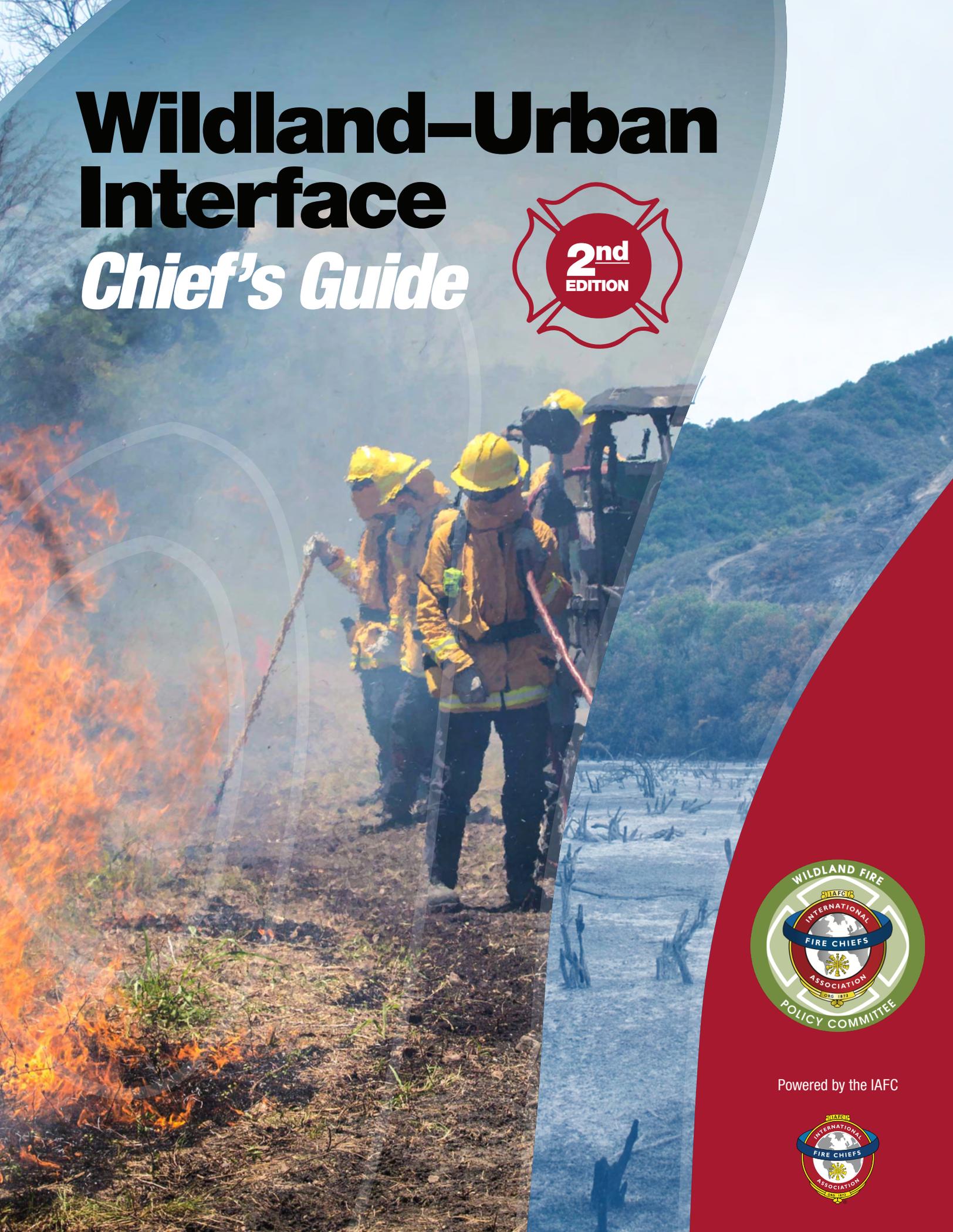


# Wildland-Urban Interface *Chief's Guide*



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# Introduction



Whether you call it a wildland fire, a forest fire, a brush fire, or an outdoor fire, these types of fires – all characterized by burning vegetation – happen in every jurisdiction and threaten communities. Such fires can become large, disruptive, costly, and dangerous. Where these types of fires meet infrastructure, civilization, and communities, the fires are called wildland-urban interface fires, or WUI fires.

For many jurisdictions, WUI fires may be low-frequency events. But, they have the potential to have a significant impact on the community and response organization.

What once might have been a community with a low-risk of wildfire may not be one today. With increased drought, climate change, changing land management philosophies, and expansion into the WUI areas, these communities are now vulnerable and may be at high risk of wildfire.

All organizations need to clearly identify the risks – whether they come from inside or outside the jurisdiction – and adequately prepare for these types of fires. All WUI fires start small and can be managed with proper preparation. Without such preparation, these fires can destroy entire communities and put people at risk. In addition to proper preparation and mitigation, communities should work to develop suitable response capabilities. Furthermore, communities need to be prepared to properly manage recovery from a WUI fire.



## **THIS GUIDE HAS BEEN DESIGNED BY FIRE CHIEFS FOR FIRE SERVICE LEADERS**

to help provide a better understanding of the wildland-urban interface, as well as the necessary information needed to prepare for, mitigate, respond to, and recover from these fire events.

The intent of this guide is to provide an understanding of how a fire chief or other official can help a community adequately manage the emerging risk of fires in the wildland-urban interface. Each section contains information and advice, case studies, and wherever possible, referenced resources.

# Case Study

## **FIRE DEPARTMENTS ACROSS THE NATION AND AROUND THE WORLD BENEFIT FROM WILDLAND PREPARATION.** ***IT'S NOT A MATTER OF IF BUT WHEN.***

On the night of November 28, 2016, residents of Gatlinburg, Tennessee found themselves in the midst of a nightmare. A small wildland fire, the Chimney Tops 2 fire, had exploded into the worst fire the Smoky Mountains had experienced in over a hundred years. The fire would eventually take 14 lives, destroy 2,400 structures, and force 14,000 individuals to evacuate, resulting in millions of dollars in damages.

The most destructive wildfire in California's history, the Camp Fire, burned in Butte County for over two weeks in November 2018. The Camp Fire claimed 85 lives and caused an estimated \$16.5 billion in damages. It burned more than 18,000 buildings, including the majority of the town of Paradise.

Australia's "Black Summer" megafires in 2020 burned an estimated 46 million acres, destroyed over 5,900 buildings (including 2,779 homes), and killed at least 34 people. At its peak, air quality dropped to hazardous levels in all of Australia's southern and eastern states. The cost of battling the bushfires is expected to exceed \$4.4 billion. Economists estimate that the Australian bushfires may have caused over \$103 billion in property damage and economic losses, making them Australia's costliest natural disaster to date. Nearly eighty percent of Australians were affected, either directly or indirectly, by the bushfires.

A wildland fire swept through the community of Fort McMurray in Alberta, Canada, on May 3, 2016, forcing the largest wildfire evacuation in Alberta's history. Upwards of 88,000 people were forced from their homes. The 1.5 million-acre wildfire destroyed approximately 2,400 homes and buildings. The Fort McMurray Fire was the largest and costliest natural disaster in Canadian history.

## ANYWHERE. ANYTIME.

These fires identify a growing problem in the WUI. WUI fires are complex, often spanning multiple jurisdictions, including large amounts of private land. The risk within the WUI is often ignored due to attitudes that disaster will either strike somewhere else or will never strike twice. Like with many disasters, there is often more than one cause contributing to these events. All causes need to be understood in order to implement effective solutions to reduce the risk of future catastrophic fires. Ultimately, there's nothing that can be done to change the past. The key is to learn from the past and be better prepared for the future.

## WHAT CAN WE LEARN FROM THESE, AND OTHER WILDLAND FIRES, TO HELP PREPARE OUR COMMUNITIES?

**Fuels, weather, and topography** all played a significant role in these events. Risk can be managed and communities can become more resilient. Fuels can be reduced, eliminated, or modified. Programs such as Ready, Set, Go!, Living With Fire, and Firewise USA provide guidance for establishing a resilient landscape and engaging property owners. Another strategy is to enact codes for new development in the WUI and enforce existing local statutory requirements. The foundation for building wildfire resilience can be found in a sound scientific understanding of the risks. Resilience to fire in the WUI requires knowledge about fire behavior and how structures ignite and burn. The design and layout of communities and subdivisions is also important, as demonstrated by the Camp Fire in Paradise, California.

Located in the Sierra Nevada foothills, Paradise has almost 100 miles of private roads that dead-end on narrow overlooks, with relatively few streets connecting them. During the Camp Fire, the evacuation routes out of Paradise for 38,000 people consisted of four roads that were threatened, and in some cases overrun, by the fire. This resulted in evacuation routes that quickly became gridlocked as residents attempted to flee from the approaching fire.





**Communication and Community Notification.** During a rapidly moving wildfire, emergency notification can be problematic. Many of the residents in Paradise reported that they did not receive an evacuation order. In Paradise, and in many communities, the biggest challenge with emergency notification is the low rate of citizen registration with the local emergency notification system. In the case of Paradise, the capacity of the communication network could not keep up with the magnitude of the evacuation. This was further complicated by the number of cell phone towers and communication sites that were either damaged or lost power during the fire.

During the Chimney Tops 2 fire, the City of Gatlinburg relied on social media platforms, the use of existing notification systems, and law enforcement officers and firefighters making in-person notifications. The systems were not as effective as they needed to be for a major disaster. Communications were compromised as fiber optic lines and cell towers were damaged by fire. Response personnel were prevented from making in-person notifications due to impassable roads. On the day the Chimney Tops 2 fire spread into residential areas, only a small percentage of residents reported receiving official evacuation notices. This resulted in citizens relying on information from the media, social contacts, and cues from the fire itself (such as smoke, embers, and flames) to stay informed about the impending wildfire threat.

There is a clear need for all communities to have robust evacuation plans that address both the physical evacuation itself, as well as the critical first step in any evacuation - community notification. Communities should have redundant notification methods and a clearly defined plan. The plan should establish common terminology and define the lines of communication between fire departments, law enforcement, and other supporting entities, such as public works. The Ready, Set, Go! Program is an effective tool to help the community be prepared for WUI fires and evacuations.

**Relationships and Agreements.** Few fire departments can handle a significant WUI fire on their own. It is crucial to plan for the fires your organization can handle, as well as those that will require a major commitment of resources from local, regional, state, and federal resources. Most fire departments have local Automatic Aid and Mutual Aid agreements but it takes preparation and advanced planning to execute the regional/state/interstate agreements that will be necessary to address major WUI fires.

## THE NEW NORMAL

Across the country and around the world, we are experiencing fires of unprecedented – and in many cases, unimaginable – scale. No city, community, or wildland area is safe from fire. Factors such as climate change, declining forest health, and the expansion of the WUI will continue resulting in wildland-urban disasters. In many areas, wildfires have always been common, rearing up for a few months each year. What has changed is that they have become unrelenting, stretching the fire season across the full course of the calendar; megablazes, once thought unprecedented, are no longer unlikely. These blazes are a wake-up call to the new, pervasive danger of wildfires.

In many communities, wildland fires are arguably the greatest threat to quality of life: degrading the air we breathe, harming the environment, impairing the economy, destroying neighborhoods, and in some cases, taking the lives of the citizens we are called to serve.



# Preparation





Preparation is defined by the Department of Homeland Security and the Federal Emergency Management Agency as:

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***“a continuous cycle of planning, organizing, training, equipping, exercising, evaluating, and taking corrective action in an effort to ensure coordination during incident response.”***



# Specific Categories



## RISK ASSESSMENT

All communities have some level of risk. It is incumbent upon fire service leaders to objectively evaluate that risk to properly prepare their responders and the community they serve.

There are several location-specific considerations that factor into risk:

- » **Fire ecology** – vegetation type and fuel loads, relative impact of invasive species, climate, fire return interval.
- » **Weather Patterns and Topographical Influences** – wind and recognition of prevailing wind patterns, location of development and infrastructure in relation to slope and aspect.
- » **Situational Awareness** – the local and regional risks and when they are most likely to occur.
  - Improvements adjacent to natural vegetation.
  - Construction types and materials – new and existing.
  - Community fire knowledge – historical experience and outcomes – may vary based on neighborhood, mitigation program participation, and interval since the last fire event.
  - Ability to communicate to the public in emergencies.
    - ♦ Reverse 911.
    - ♦ Phone Apps.
    - ♦ Backup plans.
  - Weather conditions – drought, winds.



» **Economic impact** – tourism, aesthetics etc.

» **Infrastructure**

- **Key components and resiliency.**
  - ◆ Road systems – access/egress, bridges.
    - ⊙ Are they vulnerable to a wildfire?
  - ◆ Mining.
  - ◆ Energy production.
  - ◆ Water sources, systems, watersheds.
    - ⊙ Natural and unnatural.
    - ⊙ Capacity and time of year.
- **Utilities.**
  - ◆ Assess utilities (especially above-ground power lines, solar, fossil fuel distribution, and storage systems) for risk of wildfire ignition.
  - ◆ Assess resiliency and continuity of service during and after the event.
  - ◆ Possibility of planned shut-off during high fire danger.
- **Health care – hospitals, EMS, nursing homes.**
  - ◆ Impacts of smoke, fire, and resistance to fire.
- **Key employers – continuity of business.**
  - ◆ How vulnerable?
- **Schools.**
- **Key residential facilities.**
  - ◆ Corrections.
  - ◆ Group homes.

Your **HIGHEST AREA OF RISK** is where the above factors, Fire Ecology, Weather Patterns and Topographical Influences, Situational Awareness, Economic Impact, and Infrastructure overlap.

**Additional Resources:**

- » [State Risk Assessments and Landfire.gov.](#)
- » [National Fire Danger Rating System.](#)
- » [Community Wildfire Protection Plan \(CWPP\) Leader’s Guide.](#)
- » [FAC Self-Assessment Tool.](#)
- » [Wildland-Urban Interface Wildfire Mitigation Desk Reference Guide.](#)
- » [Emergency Preparedness Resources for Businesses.](#)



## RELATIONSHIPS

Once you have established risk, it is critical that you identify and communicate with partner agencies. Roles need to be clearly established, as well as the ability to seamlessly assimilate and utilize a Unified Command.

» **Possible partners.**

- **Traditional.**
  - ◆ Neighboring fire jurisdictions.
  - ◆ Law enforcement (local, state, county).
  - ◆ Emergency management.
  - ◆ Land management agencies (parks, BLM, state, BIA, USFS).
  - ◆ Bureau of Reclamation.
  - ◆ Tribal Partners.
  
- **Non-Traditional.**
  - ◆ Public works.
  - ◆ Planning/zoning/code enforcement.
  - ◆ Water departments/irrigation districts.
  - ◆ Key private landowners.
  - ◆ Homeowner/Neighborhood Associations.
    - ⊙ Interested/invested citizens – community advocates.
  - ◆ Utilities.
    - ⊙ Gas.
    - ⊙ Pipeline.
    - ⊙ Electric.
  - ◆ Natural Resources Conservation Service (NRCS)/conservation districts.
  - ◆ School districts.
  - ◆ 4H/cooperative extension service/animal control.
  - ◆ Fish and Wildlife – state and federal.
  - ◆ Parks – local, state, and federal.
  - ◆ DOT/highway/roads.
    - ⊙ Identify agency contacts and process for requesting modifications of traffic and/or closures.
    - ⊙ High-risk/vulnerable areas.
  - ◆ Non-governmental organizations (NGO's) like The Nature Conservancy (TNC).

- ◆ Universities - fire modeling programs, early fire detection networks.
- ◆ National Guard units – especially aviation units.

» **Municipal and County Government.**

- Which legislative bodies and agency administrators do you report to in a large wildland incident?
  - ◆ Who is the contact?
  - ◆ How to contact?
- Air pollution control board.
  - ◆ Impacts on prescribed burns.
  - ◆ Impacts on burnout.
  - ◆ Expertise to assist in managing smoke for community and firefighter impacts.

» **Coroner/Medical examiner.**

- What arrangements can be made if you have a large-scale incident with fatalities in your jurisdiction?
- When will the coroner be called?
- What are the conditions of access to the scene?

## POLITICAL SUPPORT

With risk established and partner agencies identified, you will need political leaders to be informed and to buy into the cooperative efforts of managing wildland fires.

» **Know who you report to and their level of commitment, comfort, and understanding of the role your agency will play in a wildland response. Do your elected officials understand the risks, statistics, and general response needs of your community?**

- Local.
- Regional.
- Beyond.





## JURISDICTIONAL RESPONSIBILITY

Know which agency is the lead. Are there shared responsibilities or is jurisdiction undetermined or undefined?

## AGREEMENTS

In order to respond outside your normal operating area, you will need an agreement. Typical agreements include Who, What, Where, When, Why, and How, and are used to request or provide assistance and/or resources among jurisdictions. States may participate in interstate compacts and intrastate agreements that encompass local jurisdictions. Check with your state or federal emergency management or land management agency for details. Authorized officials from each of the participating jurisdictions and/or organizations should collectively approve agreements prior to response.

