. Effective communication is especially important during no-notice fire events, which present the greatest challenge to emergency management agencies. They require rapid decision-making and clear, actionable messaging to ensure public safety. No-notice fire events allow little to no time for preparation, making it critical to have multiple, redundant, and tested communication channels in place, including WEAs, social media, and traditional media outlets. It is crucial to ensure that messages are consistent, accessible, and effective, reaching all populations, regardless of language, disability or technological barriers.

Appendix E. AFN/CTN Populations and Other Special Considerations

Effective evacuation planning is critical to ensuring the safety and well-being of all community members during wildfire emergencies. Populations with AFN — including people with disabilities, limited mobility, language barriers, and are dependent on specific resources — face unique challenges during evacuations. Similarly, populations with Critical Transportation Needs that do not have access to reliable transportation — including prisoners or people who are staying in hospitals, the unhoused or others without cars — also require special consideration during evacuation planning. Addressing these challenges requires a thoughtful, detailed approach to planning, implementation, and collaboration. This section provides an overview for supporting AFN and CTN populations while also addressing the needs of pets, large animals and service animals, which are often integral to community preparedness and compliance.

E.1. Identification and mapping

The foundation of any effective evacuation plan is the identification and mapping of AFN populations within the community. Agencies must understand where these individuals live and what specific needs they may have during a wildfire emergency.

Leveraging data and community input

Local data, census information, and community input are invaluable for identifying populations with disabilities, mobility limitations, and other access and functional needs. These sources offer demographic insights, highlighting areas with higher concentrations of vulnerable/higher risk individuals. Community engagement through focus groups and outreach programs can uncover gaps that raw data may not reveal.

Including institutional settings

Institutions such as K-12 schools, nursing homes, assisted living facilities, group homes, and hospitals house individuals who may face significant barriers to evacuation. These facilities must be incorporated into risk assessments, with detailed evacuation plans tailored to the mobility and medical needs of their residents. Facility managers should be engaged early to align their protocols with local emergency response efforts, ensuring seamless coordination during a wildfire event.

GIS integration

GIS technology enables agencies to overlay hazard zones with demographic and infrastructure data, providing a visual representation of at-risk populations. This tool allows planners to identify clusters of vulnerable/higher risk individuals, evaluate the proximity of these populations to egress routes, and prioritize resource allocation. GIS can also be used to monitor urban development and population shifts over time, ensuring that plans stay relevant.

E.2. Transportation and assistance

Transportation is one of the most significant challenges for AFN populations during evacuations. Many individuals may not have access to private vehicles or may require specialized transportation to accommodate disabilities or medical equipment.

Collaborating with transit agencies

Emergency management agencies should partner with local transit providers to develop accessible evacuation transportation plans. Wheelchair-accessible vehicles, paratransit services, and public buses, trains, ferries, etc., can be integrated into evacuation strategies to increase capacity. Transit agencies should conduct regular

drills and simulations to ensure readiness and identify potential bottlenecks. Additionally, non-traditional modes of transportation should be considered.

Providing specialized support

Deploying staff trained to help individuals with sensory or cognitive disabilities is essential for maintaining safety and reducing stress during evacuations. These staff members can provide guidance, reassurance, and practical aid, such as helping evacuees navigate unfamiliar routes or manage anxiety.

Addressing tourists and public transit dependents

Populations such as tourists or those reliant on public transportation face unique challenges during evacuations. Choosing well-publicized pick-up points for evacuation buses and including clear signage translated into multiple languages ensures these groups are not overlooked. Coordination with hotels, tourism boards, and public transit agencies can further streamline efforts.

Establishing staging areas

Staging areas serve as critical hubs for individuals requiring help before evacuation. These locations should be staffed with medical personnel, equipped with accessible amenities, and situated near high-risk areas. Staging areas also provide a centralized point for coordinating transportation resources and managing evacuee flow.

