Message from the U.S. Fire Administrator

8/30/22

I am pleased to submit the U.S. Fire Administration (USFA) Annual Report for Fiscal Year 2021, as required by the Federal Fire Prevention and Control Act of 1974 (Public Law No. 93-498). The reporting requirement is codified at 15 United States Code § 2215.

This report highlights the achievements of the USFA’s activities during the period of Oct. 1, 2020 to Sept. 30, 2021.

The USFA supports the U.S. Department of Homeland Security and Federal Emergency Management Agency missions of preparedness, mitigation, response, and recovery through our commitment to support and strengthen fire and emergency medical services and stakeholders through National Fire Academy training activities, public education and awareness initiatives, research and technology development, and data collection and analysis.

Pursuant to congressional requirements, this report can be found at www.usfa.fema.gov and is provided to the following members of Congress:

The Honorable Eddie Bernice Johnson
Chair, U.S. House Committee on Science, Space, and Technology

The Honorable Frank Lucas
Ranking Member, U.S. House Committee on Science, Space, and Technology

The Honorable Gary C. Peters
Chairman, U.S. Senate Committee on Homeland Security and Governmental Affairs

The Honorable Rob Portman
Ranking Member, U.S. Senate Committee on Homeland Security and Governmental Affairs

The Honorable Lucille Roybal-Allard
Chairwoman, Subcommittee on Homeland Security
U.S. House Committee on Appropriations

The Honorable Chuck Fleischmann
Ranking Member, Subcommittee on Homeland Security
U.S. House Committee on Appropriations
The Honorable Christopher Murphy  
Chairman, Subcommittee on Homeland Security  
U.S. Senate Committee on Appropriations

The Honorable Shelley Moore Capito  
Ranking Member, Subcommittee on Homeland Security  
U.S. Senate Committee on Appropriations

For questions regarding this report, please contact the FEMA Congressional Affairs Division at (202) 646-4500.

Sincerely,

Lori Moore-Merrell, DrPH, MPH  
Fire Administrator  
United States Fire Administration
Executive Summary

Background

In 1971, our nation lost over 12,000 civilians and 250 firefighters to fire. To help decrease tragic losses and to promote professional development of the fire and emergency response community, Congress passed the Federal Fire Prevention and Control Act of 1974 (Public Law No. 93-498), which, among other things, established the United States Fire Administration (USFA). Thanks to the cooperation between the nation’s fire service organizations and the USFA, the United States’ fire losses have since been reduced significantly. Since 1974, there has been a reduction of more than 70 percent in civilian fire fatalities and more than 60 percent in firefighter fatalities annually (excluding firefighter fatalities attributed to COVID-19). These are substantial improvements, however, there is still a significant fire problem across the nation and the threat of wildfire is expanding. The USFA is committed to working with its partners to safeguard the United States and its citizens from fire.

The U.S. Fire Administration Strategic Plan

The effectiveness of the U.S. fire and emergency services relies on the USFA’s efforts to gather and analyze information, determine priorities, and lead on fire and emergency medical issues important to the nation. The USFA five-year Strategic Plan for Fiscal Years (FY) 2019 to 2023,1 provided operational direction for activities included in this report. The USFA partners with fire and emergency services organizations and stakeholders at the state, local, tribal, and territorial (SLTT) level to achieve the outcomes in the USFA Strategic Plan. The following performance goals provided the foundation for the USFA’s 2019-2023 Strategic Plan and the desire for a fire-safe nation:

- Build a culture of preparedness in the fire and emergency medical services.
- Ready the nation’s fire and emergency medical services for all hazards.
- Ensure the USFA is an innovative, knowledgeable, and responsive organization.

The USFA supports the above goals through partnership with the fire and emergency services community, strives for continuous improvements, and seeks positive results in our programs and initiatives. One method the USFA uses to measure its performance is the long-term evaluation of its National Fire Academy (NFA) courses. This measurement includes feedback from SLTT fire department supervisors who report that the NFA’s training improved their subordinate’s job performance. In FY 2021, 92.5 percent of supervisors reported improved subordinate performance, which exceeds our 5-year target rate of 87 percent. Another performance measure is the loss of life per million people due to fire in the United States. This metric is used in strategic planning to identify opportunities for enhancements in the USFA’s training, public education, and fire prevention programs designed to address the nation’s fire problem and preventable fire fatalities. The 5-year target goal is a reduction of the per capita loss of life to fewer than 10.9 fatalities per million population. The goal was achieved in FY 2021, with an

annual rate of 10.6 reported fire related civilian fatalities per million population. Overall, USFA’s collaborative process and renewed focus on data will continue to yield benefits to the nation.