- » **Automatic Aid** – Agreements that permit the automatic dispatch and response of requested resources without incident-specific approvals. These agreements are usually basic contracts; some may be informal accords.
- » **Local Mutual Aid** – Agreements between neighboring jurisdictions or organizations that involve a formal request for assistance and generally cover a larger geographic area than automatic mutual aid. Generally, these involve short-term assistance with no formal resource order and there is usually no payment/reimbursement involved.
- » **Regional Mutual Aid** – Substate regional mutual aid agreements between multiple jurisdictions that are often sponsored by a council of governments or a similar regional body. May be for an immediate need, such as structure protection, or a planned need. Generally involves a resource order, typing and credentialing, and reimbursement after a set time period.
- » **Statewide/Intrastate Mutual Aid** – Agreements, often coordinated through the state, that incorporate both state and local governmental and non-governmental resources in an attempt to increase preparedness statewide. Often cover a planned need and reimbursed costs.
- » **Interstate Agreements** – Out-of-state assistance through the Emergency Management Assistance Compact (EMAC) or other formal state-to-state agreements that support the response effort. These typically cover a planned need and full-cost reimbursement.

### Additional Resources:

- » [2015 California Fire Assistance Agreement.](#)
- » [NWCG Standards for Interagency Incident Business Management.](#)
- » [JPA San Juan and EMND PDF \(See Appendix A\).](#)

# TRAINING

Training can be local, regional, or based on national standards. There are a number of ways an agency can determine to what level(s) and standards to train personnel.

- » **Local** – basic wildland fire training to wildland incidents that ensures accountability and safe and effective operations.
  - Fire Chief/Local Authority Having Jurisdiction (AHJ) can approve within a district or for response in agreed-upon areas (Mutual Aid Agreements). Not generally accepted for state or federally-managed or funded fires.
  - Partners – basic understanding of Incident Command System (ICS) for public works, utilities, and law enforcement, to include a basic understanding of risks and fire behavior.
  
- » **Regional** – intermediate training that is more formalized to begin the process of meeting PMS 310-1 for all personnel in positions assigned, Incident Command System (ICS) 100, 200, 700, and 800.
  - NIMS Wildland Fire Qualification System Guide, PMS 310-1 (federal standard for wildland fire personnel – levels and task books – universally accepted) Red Card. There are several ways to meet PMS 310-1:
    - ♦ NWCG 310-1 flow charts – following traditional PMS 310-1 paths.
    - ♦ Crosswalk – a method by which structural firefighters can incorporate their fire suppression knowledge and skills (most frequently based upon NFPA standards) and apply them towards specific NWCG wildland fire position qualifications. This is accomplished through the use of approved gap courses and position task books.
    - ♦ Recognition of Prior Learning (RPL) – allows the credentialing authority to account for skills and knowledge acquired through past experiences which can be applied towards NWCG wildland fire position qualification. This is accomplished through evaluation by a qualification committee and subsequent completion of assigned and appropriate competency evaluations or position task books.
  
- » **National** – PMS 310-1 compliance training to meet local and regional response needs. Incident Management Team (IMT) training to include Incident Command System (ICS) 300 and above, including position-specific training.

## Additional Resources:

- » [National Incident Management System: Wildland Fire Qualification System Guide.](#)
- » [Skills Crosswalk training.](#)





## COMMUNICATIONS

There are different levels to which communications decision-making can be applied. The basic concept of interoperability, at whatever level you decide, is critical.

- » **Basic** – capacity for command and tactical frequencies that adjoining agencies have agreed upon, are functional and largely pre-planned.
- » **Intermediate** – field-programmable radios with support to facilitate additional channels and flexibility when infrastructure is damaged or volume/complexity exceeds plans.
  - Resilient data capability that meets anticipated incident needs.
- » **Advanced** – regional communication plan with pre-programmed banks with area cooperators.
  - Expanded dispatch – ability to maintain continuity of operations by separating incident traffic and triaging system demand.
  - Ability to support data needs for complex incidents.
  - Situational awareness applications.

## COMMUNITY NOTIFICATION

The ability to inform community members on emerging incidents and provide basic instructions.

- » **Basic** – identified source for information and the plan to keep updated.
- » **Intermediate** – system redundancy, small-scale drill.
- » **Advanced** – automatic notification systems (phone, text, social media), Emergency Alert Systems (EAS), Integrated Public Alert and Warning System (IPAWS), large-scale drill.

### Additional Resources:

- » [Integrated Public Alert and Warning Systems \(IPAWS\)](#).

## PERSONAL PROTECTIVE EQUIPMENT

The level of Personal Protective Equipment (PPE) should be commensurate with the risks.

- » **Basic** – personnel have the ability to alter structural gear to facilitate wildland operations.
- » **Intermediate** – all personnel have NFPA 1977 Compliant brush gear.
- » **Advanced** – all personnel are issued full complement of PPE, tools, and equipment for their assignments to include shelter, packs, etc.

### Additional Resources:

- » [Personal protective clothing and equipment for wildland firefighting](#).



## PERSONNEL & STAFF

Does your organization have the capacity to staff operational and overhead positions on any moderate to large-scale incident? If not, what is the contingency for adequate Incident Management Team (IMT) staffing?

## APPARATUS & EQUIPMENT

Every jurisdiction must decide how to appropriately equip their agency for response.

- » **Basic** – meets minimum local anticipated needs.
- » **Intermediate** – meets local needs and deployment standards for regional response.
- » **Advanced** – apparatus complement meets risk and deployment needs with depth to include Type-3/4/6 (wildland engine) or Type-1/2 (structure engine), porta tanks, tenders, and hose complements (meets federal and state standards).
- » **Specialized** – if your agency intends to address a specific regional need (Rapid Extrication Module, for example), this involves very specific equipment and important training requirements.

### Additional Resources:

- » [NIFC Firefighter Equipment.](#)

## PRE-INCIDENT PLANNING

Similar to pre-planning for high-occupancy or high-hazard structures in your jurisdiction, response agencies should pre-plan wildland and wildland–urban interface areas as well.

- » **Basic** – tactics related to location and time of year.
- » **Intermediate** – in-depth planning including partners and regional exercises.
  - Law enforcement evacuation included.
  - Water sources.
  - Deployment.
- » **Advanced** – site-specific planning including fuels, and topography.
  - All partners – advanced evacuation, water-system planning.
  - Modeling.
  - Full-scale drills with community.
  - Developing written or electronic pre-incident plans or maps that are available for download by responding resources using Quick Response (QR) code, File Transfer Protocol (FTP) site or other means.

### Additional Resources:

- » [Wildland Fire Incident Management Field Guide.](#)

# Case Study

Barnegat Township, NJ

## **WILDLAND PREPAREDNESS HAS POSITIVE IMPACT ON OTHER HAZARDS**

The Barnegat Volunteer Fire Company, located in Barnegat Township, New Jersey, protects about 20,000 residents and has an initial response area of approximately 41 square miles of residential, commercial, agricultural, and bayfront property. The township sits on the eastern edge of 1.1 million acres of undeveloped forest known as the Pine Barrens. Since 1926, there have been numerous wildfires greater than 100 acres and the community has a significant special needs population of retired and elderly individuals, including eight senior communities that border the undeveloped forest.

The department has been instrumental in introducing wildfire preparedness into their community. They started as one of the nine Ready Set Go! (RSG!) Program pilot groups in 2010, and since then they have become leaders in creating partnerships on the local, county, state, and national level.

The RSG! Program encourages fire departments to become leaders in wildfire preparedness and work collaboratively with key stakeholders in their community to become fire-adapted. The department has used the RSG! Program to forge relationships and create familiarity, build an understanding of the wildfire threat across disciplines, build community trust, and create a virtual communication infrastructure within their community.

The department established relationships and created familiarity in their community by holding frequent community meetings and becoming the trusted source for wildfire preparedness information. They took their special needs populations into consideration and developed a yearly outreach program in the senior communities. They also communicated their priorities and concerns with other stakeholders while being sensitive to the demands placed on other services in their community.

They gained the community's trust by exhibiting confidence in the security and protection of property in a wildfire incident. They also worked diligently with the police department and other key stakeholders to create an understanding of the evacuation process. Everyone knew what their role was in the event of an evacuation, and it was understood among the stakeholders that when the department says it's time to go, that means it's time to evacuate.

The department worked with their partners to create a virtual communications infrastructure in their community. They utilized social media, local websites, phone chains, and a reverse 911 system.

The framework that the department built with the RSG! Program helped them become the first municipality in their state to complete a Community Wildfire Protection Plan (CWPP) and become a model fire-adapted community. It also allowed them to become instrumental in the writing of certifiable wildfire preparedness actions for a state program, to mentor other fire departments, and to aid the state forest fire service in their wildfire preparedness efforts.

The department's hard work and partnership building were put to the ultimate test in 2012, when Hurricane Sandy hit the township. At that time, the community had a CWPP that was in place. The CWPP outlined the roles of all community stakeholders, the evacuation routes to the coastline, and the shelters that should be used.

Thanks to the due diligence of the department and their partners in writing the CWPP, they were able to reverse their wildfire evacuation plan and safely evacuate residents from the coastline inland towards the forest. The hurricane evacuation was streamlined and successful due to the collaboration by the department, the police department, and other stakeholders in the community.

Preparedness considerations for the local chief gleaned from this department, include:

- » **Partnership building is key to success. It takes the input of all community stakeholders to succeed.**
  - It doesn't stop at the local level. Don't hesitate to get county, state, and national stakeholders involved, too.
- » **Preparedness programs can serve as a catalyst to bring the community together.**
- » **Think outside the box. Community Wildfire Protection Plans can be used for all hazards, not just wildfires.**



*This case study is dedicated to the memory of **John Cowie** of the **Barnegat Volunteer Fire Company** and **New Jersey Forest Fire Service** for his dedication and hard work to protect his community from the threat of wildland fire.*

# Case Study

Orange County, CA

## **WILDFIRE EDUCATION IS THE FIRST STEP TOWARD WILDFIRE SAFETY**

The combination fire department in Southern California protects over 1.6 million residents and has an initial response area of approximately 553 square miles.

The area comprises urban, suburban, rural, and undeveloped wilderness. Personnel are trained at all levels for responses to structure and wildland fire, hazardous materials, extrication, technical rescue, aircraft fire, and emergency medical response.

The department is heavily involved in efforts to educate people in the community and to create opportunities for personal action and preparedness. They are one of two fire departments credited with the creation of the Ready Set Go! Program to be managed by the International Association of Fire Chiefs in cooperation with the USDA Forest Service.

To adopt the program in their community, the department conducted extensive door-to-door canvassing for several months to inform residents about the RSG! Program. Through their efforts, the department was able to reach 44% of the residents who lived within the fourteen high-risk communities they targeted. The program resulted in 28% of households making home improvements that increased their home's survivability in case of a wildfire.

The department found that the RSG! Program is effective in creating awareness of wildfire risk among residents and identifying areas where home hardening is necessary. Two-thirds of residents who were aware of the program chose to have a Wildfire Home Risk Assessment conducted on their residence – and after the assessment, 96% of those residents made some change to their home.

As part of their initial outreach efforts, the department created materials for residents, including a DVD, postcard, door hanger, assessment form, and the first RSG! Program Action Guide. The Action Guide was the most accepted resource among residents. This still proves true today, as the English National Action Guide is the most requested resource by members of the National RSG! Program.



Over the years, the department has continued to expand its community outreach by creating a web portal that provides a shared awareness between the department and homeowners about the risk of wildfire. The portal contains an online home assessment form, wildfire hazard maps, and resources related to the three tenets of the RSG! Program, including the [Ready, Set, Go videos from OCFA](#).

Due to these efforts, the department has seen a significant increase in resident engagement. Now they present to at least one homeowner's association each week. They also work closely with property managers to get the RSG! Program information on community websites and in monthly community newsletters.

According to department personnel, the goal of their program is to educate everyone so people in the community understand their risk and can make the best decision to protect themselves, their family, and their property against the threat of wildland fire.

The department's outreach efforts were shown to be effective in October 2017 when a fire threatened one of the neighborhoods that was part of the initial RSG! Program rollout. The fire was stopped at a house where the department had spent time educating the resident about fire-resistant construction and fuel-modification zones. The department's outreach, and the homeowner's decision to have their house built with fire-rated roofing, exterior sprinklers, and fire-resistant vegetation, played a significant role in saving the home.

The day after the fire, the department continued its outreach in the affected neighborhood. They went door-to-door to talk to residents about what they could do to prepare for future fires and conducted home assessments as needed.

Successes like this have led other communities to work with the department to update or create new fuel-modification plans to meet current standards. Similarly, the department is working with CALFIRE Land Use Planning to establish and ensure state laws surrounding WUI requirements are met in all wildland-urban interface areas related to defensible space, access, and water.

The department's commitment to outreach has also yielded results from builders in the community. California has Chapter 7a building codes, which are wildland-urban interface building codes. It has now become a standard practice for builders to follow the 7a building code standards for all new homes in the WUI.

Preparedness considerations for the local chief gleaned from this department include:

- » **Engage your residents in wildfire preparedness.**
  - Incorporate wildland fire preparedness into your existing fire prevention programs.
  - Talk to residents face-to-face to establish a line of open communication.
- » **Home assessments are a great tool to empower residents.**
  - Explain to residents why defensible space and home hardening are important.
  - Give residents actionable items that they can do and make them part of the solution.
- » **Involve key community stakeholders in the conversation.**
  - Builders, land managers, elected officials, HOAs, and other community groups all play an important role in wildland fire preparedness.
  - Form a community coalition to encourage discussion and find new solutions.
  - Reference state and local land use planning.





# Mitigation





## COMMUNITY STAKEHOLDERS ARE CRITICAL TO YOUR SUCCESS

Adapting to wildfire is a perpetual community process in which federal, state, and local land managers all play important roles. Fire chiefs are often the catalyst for helping communities reduce risk. How fire professionals work with at-risk communities and selecting which risk reduction tools take priority should be decisions made locally, based on capacity and need. Helping community members understand their roles and responsibilities in this effort is key. Fire chiefs should facilitate the dialogue between government programs managers, policy makers, and the community.

Understanding the context of the physical, political, and cultural environment you are going to be working in is critical to your success as a fire chief.

Wildland risk mitigation may be the most politically contentious area of your responsibility. Financial and jurisdictional responsibilities must be considered when introducing mitigation plans to the community. Some stakeholders may believe mitigation is not beneficial or cost-effective. Mitigation can be difficult to quantify and measure, which can be a challenge when trying to affect change, secure funding, and maintain or increase resources.

Knowing the right time to take a program, plan, or policy forward is essential. Understanding policy maker and

stakeholder priorities will be an integral part of your success. Implementing mitigation programs are time-consuming and it can be difficult to improve current programs and/or add new ones.

The financial viability and legal implications of mitigation programs, based on current local economic conditions, should be vetted during the preparation phase.

Having the answers to some of the following points is helpful:

- How do mitigation programs connect to local, regional, state, and national programs?
- Who can assist you in understanding how your local priorities connect to the larger context?
- Who are the stakeholders and/or groups who will need to adopt/accept these WUI mitigation programs?

The objective is to reduce wildfire risks, increase safety for civilians and firefighters, improve emergency response capacity, mitigate economic impact, improve ecosystem health, and to have a knowledgeable and prepared community.

Incremental phasing, documenting your success, and communicating progress at each step will help to ensure the overall success of mitigation programs.

# The Phases of Mitigation

## Phase I

Focus on low-cost high-output strategies. Use pre-packaged programs (e.g., Ready, Set, Go! Program).

### Education.

- Understand your wildfire risk.
- Communicate risk to public and community leaders.

### Collaboration.

- Solicit buy-in from stakeholders.
- Establish community partnerships.
- Engage local, state, and federal resources.
- Encourage voluntary compliance through education.

### Mitigation Efforts.

- Lead by example.
- Evaluate best practices.
- Leverage existing regulations.
- Consider codifying mitigation best practices.

## Phase II

Build on Phase I accomplishments, reduce vegetation, protect assets, and build capacity.

### Plan Development.

- Research successful WUI programs that other communities have implemented.
- Integrate wildfire mitigation efforts into existing planning and development.
- Develop a plan with partners to identify and prioritize mitigation efforts.
- Capitalize on training opportunities.
- Document accomplishments.

## Phase III

Build on Phase I and II accomplishments, enhance and sustain established programs. Engage other agencies/ companies that will benefit from risk reduction.

### Maintenance.

- Define wildfire risk to and impact on community.
- Build and nurture stakeholder collaboration.
- Plan strategic fuel mitigation projects.
- Integrate and align local, regional, and state plans.
- Develop a process to analyze the effectiveness of mitigation efforts.



# Specific Categories



## PHASE I

Establish chief’s intent to mitigate wildfire risk to ensure the highest levels of life safety, property protection, and incident stabilization.

**Objective – Focus on low-cost, high-output strategies:**

- » **Education of Community** – departments act as a catalyst for engagement.
  - Use risk-assessment resources and methodologies to teach partners and community members to recognize and accept realistic wildfire threats (e.g., your regional wildfire risk-assessment portal).
  - Conduct preparedness education to communicate wildfire risk to the public and local leadership through all media channels.

**Additional Resources:**

- » Wildland-Urban Interface (WUI) Toolkit.
- » IAFC Ready, Set, Go! Program.
- » NFPA Public Education.
- » Firewise USA®.
- » FEMA WUI Training.
- Cultivate the ability to conduct home and community risk assessments with Home Ignition Zones (HIZ) and Firewise USA®.

**Additional Resources:**

- » Fire Adapted Communities.
  - » NVFC Wildland Fire Assessment Program.
  - » Firewise USA®.
  - » FEMA WUI Training.
- Educate the public on appropriate actions when warnings are issued.

**Additional Resources:**

- » IAFC Ready, Set, Go! Program.
  - » Emergency Alerts.
  - » NVFC Wildland Fire Assessment Program.
- Educate the public on appropriate actions when warnings are issued.

