



2023 Urban Fire Forum (UFF) Position Statement

Position Statement on Climate Change

Climate change is a global transformational phenomenon exacerbating extreme weather events such as severe storms, floods, prolonged droughts, excessive temperatures, and wildfires. These impacts are present not only in regions historically disposed to these events but also in communities unaccustomed to such extremes. Even commonly hot and arid zones are experiencing progressively warmer temperatures and drier climates therefore increasing the risk of drought and wildfire.

Costly, extreme weather events have been observed more frequently both in the United States and around the world, with a staggering 42 individual billion-dollar weather disasters documented in 2022 alone.¹ These occurrences not only result in substantial financial losses but also impose increasingly significant social and economic burdens. Specifically, recent wildfires, both in the United States and abroad, have led to substantial economic damage and have placed significant social strains on affected regions. Over the past decade, devastating wildfires have surged in frequency, leaving a trail of destruction to property, natural landscapes, vital watersheds, and placing an increasing number of people and communities in harm's way.

There is widespread expectation that climate change may further increase the intensity, duration, and frequency of wildfires. For example, in July 2023, NASA recorded the world's [hottest month on record](#) since 1880. During that scorching month, more than half of the country experienced an extreme heat alert. Throughout 2023, the pervasive smoke from Canadian wildfires blanketed large swaths of the U.S. causing [air quality concerns in states along the East Coast](#). On the morning of August 8, 2023, drought-driven wildfires coupled with hurricane-force winds in Maui devastated the town of Lahaina, resulting in the deadliest wildfire in the United States in over a century.

Additionally, 2023 also saw intense flooding in various states from California to Vermont. Numerous communities face heightened threats from increasingly frequent and more powerful storms. Even areas historically spared from catastrophic weather events, exemplified by Nevada's Black Rock Desert during the 2023 Burning Man Event, are grappling with the unexpected challenges of flooding and extreme temperatures. While these extreme weather events have a profound impact on the overall well-being of communities including supply chain operations, infrastructure stability, food security, and overall public health, it is our fire and rescue departments that stand on the frontlines. They are the first responders charged with swiftly engaging in the aftermath of these events by issuing alerts, facilitating evacuations, conducting rescues, and striving to stop catastrophic outcomes.

Throughout history, fire and rescue departments have dedicated countless hours preparing to respond to catastrophic events, making every effort to limit the impacts on the communities they protect. However, the seemingly relentless effects of climate change are causing our fire service leaders to rethink their customary risks and adjust to new and emerging threats of today's emergency response environment.

Impacts on Fire Departments

In addition to the preparedness and response activities undertaken by fire and rescue departments, they often bear the brunt of climate-driven, high-impact events which take a toll on their capital resources and personnel. Record temperatures, changes in precipitation, severe storms, flooding, drought, high winds, extended wildfire seasons, water supply insecurity, and numerous prolonged disasters are driving the demand for specialized skills and equipment. These challenges underscore the importance of prioritizing the health, safety, and behavioral well-being of first responders.

Building a Climate Resilient Fire Service

Climate resilience is the ability to anticipate, prepare for, and respond to hazardous events, trends, or disturbances related to climate ... and recover.

The following principles serve as a guide for directing activities and investments aimed at bolstering the climate resilience of fire and rescue departments.

- **Be Proactive and Rethink Risks** – There is no one-size-fits-all approach to building climate resilience or improving climate adaptation. Communities experience climate change in different ways and must respond according to their unique capabilities and cultures. A key objective of climate resilience efforts is to ensure that fire departments are equipped to assess their risks and adopt the most appropriate solutions. Fire departments should conduct or update community risk assessments. [NFPA 1300: Standard on Community Risk Assessment and Community Risk Reduction Plan Development](#) contains the requirements for the process of conducting a community risk assessment (CRA) and to develop, implement, and evaluate a community risk reduction (CRR) plan. Based on risk assessment, implement solutions that anticipate, and address climate threats and impacts before an event occurs. Prioritize activities and investments through risk-based approaches, including approaches that account for complex risks, like cascading impacts and concurrent events, as well as approaches that account for differences in vulnerability and response capabilities within a community.
- **Implement a Whole-System Approach** - Consider the ways in which fire departments and physical and social systems are interconnected, recognizing that collaboration may be necessary with law enforcement, public health, public works, emergency management, and volunteer organizations. Leverage synergies with surrounding area

departments. Rethink assumptions for a community in which extreme weather events and natural disasters occur with increasing frequency and severity and in communities facing [compounding risks](#). A climate-resilient fire department will require greater capacity to respond to emergencies, including the resources and ability to respond to simultaneous emergencies.