E.3. Shelter preparedness

Evacuation shelters must be designed to meet the diverse needs of all populations, ensuring they can provide a safe, dignified, and supportive environment during crises.

ADA-compliant facilities

All designated shelters should adhere to Americans with Disabilities Act (ADA) standards, offering accessible entrances, restrooms, sleeping areas, and common spaces. Geographically distributing shelters ensure accessibility for residents across the community and minimize travel distances.

Stocking specialized resources

To accommodate the diverse needs of evacuees, shelters should be equipped with:

- Medical supplies, including oxygen tanks, mobility aids, and essential medications.
- Sensory kits for individuals with autism or sensory processing disorders, featuring noise-canceling headphones, fidget tools, and low-stimulation zones.
- Charging stations for medical and assistive devices, such as wheelchairs and communication aids.

Staff training and support

Shelter staff must be trained to handle the unique needs of AFN populations, including cultural sensitivities, disability etiquette, and conflict de-escalation techniques. Regular training sessions and collaborative exercises with AFN advocates can improve staff preparedness and confidence.

E.4. Communication accessibility

Effective communication is vital to ensure that all shelter residents, including those with AFN, receive critical evacuation information in a timely and understandable manner. See Appendix E.2.2: Accessibility Considerations for more details.

E.5. Pet evacuations

For many residents, pets are considered family members. Including provisions for pets in evacuation plans increases compliance with evacuation orders and reduces stress for pet owners. Furthermore, the Pets

Evacuation and Transportation Standards Act of 2006 requires FEMA to ensure that state and local emergency preparedness operational plans address the needs of individuals with pets and service animals and authorizes federal agencies to provide disaster support for those needs.[30] **Note** Household pets do not include reptiles (except turtles), amphibians, fish, insects, arachnids, farm animals (including horses), or animals kept for racing purposes.

Designating pet-friendly shelters

Shelters that accommodate pets must be clearly identified and publicized in pre-evacuation materials. These facilities should provide basic pet care supplies, such as food, water bowls, bedding, and waste disposal materials. Including designated spaces for pets within shelters helps reduce noise and disruption.

Promoting pet preparedness

Agencies should educate pet owners on preparing their animals for evacuation. This includes creating "go bags" with pet food, medications, and vaccination records., Pet owners should make sure their pets have identification tags and microchips with up-to-date contact information.

Veterinary support

Partnering with local veterinarians ensures that pet-friendly shelters have access to medical expertise and resources, such as emergency vaccinations or treatments for stressed animals. Veterinary staff can also help in managing health concerns during extended shelter stays.

E.6. Large animal evacuations

Evacuating large animals, such as livestock and horses, requires specialized planning and resources. These efforts are critical for rural communities where agriculture is a cornerstone of the local economy.

Shelter areas for livestock

Shelter areas, such as fairgrounds or equestrian centers, should be pre-designated for housing large animals during emergencies. These areas must provide access to water, feed, and shelter, and be in low-risk zones.

Evacuation management for livestock

During an ongoing incident, those requiring more time to evacuate livestock may need access to evacuated areas. Establishing a credential system that identifies those approved to access evacuated areas for livestock evacuation purposes may help to reduce confusion among responders.

Collaborating with experts

Agricultural extension offices, livestock associations, and veterinary services are valuable partners in developing best practices for large animal transport and care. These organizations can provide expertise, equipment, and personnel to support evacuation efforts.

Owner education

Educational campaigns targeting livestock owners should include guidance on preparing trailers, identifying animals with tags or brands, and developing evacuation plans that account for feed, water, and veterinary needs. Workshops and drills can help owners practice these procedures and address potential challenges.

[30] H.R.3858 - 109th Congress (2005-2006): *Pets Evacuation and Transportation Standards Act of 2006.* (2006, October 6). https://www.congress.gov/bill/109th-congress/house-bill/3858

E.7. Community engagement

Community engagement is the backbone of successful evacuation planning. This includes for all community members, including AFN populations, families, pets, service animals and large animals. Collaborative efforts ensure plans include everyone, are, actionable and reflect community needs.