» **Collaboration of Stakeholders – form partnerships.**

- Participate with community members, homeowners’ associations, local businesses, government officials (city, county, state, federal, tribal), non-profits, agencies/companies with exposures to risks, and emergency service organizations.

**Additional Resources:**

- » Fire Adapted Communities.
- » FEMA WUI Training.
- » Community Wildfire Protection Plan (CWPP) Leader’s Guide.



## » **Plan Development.**

- Research the development and implementation of public and individual programs that have utilized the Community Wildfire Protection Plan (CWPP) process, the IAFC RSG! Program, or similar plans.
  - ♦ Establish community partnerships for the development and implementation of the CWPP.
- Capitalize on existing free training opportunities including the IAFC Fire Department Exchange (FDX) program online, National Fire Academy (NFA) WUI Courses, and the Firewise USA® training portal.
- Solicit assistance from state and federal fire management agencies.
- Identify possible alternative funding sources from local, state, and federal grant opportunities.

### **Additional Resources:**

- » [Community Wildfire Protection Plan \(CWPP\) Leader's Guide.](#)
- » [IAFC Fire Department Exchange Program.](#)
- » [IAFC Ready, Set, Go! Program.](#)
- » [Understanding the Wildfire Threat to Homes Training.](#)
- » [NFPA Training: Assessing Structure Ignition Potential from Wildfire Training.](#)
- » [Wildland-Urban Interface: Fire-Adapted Communities.](#)
- » [FEMA WUI Training.](#)

## **PHASE II**

Mitigation Planning Efforts.

**Objective – To build on Phase I and work towards reducing, removing, and replacing vegetation, protecting critical assets, building local capacity, and reducing home ignitability.**

## » **Mitigation Efforts.**

- Consider developing and implementing, at the city- or county-level, general plans for dealing with wildfire.
- Implement efforts to protect critical assets. Lead by example by mitigating the risk to fire department infrastructure.
- Evaluate peer fire department wildfire programs, identifying best practices and lessons learned.
- Continue to educate and encourage residents to own their role in risk reduction (Firewise USA® principles, RSG! Program, and the National Fire Danger Rating System).

- ♦ As part of CWPP, establish demonstration sites to illustrate the value and benefits of fuel breaks, defensible space, resilient structures, and other fuels-reduction projects.
- Evaluate existing regulations/ordinances that can be leveraged to mitigate wildfire risk (e.g., weed abatement, outdoor restrictions, tree ordinances).
- Encourage the use of fire-resistant materials and construction.

#### **Additional Resources:**

- » [Fire Adapted Communities Learning Network.](#)
- » [Community Wildfire Protection Plan \(CWPP\) Leader's Guide.](#)
- » [IAFC Fire Department Exchange.](#)
- » [IAFC Ready, Set, Go! Program.](#)
- » [Fire Adapted Communities.](#)
- » [National Fire Danger Rating System.](#)
- » [Firewise USA®.](#)
- » [NVFC Wildland Fire Assessment.](#)

## **PHASE III**

Enhancement and Sustainability of Mitigation Plans.

**Objective – To build on Phase I and Phase II and enhance and sustain wildland mitigation programs already in place.**

#### » **Maintenance.**

- Annually review/update CWPP and mitigation plans to ensure recommendations are relevant and implemented.
  - ♦ Develop a process to analyze the effectiveness of mitigation efforts.
- Annually update/enhance multi-agency collaboration, coalitions, working group Memorandums of Understanding (MOU), and inter-agency local agreements to maximize local/regional efforts.
  - ♦ Consider a strategic plan for long-term wildfire mitigation.
- Leverage mitigation efforts into operation advantages through strategic fuels mitigation planning, including prescribed fire and large-scale mechanical fuels treatment.
  - ♦ Community protection zones, evacuation routes, and critical infrastructure.

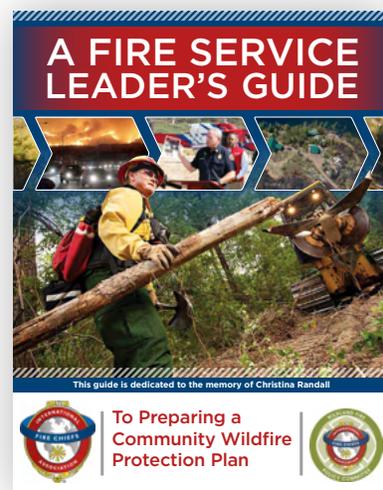
- Integrate and align local and regional plans into state plans.
  - ◆ Hazard mitigation plans.
  - ◆ Land management plans.
  - ◆ Community Wildfire Protection Plans.
  - ◆ Land use planning/comprehensive plans.
  - ◆ Fire and building codes.
  - ◆ Climate resiliency plans.
  - ◆ Post-fire recovery plans.

» **Long-Term Planning Efforts.**

- Research grant opportunities to enhance mitigation capacity, including the FEMA Hazard Mitigation Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC) Program, and state grant opportunities.
- Advocate for the adoption of local codes (e.g., building, planning, zoning, and fire prevention codes) that require ignition-resistant home design and building materials to be adopted and enforced.
- Using established wildfire mitigation training programs, adopt formal training for staff and relevant cooperating agencies.
- Utilize risk assessments to determine the need for regulatory measures like structural hardening, vegetation management standards, and integration of fire management planning into land management plans.

**Additional Resources:**

- » [Fire Adapted Communities Learning Network.](#)
- » [Community Wildfire Protection Plan \(CWPP\) Leader’s Guide.](#)
- » [FEMA WUI Training.](#)
- » [IAFC Fire Department Exchange.](#)
- » [IAFC Ready, Set, Go! Program.](#)
- » [NFPA Wildfire Public Education.](#)
- » [Wildfire Risk Assessment Portals.](#)
- » [Fire Adapted Communities.](#)
- » [National Fire Danger Rating System.](#)
- » [FEMA AFG Grant.](#)
- » [FEMA Hazard Mitigation Grants.](#)
- » [Firewise USA®.](#)
- » [NVFC Wildland Fire Assessment Program.](#)



# Case Study

Centennial, CO

## **SOUTH METRO FIRE RESCUE GETS CREATIVE TO MITIGATE HIGH-RISK RESIDENTIAL AREAS**

The career department in the Rocky Mountain Region protects over 500,000 residents and has an initial response area of 300 square miles. The area comprises suburban residential developments, an airport, and undeveloped wilderness on typical grasslands and buttes of the western plains. Personnel are trained at all levels for responses, including structural firefighting, emergency medical services, aircraft firefighting and rescue, hazmat operations, water rescue and recovery, Special Weapons and Tactics (SWAT), Urban Search & Rescue (USAR), technical rescue, and wildland-urban interface firefighting.

The department has a robust wildfire preparedness education and mitigation plan that includes an innovative approach for residential communities. Instead of using traditional mastication machinery, the department has partnered with neighborhoods to use goats. The department looked for alternative mitigation techniques after residents voiced concerns over the noise and unpleasantness of mastication machinery.

Every summer, the department collaborates with homeowners' associations for Ready, Set, "Goat!", a campaign to mitigate risk in residential communities. Over the course of four weeks, a herd of nearly 300 goats grazes on acres of open land to remove ladder fuels from scrub oak that would enable a wildfire to ignite the tree canopies. The goats also eat surface fuels such as grasses and noxious weeds.

Since 2015, the department has seen a significant reduction in the amount of scrub oak and other ladder fuels growing back in mitigated areas. After multiple treatment years, the scrub oak stops growing branches and leaves that would become ladder fuels, and returns in smaller groves that are less dense. Scrub oak responds to mastication and wildfire in denser groves. Goat browsing affects it differently and should be more resilient to wildfires of low- and moderate-intensity.

Along with the mitigation benefits, the annual campaign and associated open house event turned into an educational platform for the department and other agencies promoting mitigation and preparedness. The campaign receives significant interest from residents and the media, helping the department educate the community further about wildfire risk and the importance of preparedness. Wildfire mitigation has become popular among the target neighborhoods.

Additionally, the department provided an educational opportunity for students from local Rock Canyon High School to study the long-term impact of goat mitigation. Their research includes findings about the changes to soil and biodiversity in the mitigated areas.

The department has been able to turn mitigation in high-risk areas into a fun, community-wide learning event.

Mitigation considerations for the local chief gleaned from this department include:

- » **Mitigation doesn't have to be the same in every community. Consider alternative methods.**
- » **Make your mitigation activities a community event. It is a great way to educate the community about why you are doing the work.**
- » **Consider all the learning opportunities your mitigation activities may provide.**
- » **Engage students to study mitigation and wildfire.**
- » **Community risk reduction is better when other community partners are involved.**



# Case Study

Tallahassee, FL

## STATE-LEVEL MITIGATION: A SUCCESSFUL MODEL

The Florida Forest Service is a 1,250-person state agency that protects and manages over one million acres of forest resources. The agency's key components include wildfire prevention and suppression to protect homeowners from the threat of wildfire in their state's natural, fire-dependent environment. To serve this need, the agency has four regional Wildfire Management Teams that have specialized equipment to facilitate prescribed burning, and heavy-duty mowing units to reduce fuel through cutting, mastication, and thinning.

Along with working to reduce fuel load, these teams work with 15 mitigation specialists to provide education to landowners and homeowners about the hazards of not mitigating. This is a key part of their mitigation strategy because it is important for individuals to understand their wildfire hazard, that mitigation is an ongoing process, and what actions they can take to reduce their risk. By taking the time to educate, the agency empowers individuals, HOAs, and landowners to take personal responsibility for the mitigated land.

To reinforce this message, the agency implemented from the top down a statewide Ready, Set Go! (RSG) Program. The program encourages individuals to be Ready with personal responsibility, to be Set with situational awareness, and to Go! in the event of a wildfire.

To implement the program, the agency led the development of a statewide RSG! Program partnership that involved state, county, federal, and private partners who were committed to making the program a success. The partnership worked to customize a state RSG! Program Action Guide and implement the program on the ground.

To further expand the state's RSG! Program, the agency developed RSG! Program videos, PSAs and RSG! Program kits with grant funding from the United States Forest Service. They involved the partnership to create the videos and PSAs in both English and Spanish. They included these resources in their state-specific RSG! Program kits along with other customized materials. These kits have been instrumental in their outreach efforts because they have allowed the agency to make a personal connection with residents. They have helped the agency engage with local fire departments, so they can go out as a united front to talk to residents about wildfire preparedness.

The agency has grown their statewide RSG! Program from less than 20 participating fire departments to more than 80 participating fire departments, and has given out over 300 RSG! Program kits and 20,000 RSG! Program guides statewide.

- » **A successful mitigation strategy includes more than just mastication, chipping, and thinning. It involves educating individuals.**
  - It is important for residents to understand their wildfire threat and why mitigation is necessary.
- » **Involve other stakeholders in your outreach to ensure your message is having the impact you want.**
  - Consider town, county, state, federal, or private partners that have an interest in wildfire preparedness.
- » **Customized resources can help to make more of an impact on residents.**
  - Include photos of your area in brochures and flyers to help residents better understand their wildfire threat.





# Response





## **WILDLAND FIRES ARE HAPPENING MORE OFTEN AND IN MORE PLACES**

Wildland-urban interface fires happen in large portions of our world each year, and their frequency and severity is increasing. More than 10.3 million acres were burned in 2020, compared with 4.7 million acres in 2019. Whether you have experienced a large wildland fire or not, sooner or later you are going to have a wildland fire event that will impact your community. In 2020, fire departments experienced another record setting year for wildland-urban interface fires. California alone set a record for the 4.2 million acres burned (the most acreage since data started being collected). There were 9,279 fires, 10,488 structures lost, and 31 fatalities. While the West Coast was experiencing their record-breaking year, Colorado burned nearly 700,000 acres, almost 1,100 square miles, and the Cameron Peak Fire west of Fort Collins became the largest in Colorado's history. Oregon, Idaho, Wyoming, and Utah all experienced their own large, complex wildfires, with most

having a WUI component. Fires today impact communities more than ever.

Most agencies have Automatic Aid and Mutual Aid Agreements (i.e., neighbors helping neighbors). We have all sent and received assistance from neighbors in times of need. Helping jurisdictions when they have a need is a very similar concept that just expands the definition of friends and neighbors.

Wildland fire is a year-round, nationwide issue. "Traditional" wildland fire resources are strained and falling short of meeting the resource needs for present incidents. Nationwide, the number of "unable to fill" resources (UTFs) in 2020 was staggering. Requests for everything from engines to overhead resources went unfilled as many agencies were unable or unavailable to engage.

Response can be broken into two categories: The first describes an event that exceeds your local capabilities; the second deals with providing resources outside of your local area.



# Specific Categories



## RECEIVING RESOURCES WHEN HOSTING THE INCIDENT

All agencies have a responsibility for managing wildland fires. Some have the capability to manage routine incidents, but no agency has the capability to manage the largest and most complex wildland incidents alone. This part of “Response” describes considerations for incidents that exceed your local capability.

### Establish Your Levels of Response

- » **Determine your local capabilities to respond.** Know when you are going to exceed those capabilities.
- » **Automatic and mutual aid** – Be familiar with the capabilities and ability of neighboring agencies to assist when you’ve exceeded your capacity.
- » **Emerging incident** – When an incident is emerging, where do you find resources beyond those typically found locally or from automatic or mutual aid?
  - **What?** – What types of resources might be needed?
  - **How?** – How do you request additional resources outside of mutual and automatic aid agreements? How do you order them?
  - **Who?** – Partners might include emergency management, state agencies, tribal agencies, federal agencies, and non-traditional partners.
  - **Where** – Where are they located, and what is their effective response time?

### Additional Resources:

- » [The Interagency Standards for Fire and Fire Aviation Operations Red Book.](#)



» **General Things to Consider –**

- Your priorities are always life safety, incident stabilization, and property conservation.
- Initial documentation is important. Document strategy, tactics, objectives, and utilization of resources, and sketch a map. Consider creating a formal Incident Action Plan (IAP).
- Do a risk assessment. Evaluate values at risk.
- Need for evacuations, road closures, etc.
- Notifications.
  - ◆ State or local law enforcement , transportation, public works, etc.
  - ◆ The public.
- Communications.
  - ◆ Radio traffic management. Command and tactical frequencies, air-ground, logistics.
  - ◆ Do you have interoperability with incoming units?
- Do you need an Incident Management Team (IMT)?

An IMT can be a crucial component when managing a complex incident, and can assist the jurisdiction with resource tracking, logistics, planning and documentation (for post-incident reimbursement, if applicable). Performing a complexity analysis can assist in making this decision. The Interagency Standards for Fire and Aviation Operations Red Book is a great resource for determining the complexity of your incident.

» **Type 5 Incident.**

- Resources required are local and typically vary from two to six firefighters.
- The incident is generally contained within the first burning period, often within a few hours after resources arrive on scene.

» **Type 4 Incident.**

- Command staff and general staff functions are not activated.
- Resources are often local and vary from a single module to several resources.
- The incident is usually limited to one operational period in the control phase.
- No written IAP is required. However, a documented operational briefing will be completed for all incoming resources.





» **Type 3 Incident.**

- Some or all of the command and general staff positions may be activated, usually at the division/group supervisor and/or unit leader level. Units may have a predetermined Type 3 organization designated.
- Type 3 organizations manage initial attack fires with a significant number of resources, an extended attack fire until containment/control is achieved, or an escaped fire until a Type 1 or 2 team assumes command.
- Initial briefing and closeout are more formal.
- Resources vary from several resources to several task forces/strike teams.
- The incident may be divided into divisions/groups.
- The incident may involve multiple operational periods prior to control, which may require a written IAP.
- A documented operational briefing will be completed for all incoming resources, and before each operational period. Refer to Incident Response Pocket Guide (IRPG) for outline.
- Staging areas and a base may be used.

If you determine an IMT will be necessary due to the complexity determined through analysis, consider the following tasks to be addressed/completed:

- » **In-brief** – You will need to prepare to tell the incoming team members what you've done, what you've learned, and what your at-risk values are.
- Plan for a Delegation of Authority letter from the Agency Administrator to the incoming IMT.
  - Identify your at-risk values.
  - Provide any mitigation actions/plans or fuel treatment locations that may be valuable in the suppression efforts.
  - Provide current IAP with accurate resource accountability.
  - Identify any local priorities/stakeholders.
    - ♦ **Your role** – Once an IMT is in place, you still might be needed as an agency administrator, cooperater, liaison, or a member of Unified Command.
    - ♦ **Opportunities for engagement** – attendance at planning meetings, public meetings, cooperater meetings, etc.

## QUALIFICATIONS

Personnel responding (sending or receiving) need to be qualified commensurate with the duties, tasks, and capabilities of the position they are filling.

The NIMS Guideline for the National Qualification System (NQS) defines a common language and approach to qualifying and certifying deployable emergency personnel to enhance interoperability and the effectiveness of mutual aid. Qualification, as used in NIMS, refers to the provision of documentation - typically, badges or identification cards which validate an individual's identity and qualifications to fill an incident position.

The Incident Qualification System (IQS) is a software program that allows the user to track incident qualifications, experience, task books, and fitness levels for individuals within various roles throughout your agency.

## RESOURCE MOBILIZATION

Responding to fires outside of your area provides an opportunity to gain experience in wildland firefighting and support the national interagency response network.

Responding outside of traditional, mutual, or automatic aid necessitates fire service leaders to create processes and guidelines to facilitate a response that supports the system and maintains adequate services inside your community. In most cases, these decisions should be explained and made well in advance of the request.