- **Be Mission Focused.** Position the well-being of responders, individuals, families, and the community at large at the center of preparedness goals and solutions. Consider the needs and perspectives of fire officers and responders who will be on the frontline in response to any event. [NFPA 1710: Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments](#) guides fire departments to create a standard of cover for fire and rescue department response jurisdiction with minimum standards for crew size and deployment models based on risk level in each first-due response zone. Strenuous conditions during the response to climate emergencies can take a toll on the mental health and physical well-being of responders. [NFPA 1582: Standard on Comprehensive Occupational Medical Program for Fire Departments](#) provides detailed information on responders' physical and mental well-being and provides information and guidance for physicians and other healthcare providers responsible for fire department occupational medical programs.
- **Be Collaborative and Inclusive** - Work across sectors to identify and pursue shared goals. Create pathways for all community members to be involved in preparedness and making themselves savable. Conduct active outreach to raise awareness and inspire participation of community members in hardening their homes and communities to the impact of extreme climate events thereby building resilience. Identify and work to overcome disparities between and within sectors of the community recognizing the needs of underserved and marginalized neighborhoods.
- **Implement Durable Solutions** – Identify and implement preparedness and resilience solutions that serve the current and future needs of the fire department and the community while advancing other community and societal objectives (i.e., fire-safe residential structures). Promote work to implement and enforce national building codes and standards, preventing where possible degradation of the science-based national standards.
- **Importance of the National Mutual Aid System and Asset Prepositioning** - The National Mutual Aid System, also known as the [Emergency Management Assistance Compact \(EMAC\)](#), plays a pivotal role in our nation's disaster preparedness and response efforts. EMAC fosters interstate cooperation and coordination by enabling states and territories to request and aid during times of crisis and facilitates the sharing of critical resources, expertise, and personnel across jurisdictional boundaries.

Additionally, asset prepositioning is a strategic approach that involves the careful placement of emergency resources, such as supplies, equipment, and personnel, in areas prone to disasters or with high response demand. This proactive strategy ensures that essential resources are readily available for immediate deployment when disasters strike.

Available Resources

The U.S. Federal government is a world-leading source of climate information, data, and modeling, and is working alongside partners to develop and provide evidence-based and actionable resources. The Federal government has created several products that draw upon extensive climate information to give a comprehensive picture of how the climate is changing and what that means for our communities. For example, the forthcoming United States Fire Administration's National Emergency Response Information System (NERIS) will be the premier source of all-hazards information and innovative analytics informing the nation's fire problem and the capabilities of state, local, territorial, and tribal fire services' resource capacities, and capabilities to handle the problem effectively, efficiently, and safely. The NERIS platform, using data procured, captured, aggregated, and analyzed, will provide near real-time information on the overall scope of fire and emergency incidents across the U.S. and timely insights on significant or unique fire, hostile, and disaster events.

[About the United States Fire Administration's National Emergency Response Information System \(NERIS\) \(fema.gov\)](https://www.fema.gov/national-emergency-response-information-system-neris)

[National Emergency Response Information System \(NERIS\) | UL's FSRI – Fire Safety Research Institute](#)

Likewise, the [Fifth National Climate Assessment \(NCA5\)](#) will provide a rich source of authoritative climate information across all U.S. regions and key economic sectors. The [Climate.gov](#) and [Climate Mapping for Resilience and Adaptation \(CMRA\)](#) portal tool helps people consider their local exposure to climate-related hazards. The [Sea Level Rise Viewer](#) allows users to interactively explore climate hazards in their area, and the [Climate and Economic Justice Screening Tool \(CEJST\)](#) can guide investments in climate resilience by identifying communities likely to be disproportionately impacted by climate change. The [Climate Risk & Resilience Portal](#) helps emergency planners understand local-scale climate risks in the context of their community, including locations of vulnerable populations and critical infrastructure.² The [National Risk Index](#) informs on 18 natural hazards that have historically posed the greatest threat to local neighborhoods.

Current and prospective technology innovations like DHS Science and Technology funded wildfire sensors for rapid detection and [Team Awareness Kit \(TAK\)](#) that uses geospatial data to improve fire service situational awareness during an event, will improve response and recovery capabilities at the local level. Continued collaborative research efforts, along with the adoption

of building codes, responder training, and enhancing workforce health and safety are necessary to facilitate fire departments' capability to plan, mitigate, respond, and recover more quickly from climate-driven emergencies and natural disasters.

The National Fire Protection Association has a host of resources designed to help inform fire and emergency services on how to protect their communities from the impacts of extreme weather. Two notable examples are "[Outthink Wildfire™](#)," a comprehensive policy action strategy aimed at fundamentally transforming wildfire risk reduction, and [NFPA's Firewise USA®](#) which provides communities with valuable resources, guidance, and a structured approach to wildfire risk reduction in the Wildland-Urban Interface WUI. The most longstanding and extensive voluntary wildfire mitigation program, Firewise promotes education, collaboration, and proactive measures, Firewise empowers communities to plan, prepare, and respond effectively to WUI fires, ultimately enhancing their safety and resilience in the face of significant manmade and natural hazards.

[Community Risk Assessment \(CRA\) Insight Generator](#)

[Outthink Wildfire Summit Report Recommendations](#)

[NFPA LiNK® Instant Access to NFPA® Codes and Standards](#)

¹ [Masters, Jeff. "Dozens of billion-dollar weather disasters hit Earth in 2022." Yale Climate Connections, 30 January 2023, https://yaleclimateconnections.org/2023/01/dozens-of-billion-dollar-weather-disasters-hit-earth-in-2022/#:~:text=The%20planet%20was%20besieged%20by.insurance%20broker%20Aon%2C%20released%20Jan.](https://yaleclimateconnections.org/2023/01/dozens-of-billion-dollar-weather-disasters-hit-earth-in-2022/#:~:text=The%20planet%20was%20besieged%20by.insurance%20broker%20Aon%2C%20released%20Jan.)

² [The Climate Risk & Resilience Portal integrates FEMA's Resilience Analysis and Planning Tool \(RAPT\).](#)