Specialized workshops and drills

Hosting workshops tailored to vulnerable/higher risk populations and pet/livestock owners build awareness and preparedness. These events should cover topics such as egress routes, available resources, and effective response strategies. Evacuation drills that simulate real-world scenarios allow agencies and residents to find weaknesses and refine plans.

Partnerships with nonprofits and advocacy groups

Local animal shelters, disability advocates, and non-profit organizations bring expertise, resources, and networks that enhance evacuation efforts. Establishing mutual aid agreements with these groups expands the capacity to address AFN needs effectively.

Feedback mechanisms

Creating feedback channels, such as surveys or public forums, allows residents to share their experiences and suggestions. This input is invaluable for improving plans and making sure they stay relevant and inclusive.

E.8. AFN and CTN conclusion

Comprehensive evacuation planning for AFN and CTN populations is a public safety imperative. By prioritizing identification, transportation, shelter preparedness, communication accessibility, and community engagement, agencies can build systems that protect all residents during wildfire emergencies. Addressing the needs of pets and large animals further strengthens community resilience, ensuring no one or animal is left behind. Through collaboration, education, and continuous improvement, communities can prepare for the challenges of wildfire evacuation and safeguard their most vulnerable/higher risk members.

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  - Gunnison County Sherriff's Office
  - Gunnison Regional 911 Authority
  - Gunnison Volunteer Fire Department
  - Gunnison Valley Health
  - Gunnison Valley Rural Transit Authority
  - Husum BZ Community Council
  - Kentfield Fire Protection District
  - Klickitat County Department of Emergency Management
  - Klickitat County Fire Chiefs
  - Klickitat County Fire Districts (1,7,8,9,12, and 14)
  - Klickitat County Public Health Department
  - Klickitat County Public Works
  - Klickitat County Search and Rescue
  - Klickitat County Sheriff's Office
  - Marin County Fire Department
  - Marin County Office of Emergency Management
  - Marin County Sheriff's Office
  - Marin Emergency Command Center
  - Marin Wildfire Prevention Authority
  - Maui County
  - Mill Valley City Council
  - Mill Valley Police Department

- Montrose County
- Mt. Crested Butte Police Department
- Nevada Office of Emergency Management/Homeland Security
- Novato Police Department
- Orange County Fire Authority
- Pitkin County Sheriff's Office
- Pitkin County 911
- Ross Police Department
- San Rafael Police Department
- Santa Clara County Firesafe Council
- Sausalito Police Department
- Skamania County Department of Emergency Management
- Southern Marin Fire Protection District
- Spokane County
- Tiburon Fire Protection District
- Tiburon Police Department
- Town of Crested Butte Public Works
- Town of Marble
- Town of Vail
- West Klickitat Regional Fire Authority
- Woodside Fire Protection District

- Tribal
  - Yakama Nation
- Private
  - BurnBot
  - Colorado River Sustainability Campaign
  - Esri
  - Guidehouse
  - HAAS Alert
  - Ladris Technologies
  - Mt. Adams Resource Stewards
  - Puget Sound Energy
  - Republic Services
- Federal
  - Argonne National Laboratory
  - Bureau of Alcohol, Tobacco, Firearms and Explosives
  - Federal Emergency Management Agency – National Exercise Division
  - Federal Emergency Management Agency – Region 9
  - Federal Emergency Management Agency – Region 8
  - National Aeronautics and Space Administration
  - National Institute of Standards and Technology
  - National Oceanic and Atmospheric Administration
  - National Parks Service
  - U.S. Forest Service
  - U.S. Department of Homeland Security
  - U.S. Fire Administration
- NGOs
  - American Red Cross
  - Gordon and Betty Moore Foundation
  - International Association of Fire Chiefs
  - Resources Legacy Fund
  - Western Fire Chiefs Association

FEMA

U.S. Fire Administration

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