Although local or state requirements may differ, these types of responses generally necessitate compliance with national standards for training, equipment, and apparatus. National standard references include PMS 310-1, which provides training standards for wildland firefighters, and The Interagency Standards for Fire and Fire Aviation Operations Red Book which provides standards for equipment and apparatus:

- » **PMS 310-1 and/or applicable state level certifications systems.**
- » **Interagency Standards for Fire and Fire Aviation Operations Red Book.**

You will want to think through what resources you are willing and able to provide while ensuring adequate at-home coverage. For many, there is a big difference between what can be sent to a neighbor for a few hours and what can be sent out of state for up to two weeks. There are a number of ways that you can provide resources:

- » **Single resources/individuals who fill overhead positions, such as a Task Force Leader or Line EMT.**
- » **Equipment such as engines or water tenders/tankers.**
- » **Strike teams/task forces which are generally assembled with/from your local mutual aid partners and respond to the incident together on one resource order.**





## AGREEMENTS

In order to respond outside your normal operating area, you will need an agreement. Typical agreements include Who, What, Where, When, Why, and How, and agencies are used to request or provide assistance and/or resources among jurisdictions. States may participate in interstate compacts and intrastate agreements that encompass local jurisdictions. Check with your state or federal Emergency Management or Land Management Agency for details. Authorized officials from each of the participating jurisdictions and/or organizations should collectively approve agreements prior to response.

There are numerous types of agreements that will help a jurisdiction be prepared. These agreements should usually cover how to activate response and respond, cost-share or cost recovery, and billing procedures. Consideration as to the availability, timing, and reliability of any outside resources needs to be given, and monitored throughout the fire season.

» **Basic – agreements to support mutual aid needs - no finance component**

- **Automatic Aid: Agreements that permit the automatic dispatch and response of requested resources without incident-specific approvals. These agreements are usually basic contracts; some may be informal accords. There is usually no/minimal exchange of funds. The jurisdictions will need to define:**
  - ◆ Expectations of response (resources).
  - ◆ Timing of response.
- **Local Mutual Aid: Agreements between neighboring jurisdictions or organizations that involve a formal request for assistance and generally cover a larger geographic area than automatic mutual aid. Generally, these involve short-term assistance with no formal resource order and usually no payment/reimbursement involved.**
  - ◆ Expectations of response (resources).
  - ◆ Timing of response.

» **Intermediate –**

- **Regional Mutual Aid: Substate regional mutual aid agreements between multiple jurisdictions that are often sponsored by a council of governments or a similar regional body. May be for an immediate need such as structure protection or a planned need. Generally involves a resource order, typing and credentialing, and reimbursement after a set time period.**
- **Statewide/Intrastate Mutual Aid: Agreements that are often coordinated through the state that incorporate both state and local governmental, and non-governmental resources in an attempt to increase preparedness statewide. Usually a planned need and reimbursed costs, operational, and finance agreements to support local and regional response.**

- **Jurisdictions need to consider the following:**
  - ◆ Agreements can vary based on amount of effort, time, and ownership.
  - ◆ Mobilization plans.
  - ◆ Master agreements might exist or can be used.
  - ◆ State to federal, and vice-versa, allowing local governments to access federal fire resources and participation.
  - ◆ Compacts.
- **Regional Agreements for exchange of resources across state and national boundaries for payment.**

» **Advanced –**

- **Interstate Agreements: Out-of-state assistance through the Emergency Management Assistance Compact (EMAC) or other formal state-to-state agreements that support the response effort. Planned-need and full-cost reimbursement.**
- **Detailed finance evaluation involving multiple agreements with understanding or mobilization, EMAC and Fire Management Assistance Grants (FMAG), etc.**
- **Cooperative resource rate agreements.**

**Additional Resources:**

- » [JPA San Juan and EMND PDF \(See Appendix A\).](#)
- » [2015 California Fire Assistance Agreement.](#)
- » [NWCG Standards for Interagency Incident Business Management.](#)



## TYPING

Equipment and apparatus responding (sending or receiving) need to be qualified commensurate with the duties, tasks, and capabilities of the position they are filling.

### Additional Resources:

- » Interagency Standards for Fire and Fire Aviation Operations Red Book.
- » NWCG and FEMA (NIMS) Typing.
- » Wildland Fire Incident Management Field Guide.
- » Field Operations Guide.

## BILLING PROCEDURES

Billing procedures are detailed in the agreement.

- » **Incident billing documentation – the forms required to document time worked.**
- » **Non-billable items – For example, agency overhead personnel performing agency-specific duties.**
- » **Billable costs – firefighter and equipment costs.**
- » **Establish the rates to be used.**
- » **A generally accepted foundational concept: Everyone is entitled to recover actual costs of providing assistance.**



# OBTAINING A RESOURCE ORDER

In most agreements with assistance-for-hire provisions, a resource order is the permission to respond and to recover costs. Resource orders can come from a variety of state and federal agencies, depending upon your agreement. The resource order commits your resources to a specific incident and includes such information as reporting date, time and location, authorization for rental cars, laptops, etc.

## Example

Run Date: 8/15/2016 15:02 CDT  
Server: rossreports.nwcc.gov

<b>RESOURCE ORDER</b>		<b>Initial Date/Time</b>		<b>2. Incident / Project Name</b>				<b>3. Incident / Project Order Number</b>				<b>Financial Codes</b>					
<b>EQUIPMENT</b>		08/14/16 1327		<b>HAPPY HOLLOW</b>				<b>CO-LSD-000363</b>				KL49 [P]					
<b>5. Descriptive Location</b>				<b>6. TWN</b>		<b>RNG</b>		<b>SEC</b>		<b>Base MDM</b>		<b>8. Incident Base / Phone Number</b>					
HAPPY HOLLOW				6N		100W		1		6th PM, CO		<b>9. Jurisdiction / Agency</b> Little Snake Field Office					
				<b>LAT.</b> 40 29 57 N								<b>10. Ordering Office</b> Craig Interagency Dispatch Center					
				<b>LONG.</b> 108 34 16 W													
<b>11. Aircraft Information</b>																	
<b>Bearing</b>	<b>Distance</b>	<b>VOR</b>	<b>Contact Name</b>				<b>Frequency Type</b>			<b>Assigned Frequency</b>			<b>Reload Base</b>	<b>Other Aircraft / Hazards</b>			
294	39	EKR	Juniper Mtn				Repeater			RX: 172.7250 TX: 164.5250 131.80			4V0				
64	43	VEL	FIRETAC 8				Tactical			172.5875			EEO				
253	58	CHE					Air to Air			126.450			VEL				
			SOA Repeater				Repeater			163.3875 TX 172.5875 RX 110.90			CAG				
			NIFC Tac 1				Tactical			168.050 000.00			RIL				
													SBS				
													GJT				
													EGE				
													RWL				
													20V				
													BJC				
<b>12. Request Number</b>	<b>Ordered Date/Time</b>	<b>From</b>	<b>To</b>	<b>Qty</b>	<b>Resource Requested</b>	<b>Needed Date/Time</b>	<b>Deliver To</b>	<b>From Unit</b>	<b>To Unit</b>	<b>Assigned Date/Time</b>	<b>Resource Assigned Unit ID</b>	<b>Resource Assigned</b>	<b>M/D Ind</b>	<b>Estimated Time Of Departure</b>	<b>Estimated Time Of Arrival</b>	<b>Released Date</b>	<b>Released To</b>
E-6	08/14/16 1720 MST	CO-CRC (Dispatch) 970-826-5037	CO-CRC	1	Engine, Type 6	08/16/16 0800 MST	Happy Hollow Fire	CO-GJC	CO-CRC	08/15/16 1402 MST	CO-GJS	ENGINE - T6 - Vail - Brush 3 (VAIL FIRE & EMERGENCY SERVICES BRUSH 3 (14)) (CO-GJC)	M	08/15/16 1430 MST	08/15/16 1630 MST		
<b>Travel Mode</b> AOV		<b>Financial Code</b> KL49				<b>Special Needs</b> NEED TO BE SAW QUALIFIED AND 4X4				<b>Reporting Instructions</b> From Maybell, Co: Northwest on CO Hwy 318. About 8-9 miles, turn west (left) on Moffat County Rd 10. Pass the 10/25/153 junction and cross the river on the bridge. About 3 miles later, BLM road 1610 is flagged in pink. Turn south (left)							
<b>13. User Documentation</b>																	
<b>Req. No.</b>	<b>Documentation</b>														<b>Entered By</b>		
E-6	Called Rick Balentine, Aspen FD - their T3 Engine is not available. He said to change their status to available locally. He apologized for not already doing that.														Gloria Holley (CO-GJC) 08/14/2016 1748 MST		

<b>13. User Documentation</b>																
<b>Req. No.</b>	<b>Documentation</b>														<b>Entered By</b>	
E-6	Grand Junction FD will get back to me with roster information														Gloria Holley (CO-GJC) 08/14/2016 1759 MST	
E-6	Steve/CRC said they are retrieving this order. Do not need T3 Engine. I notified Stacy at Grand Junction FD that this order was being retrieved.														Gloria Holley (CO-GJC) 08/14/2016 1907 MST	
E-6	Email to pcada@vailgov.com														Christine Arredondo (CO-GJC) 08/15/2016 1402 MST	
E-6	Request E-6 - Engine, Type 6 - [CO-LSD-000363] HAPPY HOLLOW has been filled with ENGINE - T6 - Vail - Brush 3 (VAIL FIRE & EMERGENCY SERVICES BRUSH 3 (14)) (CO-GJC) by Christine Arredondo@CO-GJC ROSS.														Christine Arredondo (CO-GJC) 08/15/2016 1402 MST	

HAPPY HOLLOW	CO-LSD-000363
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Run Date: 8/15/2016

15:02 CDT

## WHEN ASSIGNED TO AN INCIDENT

- » **Arriving on the scene** – Check-in and obtain an in-brief prior to assignment. Most, if not all large incidents will have an Incident Management Team (IMT). When an IMT is not in place, check-in with incident command.
- » **Documentation** – Make sure you are keeping records associated with your assignment.
- » **Demobilization** – Make sure you are formally released from the scene and have completed the required documentation process. Appropriate demobilization is as important as proper check-in.



# Case Study

## Colorado Rocky Mountain Region

The Northwest region of Colorado is a very diverse area. It is characterized by wide-open sage-steppes with sparse populations, dispersed agricultural towns, densely populated mountain resort towns, and high peaks reaching elevations of over 14,000 feet. Within this area is also great diversity in fire services. Some areas have small volunteer fire departments, while other areas have career fire departments with good staffing levels. In addition, there are high profile wildland-urban interface areas such as Aspen, Breckenridge, Steamboat Springs, and Vail.

Since the early 1990's, members of the Colorado fire service have identified a need for a cohesive mutual aid system. Numerous commissions and reports have identified the need for robust mutual aid programs which can provide sufficient resources to keep wildfires small and minimize their impact on communities. While many states have robust statewide mutual aid systems, Colorado is characterized by a patchwork of local and county level mutual aid agreements.

Prior to 2018, the nine counties of Northwest Colorado had a long-standing mutual aid agreement. However, there was no defined mechanism for activating this agreement. As a result, mutual aid with out-of-county departments was infrequently used; when it was, there were long delays between the time when an Incident Commander requested mutual aid and mutual aid resources responded to provide assistance. These delays were particularly problematic as the drive time between most of the population centers in the region was two hours or longer.

The winter of 2018 found the region in an ongoing drought which was exacerbated by a long term trend of drier winters and less prolific summer monsoon rains. Increasingly, a number of the region's fire chiefs became concerned about the 2018 fire season. A few of the region's fire chiefs decided that merely having a mutual aid agreement was not enough and there needed to be a mutual aid system. In the early spring, fire chiefs from over 20 local fire agencies gathered together. Many of these chiefs had never had the opportunity to meet one another. In a short, 3 hour period, the group agreed there was a need to build a regional mutual aid system, and a model for what was to become Mountain Area Mutual Aid (MAMA) was formulated.

Several foundational principles were agreed upon:

- » **The primary goal was to protect communities and provide firefighter safety.**
- » **Rapid notification was essential due to prolonged response times.**
- » **The system needed to work 24/7 and be available for more than just wildland fires (structure fires, MCI, etc.).**
- » **Potential reimbursement should not interfere with providing mutual aid.**
- » **Due to low staffing and high turnover, local dispatch centers should not be relied upon as part of the system.**
- » **Local emergency managers/EOCs did not have the capacity to rapidly provide resources.**

The result was a low-tech mutual aid system that relied upon simple platforms including phone, Google Drive, group text and email.

In June 2018, the drought that was feared earlier in the year had intensified. Even at elevations above 8,000', fuels were ready to burn. On June 12, the Buffalo Mountain Fire ignited. The fire grew rapidly and threatened a large swath of the Town of Silverthorne. MAMA was quickly put into play. By the end of the day, MAMA had played a pivotal role in preventing any structures from being lost.

Less than a month later, MAMA would again be put to the test. On July 3rd, the Lake Christine fire ignited near Basalt, Colorado. Early on, a number of agencies were called through MAMA to assist. Late on the night of the 4th, distant thunderstorms caused the fire to grow rapidly, threatening the community of El Jebel. Additional resources from MAMA were called and, as a result, were able to keep structural loss to a minimum. MAMA filled a critical gap in between the time when local resources were exhausted and when resources mobilized through interagency dispatch centers arrived.

Since its inception, MAMA has been used numerous times, including a major natural gas leak and explosion, the Grizzly Creek fire, and most recently, the East Troublesome Fire. The East Troublesome Fire is notable in that the incident had already been burning for over a week when there was a blowup resulting in an overnight run of over 100,000 acres. Although the Incident Management Team in place at the time of the blowup called for additional resources through Interagency Dispatch Centers and Emergency Operations Centers, MAMA was nimble enough to provide resources more rapidly. Although this incident was outside the mutual aid period, MAMA cooperators took the approach of providing aid without question and addressing potential reimbursement later. This undoubtedly made a major difference in protecting the communities impacted by this fire.

The success of the MAMA program has resulted in many fire chiefs and incident commanders placing “call MAMA” high on their checklists.

Lessons learned:

- » **Mutual aid systems do not have to be complex to be effective.**
- » **Relationships, communication, and trust are key to an effective mutual aid program.**
- » **There are times when the mutual aid system can be used effectively outside the initial mutual aid period.**
- » **There is a need to link regional mutual aid systems together to provide greater depth of available resources.**



# Case Study

Columbus, MT

## A LOCAL FIRE CHIEFS REMINDER TO PRACTICE EXTREME OWNERSHIP

The combination fire department located in a generally rural area in the northwest part of the U.S. protects about 6,000 residents and has an initial response area of approximately 650 square miles. Personnel are trained at all levels for responses, including structure and wildland fire, hazardous materials, extrication, technical rescue, swift water rescue, all hazard/all risk incident teams, and emergency medical response.

On a warm summer day, the fire department responded to a wildfire call which, in the end, consumed approximately 10,000 acres in just over a day. The initial local response was timely, but the fire and required structure protection proved more than the small department could tackle so reinforcements were called. They included multiple local mutual aid units responding from nearly 50 miles away, a county assistance team (CAT) – a Type III Incident Management Team – and multiple additional strike teams. Ultimately, bringing in these resources resulted in suppression and no structures lost except for one outbuilding. The response, however, was not without confusion, nor a clear understanding of assignments and accountability challenges.

*The following captures the local chief's reflections on the response effort and considerations for future incidents:*

Each department is set up to handle “its norm.” When you add resources, it’s easy to throw off the span of control and exceed your management capabilities. The addition of resources also creates accountability issues, especially if personnel is not built into resource ordering. It’s easy for first-due personnel to get caught up in response and suppression efforts or lose sight of the ‘big picture’ because this is where they live and work. They feel they have a higher level of responsibility to protect their jurisdiction. As with many large-scale incidents with local, combination, and volunteer mutual aid response, the Incident Commander doesn’t always get what’s requested and doesn’t ever completely know the qualifications of the responders. The closest resources may not necessarily be the most appropriate, and may not have the capacity to help with command. The neighboring chief may be serving as part of an operational crew.

Resource ordering, assigning, accountability, and sustainment can be very overwhelming for a local chief. With this comes the transition of incident command (IC) to an 'outside' team. This isn't always easy. In theory, the local chief should be integrated into the more involved Incident Command System (ICS) because all incidents start and end locally. Shortly after the IC transition, the local chief stepped out of a command role and had to step into a division supervisor role as events unfolded that created a situation where one particular division lacked leadership. Some poor decisions were made and there was no clear plan for division personnel. This quickly morphed into the local chief being in a line suppression role. In this role, it's impossible for a local chief to maintain involvement at the command level. It's important to know where the ultimate responsibility for an incident lies.

During the incident, with the IMT in command, mutual aid units were released, but not all IMT resources were in place yet. Not long after, the fire ramped up and there were five homes in its path, one of which happened to be the local fire chief's. Mutual aid was reordered, which is not optimal in a rural setting with most of the personnel being volunteers. This part of the incident was the premise of an epiphany for the local chief: IMT objectives may not correspond with the local chief's objectives, especially when his or her home is at risk.

One particular strike team also presented a learning opportunity. While locals needed – and were glad for – the assistance, this team had little or no experience with grassland suppression. It was difficult for this team to engage in active suppression assignments simply due to a lack of training with this type of topography and fuel. The team later thanked the local chief, saying they learned a lot. An important takeaway in this situation is the importance of understanding local fire behavior and pre-incident interaction with area response crews. As a local chief, or even an IMT, you can order the world, but you never know what you're going to get. It's vital for local leadership to remain objective, emotionally detached, and resolution-oriented during a large-scale incident.

Response considerations for the local chief gleaned from this incident include:

» **Order whatever you think you might need early:**

- Be aware that you will not know the experience level of the added resources. Be ready to adjust.
- Don't release resources until you're certain you no longer need them.

» **Maintain involvement with IC. The outcome of the incident is ultimately your responsibility:**

- Do your best to remain objective, setting emotions aside.
- Transitioning IC from local to another level can be difficult.
- Know that your objectives and those of an IMT may not coincide. Work it out at the onset.
- As a local chief, you still have a responsibility to be involved in the command process.

- » **Consider the impact resource orders will have on your span of control and adjust accordingly:**
  - Ensure you have a plan of accountability for those resources.
  - Identify personnel who weren't in the ordering system and that arrived with the equipment. Add them to your accountability system.
  - Understand that you may have to supplement an IMT's equipment until all of theirs arrives.
  - Plan on most of your first-due and mutual aid personnel not returning after a single operational period. They'll do what they can while you have them, but many have other work or personal commitments.

Local responders and leadership learn something from each and every event or incident they're involved in. This fire was no exception. From a suppression perspective, you can't ask for much more. The fire was put out, structure loss was minimal, and no one was hurt. From an incident-management perspective, many lessons were learned, and it's important to apply these learnings to the next incident. Build and rebuild relationships with agencies you might request assistance from, understand your capabilities and theirs – as well as their qualifications – and even on the best days, expect the unexpected.





# Evacuation





## SAFE, TIMELY AND EFFECTIVE EVACUATIONS ARE CRITICAL FOR PUBLIC SAFETY

Recent wildfires across North America and Australia have demonstrated that evacuation is a crucial component of wildfire management. Safe, timely, and effective evacuations are critical for public safety. Poorly executed evacuations can become the focal point for criticism of the emergency response effort and the fire agencies involved.

There are many reasons evacuations fail including: fast moving fires, limitations in our ability to predict fire spread, failure to coordinate with law enforcement, notification failures, lack of public preparedness, insufficient resources, failure to apply the proper strategy (rescue vs. suppression), inexperience, insufficient access, inadequate road capacity, and more.

While there is great opportunity to improve public notification and the way evacuations are planned and conducted, it is also important to change the narrative about evacuation. The public has developed unrealistic expectations about evacuations, so it is critically important to emphasize the personal responsibility inherent in evacuations. The preparation the individual takes prior to an incident and the situational awareness they maintain during the incident are just as important as a community evacuation plan. To achieve this end, the fire service must not only be a leader in planning for and implementing evacuations, but we must also work to provide our communities with the tools necessary to be prepared for an evacuation. We should also work towards an end state in which communities are fire adapted - designed, built and maintained in a manner that makes evacuation less necessary. See more at the [Fire Adapted Communities website](#).

There are common factors that cause issues with evacuations. First, evacuation planning and implementation are complicated by the fact that the statutory responsibility for evacuation varies by jurisdiction. This responsibility could fall under the purview of law enforcement, the fire department, emergency management, or elected officials. In some areas, there is no legal basis to force a person to leave their home. The type of evacuation that may be instituted also varies by location. Regardless of the fire department's responsibility for evacuations, the fire department will most likely have some involvement in evacuations, even if it is limited to determining which areas to evacuate and when.

An additional complexity associated with evacuations is the wide variety of terminology that is used. As an example, the following terms potentially refer to the same type of evacuation, depending upon your location: pre-evacuation, evacuation warning, stage 1 evacuation, and ready. Your constituents should have a solid understanding of the terminology that is used in your jurisdiction or adjacent jurisdictions.

If an evacuation is not well executed, the fire department will likely be held accountable by the public. As the fire chief, evacuation planning should be viewed as a critical strategic initiative with the allocated resources necessary to develop a sound plan.

The intent of this section is to provide the fire chief and members of the fire department with tools to help them prepare for situations which may require an evacuation. Although this section has a wildland fire emphasis, evacuation planning has utility for other natural disasters that may require an evacuation including hurricanes and floods, as well as man-made disasters such as hazardous materials incidents.



# Specific Categories

## RED FLAG FIRE WEATHER WARNINGS

A Red Flag Fire Weather Warning (RFW) is issued by the National Weather Service when the combination of certain conditions support rapid fire growth and extreme fire behavior.

The conditions include the combination of:

- » High winds.
- » Temperature.
- » Low humidity.
- » Dry fuels.

### Reasons for Issuing a RFW to Prevent Rapid Fire Growth and Extreme Fire Behavior

- » A RFW may be a decision point to initiate public education regarding how to avoid activities that could start a fire.
- » Fire agencies may use a RFW as a basis for increasing staffing and response patterns.
- » Under the conditions outlined above, fires can travel great distances rapidly - in a number of cases, rapid fire spread has outpaced the ability to notify residents of the need to evacuate.

Poorly timed or coordinated evacuations can overwhelm the capacity of road systems. For this reason, a RFW should be considered a notice to the community to be prepared to implement the three phases of the Ready, Set, Go! Program.



## Consider Preemptive Measures

In some neighborhoods with particularly dangerous egress routes, the fire department may want to have a discussion with the residents about preemptively leaving the area during Red Flag conditions, even in the absence of a fire.

Some communities now message RFW using the term “uncontrollable fire conditions.” This messaging highlights the fact that during RFW conditions, controlling a fire may be impossible until the weather conditions change.

## Public Messaging is Critical During a RFW Fire

During a RFW fire, departments should engage in vigorous public messaging (in coordination with cooperators) that should encourage the public to:

- » **Have a personal/family evacuation plan.**
- » **Have heightened awareness of existing fires.**
- » **And/or monitor for new starts.**

It may also include information on public alerting systems, local evacuation plans, and personal preparedness.

Red Flag Fire Weather Warning public outreach tools are available through the [IAFC Ready, Set, Go! Program website](#).





## EVACUATION PLANNING

Evacuation planning should be done at the local level and be a grassroots effort with all the responders who will be engaged. Each jurisdiction will need to figure out their capabilities and which partners they will need to engage in the planning process.

### Responsibilities

Jurisdictional government responsibilities for evacuation planning can include:

- » **Setting clear expectations for whole community partners by hosting training and information sessions.**
- » **Establishing and publishing clear, accessible evacuation routes and zones for the community, as well as alternate routes in areas with changing evacuation dynamics.**
- » **Identifying evacuation shelters in the community, as well as shelters where evacuees can go in other communities if needed. Remember to work with those neighboring communities to establish notification and operations procedures.**
- » **Creating pre-approved accessible messaging for rapid distribution regarding incident and shelter-in-place or evacuation instructions.**
- » **Having a continuity plan to help maintain response operations if interrupted.**
- » **Providing real-time mapping and navigation routing systems through Geographic Information Systems (GIS) and supported private sector features, such as the Waze Connected Citizens program.**

### Planning Considerations

The Evacuation and Shelter-In-Place planning document developed by FEMA is a planning document that supports state, local, tribal, and territorial partners in preparing for evacuation and/or shelter in place protective actions.

### Additional Resources:

- » [FEMA Evacuation and Shelter-In-Place planning document.](#)

## IMPLEMENTATION

Make a Rapid Assessment of the Rate of Fire Spread. A key element of an evacuation is the rapid assessment of the rate of fire spread and where evacuations will need to occur.



The use of wildland fire pre-attack planning maps can be a useful tool in implementing evacuations. These maps can include:

- » **Predicted fire spread.**
- » **Evacuation zones.**
- » **Management action points.**
- » **Evacuation routes.**
- » **Community refuge areas.**

There are also promising new technologies currently being tested that will provide near real-time fire spread projections. These technologies can be very basic or advanced. During your planning processes, these should be identified along with the cooperators you will be working with to implement the plan.

### **Establish Your Notification Process Once the Need for Evacuation is Determined**

The ability to maintain connectivity is critical during an evacuation as it is not uncommon to lose cell service and power during a wildfire. Regardless of how comprehensive and well-thought out an evacuation plan is, a critical weakness of the evacuation plan can be public notification. There are a number of reasons for this which include:

- » **Decline in use of land-line phones.**
- » **Low registration for voluntary public notification systems.**
- » **Dial rate of public notification systems.**
- » **Damaged infrastructure.**
- » **Overloaded cell phone systems.**
- » **Poor or inadequate messaging.**
- » **Failure to activate public notification systems in a timely fashion.**
- » **Remoteness of some areas.**

Notifications should be made through multiple methods that, depending upon availability, might include:

- » **Text/voice/email public notification systems (reverse911, Code Red, Everbridge).**
- » **Social Media (Facebook, Twitter).**
- » **Loudspeaker systems (Long Range Acoustic Device, law enforcement).**
- » **Integrated Public Alert Warning System (IPAWS).**
- » **Emergency Alert System (EAS)(FEMA).**
- » **National Oceanic and Atmospheric Administration (NOAA).**
- » **Weather Radio (NWR).**
- » **Door to door notification.**



The incident commander should be in unified command and establish a direct line of communication with cooperators (law enforcement, dispatch center, emergency management, etc.) to ensure that there are no delays in notification and the correct messaging is being disseminated.

### **Evacuation Zones and Evacuation Messaging**

One approach to speed up notification is to have pre-determined evacuation zones. This will greatly increase the rapidity with which the dispatch center is able to issue notifications. It is also helpful to use pre-built evacuation messaging, which should provide a clear and concise message. If possible, it is important to provide information regarding evacuation centers.

Keep in mind, there is a very short period between the initiation of an evacuation and evacuees demanding information regarding:

- » **The status of the fire.**
- » **The status of their homes.**
- » **When they will be allowed to return home.**

To alleviate this situation, fire agencies should work with their Public Information Officer (PIO) or Joint Information Center (JIC) to develop a communications plan.

### **Complete Evacuation Before Conditions Impact the Neighborhood**

The goal when conducting an evacuation should be to have the evacuation completed well before the fire or smoky conditions impact the neighborhood. Once fire and/or smoke begin to impact an area, evacuation becomes significantly more dangerous.

In a number of wildland fires, fatalities have been attributed to citizens evacuating in these conditions. If these conditions are present, the use of community refuge areas should be considered as an alternative to a full evacuation.

### **Last Resort Survival Tactics Are an Option in Extreme Circumstances**

In extreme circumstances, last resort survival tactics may have to be implemented, which can include:

- » **Protecting citizens in their homes.**
- » **Citizens self-protecting and sheltering-in-place.**
- » **Providing other specific instructions through notification systems.**

Last resort survival tactics and public directions should be pre-built along with your cooperating agencies well before they are needed.



## Law Enforcement Officer Safety

Although law enforcement will frequently be on the frontline of evacuations, officers should not be placed in areas where they will be in the fire environment unless they have proper training and PPE.

Making the call for law enforcement to disengage will require:

- » **A good working relationship.**
- » **Adequate and effective communications.**
- » **A strong unified command presence.**

In situations when it is too dangerous for law enforcement to conduct door-to-door evacuations, a change in strategy may be necessary in which the primary objective of other resources will be rescue instead of suppression.

In areas where the road capacity is insufficient, the use of contraflow - the routing of traffic in the opposite direction of normal travel - can be used to increase evacuation capacity.

The use of contraflow should be pre-planned and requires aggressive traffic control to prevent traffic accidents. Responder ingress should be considered during contraflow operations.

## Establish Control Points

Once an evacuation is initiated, control points should be established to prevent people from entering an area that is being evacuated.

This will:

- » **Minimize traffic conflicts and maximize road capacity.**
- » **Allow firefighters to focus on fire suppression.**

This is primarily a law enforcement function, and will probably require mutual aid from other jurisdictions or partners, such as:

- » **The State Department of Transportation.**
- » **City and county public works.**
- » **On occasion, the National Guard.**



## Tracking Evacuations and Accountability

Accountability for evacuated properties and neighborhoods should be provided. Some options for tracking the evacuation status of a property include:

- » **The use of a flagging system.**
- » **The use of paper accountability systems.**
- » **Tracking evacuations electronically.**

Special circumstances will require careful coordination with emergency management and facility representatives, such as the evacuation of:

- » **Schools.**
- » **Hospitals.**
- » **Care facilities.**

These relationships and facility-specific evacuation plans should be established before the incident.

## Prepare for Community Resistance to Evacuation

It is important to remember that communities that have experienced an evacuation for a fire that did not reach the community may become resistant to evacuating in the future. The community's compliance with evacuation orders may also be altered by a previous evacuation that was followed by uncoordinated or delayed repopulation. Frequently, repopulation can be as difficult as the evacuation itself, and complicated by frustrated and emotional residents as well as political factors.

## REPOPULATION

An essential element of any successful evacuation is repopulation. When residents hear that a wildfire has been controlled or contained, their primary concern will be when they can return home.

While incident stabilization is the priority, repopulation should be:

- » **Considered before the wildfire has occurred.**
- » **Adjusted during the operational planning process.**
- » **Implemented as soon as a safe environment has been reestablished.**



The following recommendations will help to facilitate the re-entry and repopulation process:

- » **Identify areas where repopulation can be safely accomplished without interfering with fire suppression efforts.**
- » **Eliminate or mitigate significant health and safety hazards and conduct damage assessments, particularly in those areas that have been evacuated and are expected to be repopulated.**
- » **Expect that members of the public may attempt to enter through unauthorized pathways.**
- » **Determine what resources are needed for reopening roads and controlling traffic as evacuees return to the area.**
- » **Advise all appropriate cooperators of the repopulation plan that the return of evacuees will begin.**
- » **Develop a repopulation communications plan in conjunction with your PIOs or JIC. Advise evacuees how and when to return to their homes and businesses, indicating preferred travel routes and identification requirements for proof of residence.**
- » **Consider issuing re-entry credentials at evacuation centers or other remote sites to avoid confusion, frustration, and congestion at access points.**
- » **Establish controlled access points as necessary and provide traffic control for return of evacuees.**
- » **Account for evacuees who are unable to return to their residences. When possible, arrange for temporary shelter.**
- » **Coordinate with special care facilities regarding the return of evacuees to those facilities.**
- » **Consider specific needs for emergency responders who have been affected (Critical Incident Stress Debriefing (CISD)).**
- » **Coordinate your organization's ability to maintain services (facilities, fleet, responders, etc.).**

Evacuations in any situation are challenging; effective collaboration and preparation planning can result in a more successful outcome.

#### **Additional Resources:**

- » [Ready, Set, Go! Red Flag Warning.](#)
- » [Ready, Set, Go! for Law Enforcement.](#)

# Case Study

Eagle County, Colorado

## **EVACUATION PLANNING SIMPLIFIES DECISION-MAKING AND BUILDS RELATIONSHIPS**

Eagle County, Colorado is located in the Rocky Mountains approximately 100 miles west of Denver. It is a geographically diverse county marked by elevations ranging from 6,000 ft to well over 12,000 ft. Accordingly, the county has many different wildland fuels, including sage, pinyon/juniper, lodgepole pine, and mixed conifer. This area is well known for its ski areas, including Vail and Beaver Creek. It is also home to the White River National Forest, which has the highest visitation of any national forest. Virtually all development in Eagle County is within the WUI. Fire protection within Eagle County is provided by five fire departments, along with the Upper Colorado River Interagency Fire Management Unit.

The diverse geography, along with a transient population that accompanies tourism, creates unique challenges related to conducting evacuations. Following evacuation exercises in 2015, Vail Fire and Emergency Services (VFES) identified the need to streamline the evacuation process. As a result, VFES developed wildland fire pre-plans that included pre-designated evacuation zones. The evacuation pre-plan took the form of an evacuation mapbook that can be used in paper format, as well as downloaded using a QR code. The digital version of this plan can be used with both Avenza maps and ArcOnline. These platforms allow the user to use real-time geolocation so they can see their actual location in relation to an evacuation zone. The use of pre-designated evacuation zones alleviates the need for the communication center to interpret the evacuation instructions from an incident commander. This allows evacuation notifications to be pushed out almost immediately once an evacuation is requested.

Upon completion, the Vail evacuation map system was introduced to the Eagle County Public Safety Council. The members of the Public Safety Council immediately saw the benefit of the evacuation maps and developed a plan to expand this system to the entire county. Although the county was unsuccessful in securing grant funds to complete this project, it was able to be completed by agencies throughout the county by dedicating time and resources to the project. While technical experts in GIS developed the evacuation maps, representatives from each fire agency provided input so that the evacuation zones were based upon logical geographic divisions. The Eagle County Wildland Pre-Plan project was completed in 2019.

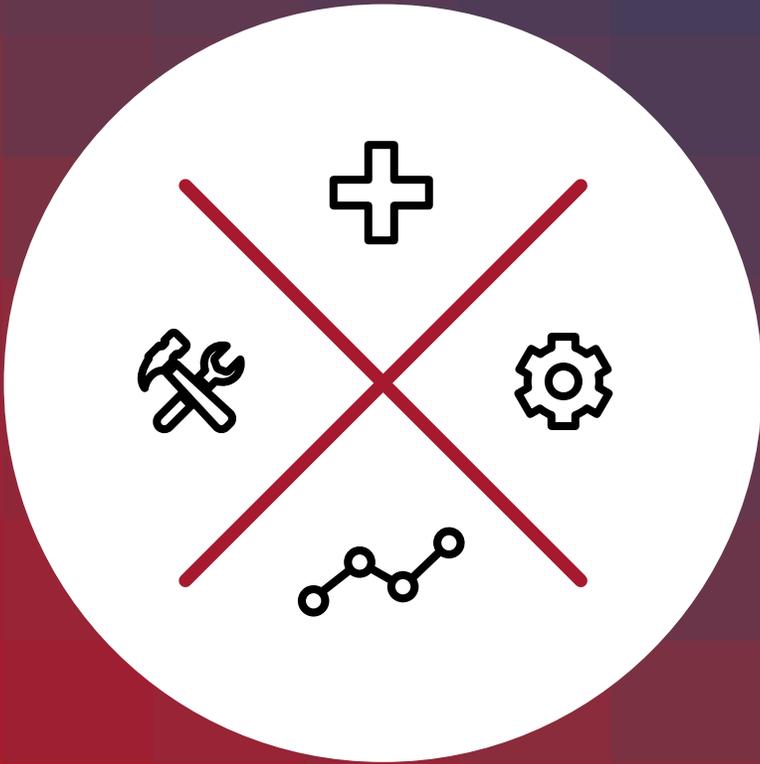
In addition to its utility for evacuation, the pre-plan project was designed to provide initial attack responders with rapid situational awareness. The increased situational awareness provided responders from outside the local area with an additional level of safety. It also allowed them to be more effective by providing information about values at risk, including housing density, occupancy type, operational hazards, common points (staging areas, helispots, etc.), and tactical opportunities, such as the location of past fuel treatments.

In 2020, the Grizzly Creek fire began to the west of Eagle County in Glenwood Canyon. The fire demonstrated very rapid fire growth and eventually spread and burned across 32,000 acres, resulting in the closure of Interstate 70 for 13 days. Soon after igniting, the Grizzly Creek fire burned into Eagle County and threatened the communities of Dotsero and Gypsum. Although there had been a number of small evacuations for wildfires in previous years, Eagle County had not experienced the potential need to evacuate entire communities before. The wildland evacuation maps provided a solid foundation for the pre-evacuation of the community of Dotsero, and later provided a framework for a staged evacuation of the entire town of Gypsum.

Evacuation planning, like most planning efforts, is an ongoing process. The Grizzly Creek fire provided these valuable lessons which are now being used to refine evacuation planning and procedures in Eagle County:

- » **Even imperfect evacuation plans are useful.**
- » **A good plan will be of limited use if all end users do not understand the plan.**
- » **Additional refinement of evacuation zones is necessary.**
- » **Field personnel need additional training in notification systems (Reverse 911, IPAWS, etc.) and the advantages and disadvantages of each.**
- » **Notification messaging should be pre-scripted to ensure accuracy and expedite delivery.**





# Recovery





## **WILDLAND FIRES ARE FELT LONG AFTER THE BLAZE IS OUT**

Recovery consists of capabilities necessary to assist communities affected by a wildland fire to recover effectively. They include, but are not limited to: rebuilding infrastructure systems, providing adequate interim and long-term housing, restoring health, social, and community services, promoting economic development, and restoring natural and cultural resources. Recovery may be the most challenging aspect of a wildland fire, due in part to the following six factors:

- » **The recovery process begins before the incident.**
- » **There is extreme pressure to return to normal.**
- » **There are a large number of complex requirements associated with external funding sources.**
- » **The length of the recovery process can take decades in some cases.**
- » **During the recovery process, community circumstances may get worse before they get better.**
- » **Due to a communication breakdown, citizens of the affected community may not feel they have a voice in recovery decisions.**

Recovery is fundamentally different from the response and requires long-term leadership, new partnerships, community involvement, planning, and priority-setting to address the short-term and long-term recovery elements.





# Specific Categories



## EMERGENCY MANAGEMENT

The purpose of emergency management (EM) is to assess available resources within the authority having jurisdiction (AHJ) and to request state and federal resources when the resources needed to recover from a wildland fire or disaster are beyond what the AHJ and community response partners are able to provide. EM also coordinates recovery activities among other stakeholders with a role in recovery.

A jurisdiction may take the following actions to develop its EM capability:

- » **Identify the process for local, state, and federal disaster declaration assistance.**
- » **Determine the level of EM capability within jurisdiction resources.**
- » **Define trigger points for requesting state and federal resources and the threshold for doing so.**
- » **Determine level and source(s) of support for out-of-jurisdiction EM resources.**
- » **Develop an EOC capability for recovery.**
- » **Practice EOC activations and involve stakeholder agencies and Emergency Support Function (ESF) representatives.**
- » **Identify partners to aid in recovery. For example, the Humane Society, Red Cross, friend groups, community groups, etc.**



## ADMINISTRATION AND CONTINUITY OF GOVERNMENT

The purpose of administration and Continuity of Government (COG) is to provide information that assists the mission-essential functions of the AHJ and ensures they will continue through the recovery process. COG also manages the administration of the disaster recovery program.

A jurisdiction may take the following actions to ensure administration and continuity of government:

- » **Define existing COG capability and plans.**
- » **Define mission-essential functions to identify gaps and potential liabilities in COG plans.**
- » **Hold yearly COG exercises to test established plans.**

## PUBLIC INFORMATION AND COMMUNITY RELATIONS

The purpose of public information and community relations is to outline activities related to the dissemination of public information before, during, and following an emergency, wildland fire, or disaster. Following an incident, the public information officer (PIO) collects, processes, and disseminates disaster information to the public and AHJ personnel. The PIO also coordinates with media outlets to provide live or taped interviews regarding the incident throughout the recovery process.

A jurisdiction may take the following actions to facilitate rapid and accurate public information efforts:

- » **Consider leveraging verified social media accounts to communicate time-critical messages.**
- » **Through a joint information center (JIC) or similar structure, ensure consistency in messaging.**
- » **Streamline communication procedures to facilitate rapid communication.**
- » **Work collaboratively with partners and organizations to ensure consistent messages are being heard.**

## INDIVIDUAL ASSISTANCE, VOLUNTEERS, AND DONATIONS

The purpose of Individual Assistance (IA), volunteers, and donations is to inform survivors about local, state, and federal IA programs, explain how to apply, determine sites where the public can apply for grant assistance in a post-emergency environment, and provide volunteer assistance to survivors as needed. Additionally, it helps with defining procedures for placing volunteers and receiving donations of goods, services, and cash. Furthermore, its role is to assist with the establishing partnerships with voluntary agencies during and following an emergency or disaster.

A jurisdiction may take the following actions to handle assistance, volunteers and donations:

- » **Identify potential brick-and-mortar assistance information and application sites.**
- » **Develop procedures to handle an influx of spontaneous volunteers.**
- » **Consider partnering with community agencies to handle requests for assistance.**
- » **Prior to recovery, consider developing general messaging that addresses sources of assistance and types of donations needed after a disaster so that PIOs can communicate needs early in an event. This helps reduce unnecessary and wasteful donations.**
- » **Involve partner agencies in practice EOC activations and consider running practice activations for donor and assistance sites.**
- » **Identify governmental agencies that may assist the community, or be used for logistical or operational assistance.**





## SECURITY AND RE-ENTRY

The purpose of security and re-entry is to promote and facilitate the timely re-entry of essential response and recovery personnel, government officials, property owners, and business owners into the city following an incident. Following a large-scale disaster, security and re-entry also provide uniform guidance to law enforcement personnel who direct access into the affected areas.

A jurisdiction may take the following actions to ensure timely re-entry after an incident:

- » **Engage with law enforcement early to evaluate and test evacuation and re-entry plans and procedures.**
- » **Develop and confirm messaging to be used in re-entry announcements.**
- » **Leverage verified social media accounts to communicate re-entry procedures.**
- » **Develop verification and accountability procedures for re-entry.**

## HEALTH AND SAFETY

The purpose of health and safety is to provide procedures to ensure that health and safety issues are adequately addressed following an emergency or disaster.

A jurisdiction may take the following actions to adequately address health and safety issues:

- » **Engage with the health department to develop respiratory impact messaging.**
- » **Develop biosurveillance procedures to increase awareness of respiratory illnesses after a fire and the impact on emergency medical services (EMS) and health care systems.**
- » **Develop messaging on basic safety for accessing and searching through building remains.**
- » **Consider messaging related to spoiled food, contaminated water, and injured or dead/decaying animals.**
- » **Develop messaging about alternate power and heat (e.g., generators, space heaters, etc.), carbon monoxide (CO), and fire.**
- » **Communicate regarding areas closed due to risk, as well as alternate routes and timelines.**
- » **Work with governmental and non-governmental agencies to perform an initial assessment of properties or provide needed tools and/or resources.**

## COMMUNITY INFRASTRUCTURE

The purpose of community infrastructure is to reference plans and procedures for performing the timely removal, transport, storage, elimination, and/or recycling of debris.

A jurisdiction may take the following actions to handle debris after a fire:

- » **Conduct a “debris summit” to gather stakeholders in debris management and define roles and responsibilities in debris management and removal.**
- » **Identify debris/biohazard destinations and determine their impact on landfill lifespans.**
- » **Engage with air-quality agencies in the event debris burning is necessary.**

## UTILITY RESTORATION

The purpose of utility restoration is to describe how the AHJ will coordinate with utility providers and other stakeholders for the restoration of utilities to pre-emergency conditions as quickly as possible following an emergency or disaster.

A jurisdiction may take the following actions to account for the restoration of utilities after an event:

- » **With stakeholder input, develop utility impact and hazard maps to identify critical areas for restoration.**
- » **Plan for potential infrastructure failures (e.g., water systems, electrical systems, pump stations, city infrastructure).**



## PLANNING AND MITIGATION

The purpose of planning and mitigation is to expedite repair, restoration, or rebuilding of habitable structures. This recovery function educates residents affected by an incident regarding the existing permitting requirements to repair or rebuild structures following a wildland fire. Furthermore, planning and mitigation integrates existing hazard-mitigation plans and flood-plain management into recovery efforts.

A jurisdiction may partner with local contractors to take the following actions to prevent wildland fire flooding:

- » **Re-seed ground cover with quick-growing or native species.**
- » **Mulch with straw or chipped wood.**
- » **Construct straw, rock, or log dams in small tributaries to prevent flooding.**
- » **Place logs and other erosion barriers to catch sediment on hill slopes.**
- » **Install debris traps to modify road and trail drainage mechanisms.**
- » **Modify or remove culverts to allow drainage to flow freely.**
- » **Add drainage dips and construct emergency spillways to keep roads and bridges from washing out during floods.**
- » **Remove critical safety hazards.**
- » **Plant grass to prevent the spread of noxious weeds.**
- » **Install warning signs.**



## ECONOMIC RESTORATION

The purpose of economic restoration is to coordinate resources to restore the AHJ's economy following an emergency or disaster.

A jurisdiction may take the following actions to ensure economic recovery after a fire:

- » **Identify resources (e.g., Small Business Administration, local economic boards, housing, and building associations) for economic recovery and package them for rapid use post-disaster.**
- » **Develop an economic restoration committee to investigate possible funding sources.**
- » **Develop a continuity of business plan.**
- » **Plan messaging related to tourism and travel.**

## ENVIRONMENTAL AND HISTORIC PRESERVATION

The purpose of environmental and historic preservation is to minimize the environmental effects of a wildland fire, follow regulations regarding historic properties and expedite recovery of the AHJ. Its purpose is also to organize response efforts so that the AHJ may obtain maximum reimbursement for expenses related to environmental and historical preservation recovery following an incident.

A jurisdiction may take the following actions to address environmental and historic values at risk:

- » **Obtain an inventory of critical community environmental and historic values.**
- » **Develop a consistent damage assessment process to rapidly identify damages and initiate restoration.**





## FINANCE

The purpose of finance is to establish procedures and oversee mechanisms for tracking emergency-related expenditures so the AHJ may obtain maximum reimbursement.

A jurisdiction may take the following actions to ensure cost recovery:

- » **Identify specific available funding sources (i.e., state, federal, national, private local foundations, businesses, etc.).**
- » **Develop proper accounting and financial tracking systems.**
- » **Put in place cost-recovery for fire department activities.**
- » **Engage with your community's financial agencies to clarify roles, responsibilities, and processes.**

## HOUSING

The purpose of housing is to identify and determine pre-incident housing and to establish transitional housing and long-term housing opportunities after an emergency or disaster within the AHJ. The ultimate objective is to assist citizens with repairing, rebuilding, and returning to permanent housing as quickly and efficiently as possible after a wildland fire disaster.

A jurisdiction may take the following actions to ensure the provision of housing:

- » **Engage with community housing agencies to determine the scope of potential needs.**
- » **Evaluate the condition of current infrastructure.**
- » **Identify state, federal, and other agencies that can provide assistance with housing needs.**
- » **Identify potential financial sources for short- and long-term housing.**
- » **Evaluate short- and long-term life safety issues related to temporary housing, including fire, potable water, refuse, and sanitation.**
- » **Identify opportunities to prevent future recurrence of disaster through mitigation and establishing codes and ordinances.**



## EDUCATION

The purpose of education is to identify specific activities to minimize disruptions to schools and provide a rapid return to normal operations. This recovery function also lists the actions schools can take to support AHJ recovery operations.

A jurisdiction may take the following actions to maintain continuity of education services:

- » **Engage with community educational agencies to determine the scope of potential needs.**
- » **Evaluate the condition of current educational facilities.**
- » **Identify state and federal agencies that can provide funding assistance for educational services within a community.**
- » **Identify opportunities for your organization to further educate the public about risk.**

## TRANSPORTATION

The purpose of transportation is to establish a coordinated system for facilitating transportation in the AHJ following a wildland fire disaster. In response to an incident, individuals might be transported from their home or care facility to a location outside of the area that is at risk from a known hazard. Once conditions are deemed safe, these individuals will need to be transported back to their homes or care facilities. In addition, transportation resources might be needed to transport supplies into and around the AHJ.

A jurisdiction may take the following actions to continue the provision of transport services:

- » **Identify critical transportation routes and create a plan.**
- » **Evaluate current transportation infrastructure and include mass transit for evacuations.**
- » **Engage with public and private transit agencies in developing emergency service plans.**
- » **Develop emergency fueling points.**
- » **Develop plans for care facilities, hospitals, and other high-risk facilities.**

### Additional Resources:

- » [National Disaster Recovery Framework.](#)
- » [National Voluntary Organizations Active in Disaster \(VOAD\).](#)
- » [Continuity of Business \(FEMA\).](#)
- » [Continuity of Government \(FEMA\).](#)
- » [Fires and Wildfires: Health Information Guide.](#)
- » [Centers for Disease Control and Prevention - Wildfire.](#)

# Case Study

Colorado Springs, CO

## WHEN THE FIRE IS OUT, REBUILDING BEGINS

The Waldo Canyon Fire started on June 23, 2012, in the Pike National Forest just west of Colorado Springs, CO. Over the 18-day fire duration, it burned 18,247 acres and claimed two civilian lives. As the fire intensified, it grew and spanned across multiple jurisdictions and was elevated to a Type 1 incident. As the fire grew, a large-scale evacuation was ordered for the northwest portion of Colorado Springs and neighboring areas for 32,000 residents. The Waldo Canyon fire destroyed 347 homes, making it the most destructive wildfire in Colorado history at the time – though it was later surpassed by the Black Forest Fire the following year. In the aftermath of the fire, a comprehensive After Action Review was completed. Several reports were generated by national organizations to draw upon the lessons learned and to identify recommendations and national takeaways. The collaboration between organizations helped Colorado Springs not only during the response, but also throughout its lengthy recovery.

This case study focuses on considerations for post-fire recovery, giving emphasis to re-entry due to large-scale evacuations conducted during the fire. It is important to note that the comprehensive WUI Fire Evacuation Appendix to the Colorado Springs Emergency Operations Plan (EOP) was a major asset during the fire. The plan outlined in the Appendix addressed messaging, transportation, evacuation, and re-entry. The Colorado Springs Fire Department (CSFD) was heavily involved in the development of the plan and the Appendix.

During the final days of fire response, recovery efforts were underway with residents of certain areas being allowed re-entry. The re-entry was evaluated and announced on a street-by-street basis until the mandatory evacuation was lifted. The Colorado Springs Police Department (CSPD) and the National Guard, as well as other local and state law enforcement agencies, were critical in both blocking re-entry during evacuation orders and patrolling on the day of re-entry.



It was noted that CSPD did not have enough capacity to block all re-entry points and identified a need for additional partnerships and resources. The CSPD also conducted patrols of evacuated areas in order to dissuade looting and other illegal activity while residents were away from their homes.

Given the extensive evacuations and the significant number of homes destroyed or damaged, there were numerous requests from residents to re-enter and assess the damage. After several rounds of deliberations, the policy group, elected officials, and other key leaders having authority over the jurisdiction outlined procedures for residents to return for one day to visit their homes. These conditions were set to address health and safety concerns. During the visit, CSFD staff provided escorts and were on-site to provide support to the residents as they surveyed the damage.

As media outlets pressed for information, issues with conflicting media reports started to arise as outlets attempted to be the first to issue “breaking news” regarding structure losses, evacuations, and fire behavior. The utilization of a Joint Information Center (JIC) to direct news outlets to one location would have established consistency across reports. Another takeaway from the incident was that the inclusion of a disclaimer would protect statements from PIOs as the incident was ongoing. While the JIC was critical to information sharing during response and recovery, the need for a JIC plan was identified post-fire and recommended to strengthen efforts during future incidents.

The community's desire to volunteer and provide donations was overwhelming; while there is certainly a benefit to having an abundance of volunteers, a level of organization and structure is necessary to properly coordinate these efforts. To mobilize volunteers, the Community Advancing Public Safety (CAPS) program was utilized. While CAPS was resourceful during response and recovery, the Colorado Springs community also developed a group specifically targeting recovery. Immediately after the fire was contained, the Mayor of Colorado Springs initiated the formation of the Colorado Springs Together group, a non-profit organization comprised of government and private-sector assets, as well as representatives from affected neighborhoods. The group assisted in recovery and supported the needs of the community following the disaster.

As the community looked toward rebuilding, the CSFD identified an opportunity to assist with creating ignition-resistant structures for future fire prevention. Taking the lessons learned from the structure loss during the fire, CSFD worked with local home builders and building authorities to develop guidelines for ignition-resistant construction. In addition, the CSFD worked with existing and new partners to develop and adopt a WUI mitigation ordinance.

While there are extensive action items that require immediate attention during post-fire recovery, a key takeaway is that there is an opportunity to identify long-term solutions as the community is potentially more receptive to suggestions that may reduce the ongoing threat.

The devastation of the Waldo Canyon Fire captured national attention. The extensive research and study of this fire led to lessons shared beyond the limits of the impacted jurisdictions.



Recovery considerations for fire chiefs gleaned from this incident include:

- » **Collaboration and interagency cooperation was critical for the re-entry process:**
  - WUI Fire Evacuation Appendix to EOP contained valuable re-entry information.
  - Numerous requests for re-entry had to be fielded by the officers on-site by contacting their chain of command for permissions:
    - ♦ It was determined that a re-entry task force established after initial evacuation orders would streamline this process. The task force would be a single point-of-contact to assess the need for anyone requesting re-entry during the evacuation.
  - Temporary one-day visits alleviated a lot of requests and community concern:
    - ♦ Considerations and procedures should be clearly outlined to address health and safety concerns.
    - ♦ Provide residents with safety handouts, trash bags, dust masks, and gloves.
    - ♦ Establish perimeters and check-in stations where each vehicle is given a dashboard placard with information on the residence being visited.
    - ♦ Numerous agencies were present and provided patrol. CSFD provided crews on apparatus to drive through the neighborhood and the hardest hit sites.
    - ♦ During hot and dry weather conditions, provide comfort items to returning residents (i.e., sunscreen, water, and facial tissues).
    - ♦ Primary jurisdiction should provide a very visible presence of personnel and apparatus in the re-entry area to distribute comfort items and to support residents.

- 
- » **Formation of a formal group to organize and oversee volunteer and recovery efforts:**
    - Recommended that a local Volunteer Organizations Active in Disasters (VOAD) chapter be mobilized to address that need.
    - Colorado Springs Together was a non-profit group created specifically for recovery efforts of the Waldo Canyon Fire:
      - ♦ Utilize resources from companies like The Home Depot and Lowe's.
      - ♦ Peer support is critical to recovery, which is still ongoing for victims of the Waldo Canyon Fire.
  
  - » **Establishment of Joint Information Center (JIC):**
    - Develop a JIC plan for the locality. The plan should define roles and responsibilities for all JIC functions during response and recovery. During the Waldo Canyon Fire, the absence of a pre-existing JIC plan led to confusion on roles and a lack of information sharing amongst PIOs.
    - Pointing all media to the JIC facilitates consistent information being reported.
    - Inclusion of a disclaimer protects organizations. Use language along the lines of “This is to the best of our knowledge at this point in time,” as the situation is evolving and changing.
    - Ensure the JIC location has adequate resources (equipment and connectivity) for the information requirements. During the Waldo Canyon Fire, the JIC did not have enough landline telephones and lacked recording capabilities.
    - Ensure the JIC has adequate support for media representatives (e.g., power, parking for satellite trucks and other vehicles, etc.).
  
  - » **Identify potential opportunities for wildfire risk reduction:**
    - Use the post-fire atmosphere as a catalyst for adopting new codes and ordinances. Identify new partners (e.g., building construction, contractors, neighborhood leaders, friends groups, and homeowners associations) who may be helpful throughout rebuilding efforts.
    - If you encounter increased attention and receptiveness to wildfire preparedness within the community, create a teaching moment to reinforce your outreach and mitigation efforts.

## RESOURCES ON WALDO CANYON FIRE

- » [Waldo Canyon Fire Final After Action Report.](#)
- » [4/3/13 Waldo Canyon Fire After Action Report Presentation video.](#)
- » [Colorado Springs WUI Mitigation Ordinance 12-111.](#)
- » [Recovery Resource Guide: Waldo Canyon Fire.](#)
- » [Lessons Learned from Waldo Canyon, Fire Adapted Communities Mitigation. Assessment Team Findings.](#)



# Resources



## PREPARATION

- » State Risk Assessment Websites
- » National Fire Danger Rating System
- » Community Wildfire Protection Plan (CWPP) Leader's Guide
- » FAC Self-Assessment Tool
- » Wildland-Urban Interface Wildfire Mitigation Desk Reference Guide
- » 2015 California Fire Assistance Agreement
- » NWCG Standards for Interagency Incident Business Management
- » Crosswalk
- » National Incident Management System: Wildland Fire Qualification System Guide
- » Integrated Public Alert and Warning Systems (IPAWS)
- » Personal Protective Clothing and Equipment for Wildland Firefighting
- » Firefighter Equipment
- » Wildland Fire Incident Management Field Guide
- » Orange County Fire Authority RSG Videos
- » Emergency Preparedness Resources for Businesses

## MITIGATION

- » Wildland-Urban Interface (WUI) Toolkit
- » IAFC Ready, Set, Go! Program
- » NFPA Public Education
- » Firewise USA®
- » FEMA WUI Training
- » Emergency Alerts
- » Community Wildfire Protection Plan (CWPP) Leader's Guide
- » FDX
- » RSG
- » Understanding the Wildfire Threat to Homes
- » Assessing Structure Ignition Potential from Wildfire Training
- » Wildland-Urban Interface: Fire-Adapted Communities
- » Fire Adapted Network
- » IAFC Fire Department Exchange
- » National Fire Danger Rating System
- » NVFC Wildland Fire Assessment Program as a resource for conducting home assessments

## RESPONSE

- » Red Book
- » NWCG 310-1
- » 2018 Interagency Standards for Fire and Fire Aviation Operations - Red Book
- » Field Operations Guide
- » Wildland Fire Incident Management Field Guide
- » Field Operations Guide
- » Resource Mobilization Plan
- » JPA San Juan and EMND

## EVACUATION

- » Ready, Set, Go! Red Flag Warning
- » Ready, Set, Go! for Law Enforcement

## RECOVERY

- » VOAD
- » Continuity of Business (FEMA)
- » Continuity of Government (FEMA)
- » Fires and Wildfires: Health Information Guide
- » Centers for Disease Control and Prevention - Wildfire

IAFC Wildland Fire Programs

## PHOTOGRAPHY CREDITS

- » WFPC members and partners.
- » Keri Greer.
- » Kyle Miller.
- » NIFC.

# Appendix A



**JOINT POWERS AGREEMENT  
BETWEEN THE  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT,  
FORESTRY DIVISION  
AND  
SAN JUAN COUNTY  
FOR  
WILDLAND FIRE PROTECTION AND SUPPRESSION**

**AUTHORITIES**

1. Forest Conservation Act, NMSA 1978, §§ 68-2-6, 68-2-8 and 68-2-24
2. Joint Powers Agreements Act, NMSA 1978, § 11-1-1 *et seq.*
3. Disaster Location Act, NMSA 1978, §§ 12-11-23 through 12-11-25
4. Tort Claims Act, NMSA 1978, § 41-4-1 *et seq.*
5. Federal Cooperative Forestry Assistance Act of 1978, P.L. 95-313
6. Fire Prevention and Protection NMSA 1978, § 3-18-11
7. Counties; Powers; Ordinances, NMSA 1978, § 4-37-1

**PURPOSE**

This Agreement is made pursuant to NMSA 1978, § 11-1-1 *et seq.* between the Energy, Minerals and Natural Resources Department, Forestry Division (EMNRD) and the County of San Juan (County), who may hereinafter be jointly referred to as the "Agencies".

This Agreement for Wildland Fire Protection and Suppression's purpose is to document EMNRD's and the County's agreement and commitment to mutual wildland fire suppression and management assistance and cooperation.

Words and phrases used herein may have different meanings or interpretations for different readers. In order to establish a common understanding, words and phrases as used herein are defined in Exhibit A, Glossary.

**RECITALS**

**WHEREAS**, federal, state, county, and municipal lands are intermingled or adjacent, and wildland fires on these intermingled or adjacent lands may present a threat to lands one or both of the Agencies own, administer, or control;

**WHEREAS**, EMNRD is the designated state agency responsible for coordinating wildland fire suppression services among county and municipal fire departments, cooperating state agencies, and cooperating federal agencies pursuant to NMSA 1978, §§ 68-2-6, 68-2-8, and 68-2-24;

**WHEREAS**, NMSA 1978, § 68-1-11 provides that employees or agents of governmental entities who authorize volunteer firefighters not certified according to national wildland firefighting standards to respond to wildland fires shall not be subject to criminal liability solely for allowing those volunteer firefighters to engage in firefighting activities;

**WHEREAS**, EMNRD has responsibility for wildland fire suppression on non-municipal and non-federal lands within New Mexico and the County has responsibility for wildland fire suppression on lands within the boundaries of its designated fire protection districts;

**WHEREAS**, it is to EMNRD's and the County's mutual advantage to coordinate efforts for the prevention, readiness, detection, suppression, and response to wildland fires, in and adjacent to their areas of responsibility, to avoid duplication, and to improve efficiency or effectiveness;

**WHEREAS**, the control of wildland/urban interface fires in any jurisdiction may require the mobilization of personnel and other resources beyond the jurisdictional capability, and supporting agency resources may need to be organized and maintained for an extended period of time; and

**WHEREAS**, EMNRD and the County are public agencies as defined in NMSA 1978, § 11-1-2;

**THEREFORE**, in consideration of the mutual premises and conditions herein made, EMNRD and the County agree as follows:

**1. Definition of Responsibilities:**

A. EMNRD – The state agency that has responsibility for wildland fire suppression on non-municipal, non-federal, and non-tribal trust lands within New Mexico.

B. County – The entity with responsibility for wildland fire suppression on lands within the boundaries of its designated fire protection districts.

**2. Resource Mobilization Plan (RMP):** A statewide plan that establishes:

A. personnel and equipment standards for the County's resources that the County may make available to EMNRD for wildland fire suppression and management;

B. procedures by which EMNRD can request, mobilize, coordinate, and demobilize the County's resources used for wildland fire protection and management; and

C. rates and specific procedures and administrative methods by which

EMNRD will reimburse the County for the services of qualified and requested resources.

The Agencies shall annually review and, upon mutual agreement, modify the RMP; provided, however, that if such review is not completed, the latest RMP agreed upon by both parties shall remain in full force and effect.

**3. Non-Reimbursable Assistance:**

A. EMNRD shall not pay the County for the first four hours of initial attack expenses incurred by a County fire department responding to a fire within its own County designated fire protection district.

B. EMNRD shall reimburse the County for the first four hours of initial attack expenses incurred by County fire departments that respond to fires outside of their County designated fire protection district.

C. EMNRD shall not reimburse for resources it does not request.

**4. Reimbursable Assistance:** EMNRD shall reimburse the County in the following circumstances: a) initial attack fire suppression for situations that are not included in the Non-Reimbursable Assistance Paragraph; b) for extended attack wildland fire suppression; and c) wildland fire management activities.

EMNRD and the County shall designate a local contact person or persons who have authority to mobilize resources while assuring that adequate resources are retained for their own fire suppression responsibilities. Resource requests must be recorded by the resource order or similar tracking system. Requests not documented in this manner are not reimbursable.

EMNRD shall only reimburse the County for resources requested, qualified, and mobilized under this Agreement. The County shall notify EMNRD of all wildland fires in its jurisdiction within 24 hours and within that same 24-hour period, notify EMNRD of fire departments that are assisting the County in the suppression effort through mutual aid. All wildland fire mobilizations other than mutual aid shall only be at EMNRD's prior request. All County resources EMNRD requests and the County mobilizes outside of the County's jurisdiction shall meet the standards outlined in the RMP.

**5. County Reimbursement Rates:**

A. Reimbursement of Personnel: EMNRD shall reimburse the County for paid career firefighter employees' regular pay, including overtime, pay differentials, benefits, travel, and per diem from their mobilization until their demobilization following procedures defined in the RMP. These paid career firefighter employees shall at all times remain covered under the County employee benefits, including workers' compensation. EMNRD shall not hire paid career firefighter employees during the incident.

During initial attack or extended attack, EMNRD may hire requested and RMP-qualified County volunteer firefighters as State of New Mexico emergency employees upon check-in at the incident. Emergency firefighter employee pay rates shall be established in the RMP and shall be based on job qualifications and job function at the incident. Firefighters EMNRD employs shall be individually reimbursed as state employees from their mobilization until their demobilization, following procedures defined in the RMP. Firefighters EMNRD employs shall be eligible as state employees for workers' compensation coverage.

B. **Reimbursement for Equipment Use:** EMNRD shall reimburse the County for use of equipment that meets the RMP standards as follows:

1) using the RMP wet rate when staffed wholly by paid career firefighters or volunteer firefighters whose qualifications including fitness; training and experience; equipment; and wildland personal protective equipment meet the RMP standards. EMNRD shall reimburse the County for use of equipment that meets the RMP standards;

2) using the base wet rate when staffed wholly by volunteer firefighters whose training and experience meet the RMP standards but do not meet the fitness standards; or

3) using the base rate when staffed wholly or partly by volunteer firefighters whose fitness, training, and experience do not meet the RMP standards.

EMNRD shall reimburse County for use of Federal Excess Property Program (FEPP) equipment at the FEPP rate whether staffed by paid career firefighters or volunteer firefighters that meet the RMP standards or by volunteer firefighters whose fitness, training, and experience do not meet the RMP standards.

**6. No New Capital Outlay:** The EMNRD Forestry Division Line Officer shall review all requests for all property purchases or replacements. Only reimbursable or expendable materials are eligible for reimbursement. Supply numbers (S#) will be issued by the EMNRD Forestry Division Line Officer for all property that is approved for reimbursement.

**7. General Billing Procedures for Reimbursable Fire Assistance:** EMNRD will reimburse the County for fire suppression resources when:

- A. EMNRD requests the resources;
- B. EMNRD approves the use of County equipment; and
- C. the County notifies EMNRD of the fire within 24 hours.

EMNRD shall only pay for County fire department resources within the fire department's

designated fire protection district when suppression work exceeds four hours.

**8. Billing Estimates/Timeframes:** On wildland fires where the County incurs costs pursuant to this Agreement, the County shall submit an EMNRD approved reimbursement form for reimbursement as soon as possible, but not later than 45 days after the fire is controlled.

**9. Billing Estimates/Timeframes for Incidents with FEMA-Approved Grants:** If an incident has been approved as a Fire Management Assistance grant through FEMA, the County shall submit the bill for reimbursement to EMNRD within 45 days from the designated incident period date as per FEMA Disaster Assistance, Fire Management Assistance Grant Program, 44 C.F.R. Part 204, as amended.

**10. Billing Content:** The County shall identify bills by funding code, fire name, location, jurisdictional unit, and appropriate order number; shall provide EMNRD with adequate documentation supporting the bills; and shall certify each bill to be true and correct.

**11. Payment Due Dates:** All bills shall have a payment due date 60 days after the date of receipt. If EMNRD cannot make payment before the 60 days expire, then EMNRD may request a 30-day extension from the County with oral or written justification.

**12. Disputed Billings:** EMNRD shall mail written notice to the County within 60 days of receipt of a bill that fully explains why a bill is being contested. EMNRD shall pay the uncontested portion of the bill. Contested items shall be resolved not later than 60 days of receipt of the written notice; thereafter, the County shall issue a corrected bill for payment by EMNRD. If the contested portion is not resolved within 60 days, EMNRD may deny this portion.

**13. Payments:** Payments shall refer to the bill number and fire name and shall be sent to the appropriate billing address as indicated in Exhibit B.

**14. Independent Action on Lands Protected By Another Agency:** Except as otherwise limited in the Local Operating Plan, nothing herein shall prohibit either EMNRD or the County, on its own initiative and without reimbursement, from going upon lands another Agency protects to engage in wildland fire suppression, when such fires threaten lands that are the Agency's protection responsibility. In such instances, the party taking action shall immediately notify the Jurisdictional Agency. Actions taken shall be consistent with the Jurisdictional Agency's fire management and suppression policies.

## INTERAGENCY COOPERATION AND COORDINATION

**15. National Guard Assistance:** EMNRD may seek National Guard assistance for wildland fire emergency purposes at the state level through the State Forester to the Governor, for a Governor's Declared Emergency on multi-jurisdictional wildland fires. The Incident Commander shall advise the State Forester upon the termination of the wildland fire emergency for purposes of demobilizing the National Guard. At that time the State Forester shall advise the Governor and the Adjutant General's Office of the Military Affairs Department that the fire emergency no longer exists.

**16. County Government Resources:** If EMNRD requests County resources, those resources shall be considered EMNRD-provided resources, except as provided in the Non-Reimbursable Assistance and Reimbursable Assistance Paragraphs.

**17. EMNRD as Liaison for County Resources:** EMNRD shall act as coordinator for County resources the County provides for wildland fires that are outside of the County's fire protection districts.

**18. Emergency Declarations:** If the cost of a wildland fire on non-federal, non-municipal, non-tribal trust lands within the County's boundaries meets the Federal Emergency Management (FEMA) threshold EMNRD may request an Emergency Declaration for financial assistance pursuant to the State Civil Emergency Preparedness Act, NMSA 1978 § 12-10-1 *et seq.*

**19. Incident Command System:** EMNRD and the County shall operate under the concepts defined in the National Interagency Incident Management System (NIIMS) or its successor and its component, the Incident Command System (ICS), as appropriate for providing qualified resources and for the management of incidents this Agreement covers.

**20. Communication:** EMNRD and the County authorize each other to use their radio frequencies on wildland fires where they are providing assistance.

**21. Local Operating Plan:** The Local Operating Plan shall establish and map County fire department designated fire protection districts and response areas and shall outline the details of implementing this Agreement. The Local Operating Plan shall designate EMNRD and the County's authorized representatives, and contact addresses and telephone numbers for resource mobilization and billing. The Local Operating Plan shall not supersede this Agreement's terms and shall be consistent with this Agreement.

EMNRD and the County's authorized representatives, as specified in the Plan, shall develop a Local Operating Plan and conduct an annual review. If a review is not completed, the latest Local Operating Plan agreed upon by both parties shall remain in full force and effect.

**22. EMNRD Firefighter Qualifications, Equipment, and Personal Protective Equipment:** EMNRD firefighting personnel assigned to emergency fire suppression work shall be qualified according to the then current National Wildland Fire Qualifications Guide NWCG 310-1 and RMP guidelines. Firefighting equipment and personal protective equipment shall be properly configured and equipped for wildland fire suppression operations per National Wildfire Coordination Group (NWCG) standards.

**23. County Firefighter Qualifications, Equipment, and Personal Protective Equipment:**

A. **Non-Reimbursable Assistance:** For non-reimbursable assistance, the County's personnel qualifications, equipment, and personal protective equipment shall meet the County's standards and applicable State Fire Marshal rules.

B. **Reimbursable Assistance:**

1) **Paid Career Firefighters:** In order for EMNRD to reimburse assistance that paid career firefighters provide, the County shall ensure personnel qualifications including fitness; training and experience; equipment; and wildland personal protective equipment meet the RMP standards.

2) **Volunteer Firefighters on Extended Attack on Lands Under Federal Jurisdiction:** In order for EMNRD to reimburse assistance that volunteer firefighters provide on extended attack on lands under federal jurisdiction, the County shall ensure personnel qualifications including fitness, training and experience; equipment; and wildland personal protective equipment meet the RMP standards and that any federal land management agency ordered them.

All resources EMNRD mobilizes pursuant to B.1) and B.2) may receive a performance rating by the fire department supervisor. County shall submit such performance rating for review by EMNRD. A firefighter who receives a deficient performance rating shall not be considered by EMNRD as a qualified resource for future EMNRD incidents until re-qualified as prescribed in the RMP.

3) **Volunteer Firefighters on Initial Attack or Extended Attack on Lands Under Non-Federal Jurisdiction:** For extended attack on lands under non-federal jurisdiction where the Incident Commander has requested the assistance; or for initial attack in areas that are EMNRD's initial attack responsibility, EMNRD shall reimburse assistance provided by volunteer firefighters who have had basic wildland fire training and use equipment and wildland personal protective equipment that meet the RMP standards but who do not meet the RMP's fitness or training and experience standards.

**24. Law Enforcement and Preservation of Evidence:** Forestry Division law enforcement agents may conduct wildfire investigations on non-federal, non-municipal, and non-tribal lands. In addition, the County Sheriff's Office or County Fire Marshal

may conduct wildfire investigations on non-federal and non-tribal trust lands. Forestry Division law enforcement agents and the County Sheriff's Office or County Fire Marshal may assist each other with or coordinate a wildland fire investigation. The Forestry Division and County shall render mutual assistance in the gathering of evidence to the fullest extent practicable. As initial action is taken on a wildland fire, the initial attack forces shall preserve information and evidence pertaining to the wildland fire's origin and cause.

### **WILDLAND FIRE SUPPRESSION**

**25. Fire Notifications:** EMNRD and the County shall immediately notify each other of wildland fires burning on or threatening non-federal, non-municipal lands, non-tribal trust lands.

**26. Incidents:**

A. EMNRD and the County shall establish a Unified Command and coordinate fire suppression resources.

B. The parties involved in the fire incident shall participate jointly in strategy sessions to reach mutual agreement on strategy and tactics within the EMNRDs policies and guidelines.

The County's failure to comply with conditions stated in A or B above, is grounds for denial of payment by EMNRD

**27. Protection Priorities:** The protection of human life is the single, overriding suppression priority. Once firefighters have been committed to an incident, these human resources become the highest value to be protected. The Incident Commander shall set priorities for protecting communities and community infrastructure, other property and improvements, and natural and cultural resources based on human health and safety, the values to be protected, and the protection costs.

**28. Appropriate Suppression Action Policies:** All fire suppression action shall be consistent with EMNRD's fire suppression policy and this Agreement's terms. The Local Operating Plan shall document procedures and criteria for the Agencies' representatives to communicate special land management considerations to Incident Commanders. The Incident Commander shall incorporate special conditions in the incident planning process, subject to delegation of authority.

**29. Fire Reports:** On incidents where the County makes the initial attack the County shall furnish a copy of its fire report to EMNRD within 30 days after the fire is controlled.

**30. Structural Fire Suppression:** Nothing in this Agreement is intended to make EMNRD responsible for structural fire suppression.

- 31. Aircraft:** All aircraft orders shall be processed through EMNRD. EMNRD shall not reimburse the use of aerial resources not processed through EMNRD.
- 32. Procurement:** Whenever EMNRD or the County is responsible for an incident's management, they shall comply with state procurement laws.

### **FEDERAL EXCESS PROPERTY PROGRAM (FEPP)**

- 33. FEPP Equipment:** EMNRD may provide the County with such FEPP firefighting equipment, as available and as it deems appropriate for use under the Federal Cooperative Assistance Program for placement with the County's fire department for fire prevention and control work. The exchange of FEPP equipment shall be documented in writing by EMNRD and the County's authorized representatives as specified in the Local Operating Plan.
- 34. License Plates:** EMNRD shall provide official-use license plates for FEPP vehicles EMNRD makes available to the County for its fire department's use.
- 35. Equipment Maintenance:** The County shall maintain the FEPP equipment EMNRD provides in good condition, reasonable wear and tear excepted, and make the equipment available to EMNRD for inspection upon reasonable request.
- 36. Equipment Use:** The County shall use FEPP equipment EMNRD provides exclusively for fire purposes. Failure to comply with FEPP guidelines may result in EMNRD removing the equipment from the County's fire department.
- 37. Accessories or Alteration of Equipment:** The County shall obtain EMNRD's written approval prior to adding accessories or altering any of the property provided pursuant to this Agreement. The County shall not sell, junk, or trade FEPP equipment. The County shall return FEPP equipment to EMNRD for disposition. Title to all accessories, tools, sirens, or other property that the County adds to equipment EMNRD furnishes shall remain with the County. The County may remove such property prior to the return of equipment to EMNRD, provided that removal does not materially damage the equipment.
- 38. Receipt of Equipment:** The County shall transport the FEPP equipment EMNRD provides to and from locations EMNRD designates in writing, and upon the time of transfer of the equipment to the fire department, when necessary, paint and add such decals or insignias as EMNRD prescribes.
- 39. FEPP Insurance Coverage:** The County shall obtain insurance coverage for the equipment EMNRD provides in accordance with the General Services Department, Risk Management Division's minimum requirements. EMNRD shall be named as co-insured. County shall provide EMNRD proof of insurance upon request.
- 40. Notification of Accident:** The County shall immediately (within 24 hours) notify

EMNRD if the equipment EMNRD provides is involved in an accident.

## GENERAL PROVISIONS

**41. Appropriations:** Nothing in this Agreement shall be construed as obligating EMNRD or the County to expend money in excess of appropriations authorized by state or local laws. The terms of this Agreement are contingent upon sufficient appropriation and authorization being granted by the New Mexico State Legislature and the County. If sufficient appropriation or authorization is not granted, either party may terminate this Agreement, or suspend performance pending approval of sufficient appropriation or authorization, upon written notice from one to the other. Either party's decision as to whether sufficient appropriations are available shall be final, binding and accepted by the other.

**42. Mutual Sharing of Information:** EMNRD and the County shall furnish to each other, or otherwise make available upon request, such maps, documents, instructions, records, and reports including, but not limited to, fire reports, employment records, and investigation and law enforcement reports as either party considers necessary in connection with the Agreement, in accordance with applicable state and federal rules and regulations.

**43. Accident Investigations:** Whenever a fire-suppression related accident involving County equipment or personnel hired by EMNRD occurs, the County shall immediately (within 24 hours) notify EMNRD. A team made up of representatives from affected agencies shall conduct an investigation. Upon the investigation's completion, EMNRD shall provide the information to the General Services Department, Risk Management Division

**44. Non-Wildland Fire and Medical Aid Responses:** This Agreement is limited to wildland fire protection and does not include medical aid responses not related to or a result of a wildland fire or structural fire suppression.

**45. Previous Agreements:** This Agreement is intended to terminate and replace the following agreement for wildland fire protection:

- Joint Powers Agreement No. 03-521-0400-0181 (Wildfire Suppression)
- Joint Powers Agreement No. 04-521-0400-0198 (Resource Mobilization)

Where other agreements that conflict with this Agreement exist, this Agreement shall supersede all others.

**46. Suppression and Damage Collection:** Nothing in this Agreement shall preclude EMNRD or the County from collecting damages and suppression costs from third parties (civil actions for recovery shall be taken independently) under the civil liability provisions of federal or state statutes or common law in a manner applicable law provides. However, whenever such collections have the effect of reducing the Billing

Agency's net expenditures, then the bill shall be reduced proportionate to the amount collected.

**47. Employment Policy:** Except as provided in the County's Reimbursement Rates Paragraph, County's employees shall not under this Agreement's terms become State of New Mexico employees. As a result of this Agreement the County, its agents, and employees shall not accrue leave, retirement, insurance, bonding, or any other benefits afforded to State of New Mexico employees. EMNRD employees shall not under this Agreement's terms become the County's employees. As a result of this Agreement EMNRD, its agents, and employees shall not accrue leave, retirement, insurance, bonding, or any other benefits afforded to the County.

**48. Workers' Compensation:** Except as provided in the County's Reimbursement Rates Paragraph for the purposes of Workers' Compensation coverage, employees of the State of New Mexico and the County are covered under the New Mexico Workers' Compensation Act, NMSA 1978, § 52-1-1 *et seq.*, while assigned to assist in suppressing wildland fires on lands within the County's jurisdiction or within EMNRD's jurisdiction.

**49. Insurance:** Except as provided in the County's Reimbursement Rates Paragraph, EMNRD and the County shall provide insurance coverage for all injury or damage to persons or property, including third parties, that occurs as a result of the Agencies' respective actions and all personnel, agents, and volunteers the Agencies' respectively entrust; provided, however, this section shall not be read nor implemented inconsistently with the Tort Claims Act. EMNRD and the County shall maintain continuous insurance coverage of the activities described in this Agreement in effect.

**50. Waiver of Claims:** EMNRD does not have the authority to indemnify or hold the County harmless from all claims, liabilities, losses, damages, charges, etc. EMNRD and the County shall each be responsible for errors, omission, and negligence of their employees to the extent provided under the New Mexico Tort Claims Act, NMSA 1978, §§ 41-4-1 *et seq.*

**51. Third Party Claims:** Any liability to third parties that may arise under the performance of this Agreement shall be determined solely under the New Mexico Tort Claims Act, NMSA 1978, §§ 41-4-1 *et seq.*

**52. Disposition, Division, or Distribution of Property; Return of Surplus Funds:** Upon this Agreement's expiration or termination, if EMNRD or the County has property or funds in its possession belonging to the other, the same shall be returned in proportion to the Agencies' original contribution.

**53. Strict Accountability for Receipts and Disbursements:** EMNRD and the County shall be strictly accountable for receipts and disbursements relating hereto and shall make all relevant financial records available to EMNRD, the Department of Finance and Administration (DFA), the County and the New Mexico State Auditor upon

request, and shall maintain all such records for three years after this Agreement has expired or has been terminated. These records shall be subject to examination and audit for three years after final payment.

**54. Equal Opportunity Compliance:** EMNRD and the County agree to abide by all federal and state laws and rules and regulations, and executive orders of the Governor of the State of New Mexico, pertaining to equal employment opportunity. In accordance with all such laws of the State of New Mexico, both parties assure that no person in the United States shall, on the grounds of race, religion, color, national origin, ancestry, sex, age, physical or mental handicap, or serious medical condition, spousal affiliation, sexual orientation, or gender identity, be excluded from employment with or participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity performed under this Agreement. If either party is found not to be in compliance with these requirements during the life of this Agreement, that party agrees to take appropriate steps to correct these deficiencies.

**55. Performance:** Any party shall have the right to enforce this Agreement by any available remedy under the State of New Mexico's laws.

**56. Duration of Agreement:** This Agreement shall not become effective until approved by the DFA Secretary and shall be ongoing unless terminated. Either EMNRD or the County may terminate participation in this Agreement by written notification to the other at least 90 days prior to the termination date. By such termination, neither party may nullify obligations already incurred for performance or failure to perform prior to the noticed termination date.

**57. Amendment:** This Agreement shall not be altered, changed, or amended except by instrument in writing executed by the parties hereto and approved by the DFA Secretary. This Agreement may be amended at any time by all parties' written, mutual consent.

## EXHIBIT A

### GLOSSARY OF TERMS

**Agencies:** The New Mexico Energy, Minerals and Natural Resources Department (EMNRD), Forestry Division, and the County of San Juan.

**Agency Representative:** An individual assigned to an incident with full authority to make decisions on all matters affecting that Agency's participation at the incident.

**Authorized Representative:** Agency official designated in this Agreement or in the Local Operating Plan who has authority to make decisions on matters related to this Agreement including approval of the Local Operating Plan, mobilization of resources, cost apportionment agreements, delegation of authority to the Incident Commander, Agency Representatives during incidents, and the acquisition of FEPP equipment.

**County Jurisdiction:** The County's jurisdiction, for this Agreement's purposes, is defined as the County's designated fire districts.

**Closest Forces Concept:** The philosophy of committing the closest available appropriate resources, regardless of agency, for initial attack or for critical need.

**Extended Attack:** A wildland fire incident that has exceeded the initial attack resources' suppression efforts.

**Extended Attack Incident:** A wildland fire that initial attack forces have not contained or controlled and for which more firefighting resources are arriving, en route, or the initial attack incident commander is ordering. Extended attack implies that the incident's complexity level has increased beyond the initial attack incident command's capabilities.

**Fire Management:** Activities and programs that include the use of fire as a resource management tool, and protection of values from unwanted, uncontrolled wildland fire.

**Incident Command System (ICS):** The common emergency incident management system used on any incident or event and tailored to fit the incident/event's specific management needs.

**Immediate:** Acting without the intervention of another objective or cause. Occurring, acting, or accomplished without loss or interval of time.

**Initial Attack:** Preparedness and response to conduct the first wildland fire suppression actions with local resources.

**Initial Attack Forces:** Wildland fire suppression resources of agencies initially dispatched to a wildland fire in accordance with a pre-existing Local Operating Plan or

mobilization guide.

**Multi-jurisdictional Incident:** A wildland fire that is burning on more than one jurisdiction's lands or that threatens to burn on to another jurisdiction within the next operational period.

**Protection Area Maps:** The Local Operating Plan's official maps.

**Qualified Resources:** Those resources meeting or exceeding the minimum standards for use at an incident as prescribed in the Resource Mobilization Plan.

**Reimbursable or expendable materials:** Reimbursable commonly refers to the use of County equipment such as engines with personnel, graders, water tenders, etc. Expendable refers to items that are usually considered to be consumed during the suppression effort and are not recordable as returnable inventory.

**Requested Resources:** Those resources the Jurisdictional Agency specifically requests from the Supporting Agency in accordance with this Agreement.

**Resources:** All personnel, equipment, and aircraft available for assignment of tasks.

**Resource Mobilization Plan (RMP):** A statewide document that describes the specific standards, methods, procedures, protocols, and rates by which this Agreement will be implemented. The RMP will not supersede this Agreement's terms and shall be consistent with this Agreement.

**Structural Protection:** To protect structures from the threat of damage from advancing wildland fire. This normally does not include an attack on the fire that is inside the structure. It involves the use fire control lines and the extinguishment of spot fires near or on the structure.

**Structural Fire Suppression:** Defined as interior and exterior actions to suppress and extinguish a burning structure or improvement associated with standard structure fire protection, equipment, and training.

**Suppression:** All the work of confining and extinguishing a wildland fire beginning with its discovery through the incident's conclusion.

**Values to be Protected:** Include property, structures, physical improvements, natural and cultural resources, community infrastructure, and economic, environmental, and social values.

**Wildland Fire:** Uncontrolled non-structural fire burning in wildlands such as forest, brush, prairie, or cropland fuels, or conflagrations involving such fuels and structures.

**Wildland:** Lands with few or no permanent improvements.

**EXHIBIT B**  
**FINANCIAL PLAN**

**Billing Addresses:**

All bills for services provided to the state pursuant to the Reimbursable Assistance Paragraph shall be mailed to the following address for payment:

Forestry Division, EMNRD  
District Forester – Chama District  
HC 75, Box 100  
Chama, NM 87520

All bills for services provided to San Juan County pursuant to the Reimbursable Assistance Paragraph shall be mailed to the following address for payment:

Fiscal Agent  
San Juan County  
100 S. Oliver Dr.  
Aztec, NM 87410

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