Current State of Fire Problems

The American fire service had a challenging year in 2021. Challenges included the impacts of responding to the Coronavirus Disease 2019 (COVID-19) pandemic, the on-duty loss of many firefighters attributed to COVID-19, a reduction of workforce likely due to exposure or threats of exposure during the pandemic, and the limitation or lack of appropriate personal protective for use in all responses. In addition to the pandemic, the fire and emergency medical services has been called upon to respond to increasingly violent incidents during civil unrest in many American communities while responses to natural disasters, including increased major wildfires, have taxed the fire service at unprecedented levels. Moreover, there continues to be challenges with recruitment and retention throughout the nation’s fire service, in both the career and volunteer ranks. These challenges increase the risks for communities struggling to provide day-to-day emergency response leading to a direct impact on capability and capacity to sustain prevention and risk reduction activities. This situation increases the dependence of local governments on state and federal governments for assistance during and after a disaster. The USFA has provided support and programmatic efforts to the fire service in the areas noted in this report, and the data indicate that the need for support will continue to increase in the short-term and likely extend for decades.

Analysis of various fire trends reveals remarkable progress in many aspects of the structure fire-related threats in the United States. However, there remain several areas where additional efforts could reduce ongoing fire-related impacts in the nation. While fire-loss in absolute and in per capita terms has declined substantially (by more than half since the late 1970s), per-fire performance continues to be a concern. Fires requiring a fire department response continue to yield similar or higher rates of civilian casualties than a decade ago. Fires in wildland urban interface (WUI) locations continue to be great concern. Federal agency wildland fire data show a drastic increase in acres burned, dollar losses, economic losses, and a negative impact to the landscape over a 10-year period. Homes built in or near WUI areas without proper risk mitigation are increasing life and property risks and firefighting costs. During the past few years, WUI fires have destroyed entire communities including commercial, industrial, and residential structures along with essential critical infrastructure in California, Colorado, Idaho, Montana, Oregon, Tennessee, Utah, and Washington. Many other states and tribal lands are also experiencing expanding WUI risk. This trend could be mitigated by SLTT jurisdictions adopting the most current model building codes in conjunction with addressing WUI fire risks in land use planning, and WUI codes requiring homeowner management of the immediate physical environment and surrounding vegetation. Furthermore, the trend could be mitigated by advocating for public policy that clearly communicates the inherent risk and hazards of building in WUI areas, and the public cost of financing emergency response and fire suppression. It should also be noted that recognizing the impact of acute and/or systemic changes to our climate is essential to providing a solid foundation from which to build resilience and enhancing preparedness in any community or development area. The Federal Emergency Management Agency (FEMA) Administrator in the Calendar Year (CY) 2021 Annual Planning Guidance

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2 Per-fire performance is a measure of deaths or injuries per 1,000 fires.
called for incentivized data-driven whole community actions to close identified capability gaps, particularly those related to wildland-urban interface fire threats.

For the last 10 years on average, 81 percent of fire deaths occurred at residential structure fires. While the number of residential fire deaths has reduced substantially since the original “America Burning” report (1974), the majority of these losses could be mitigated/eliminated through the installation of the most reliable defensive technology, including automatic fire sprinklers. Though automatic fire sprinklers are commonplace in businesses and institutions, unfortunately their installation in residential occupancies is not widespread.

Adoption and enforcement of the most current model construction codes, which include automatic fire sprinkler requirements, by local jurisdictions would lead to expanded use of this life saving system and result in reduced loss of life and an increase in properties saved. Recent legislation granting tax relief for commercial business sprinkler installation should increase installation of this technology in commercial occupancies. The Tax Cuts and Jobs Act allows small businesses to fully deduct up to $1 million for fire protection upgrades or expenses such as the retrofit of automatic sprinklers (Pub. L. 115-197 § 179 as amended). However, the provision applies only to commercial structures and cannot be used for retrofitting sprinklers into residential structures. While it may help prevent another large fatality commercial fire such as the December 2016 Ghost Ship warehouse fire in Oakland, California where 36 civilians were killed, it does not address the residential fire problem where most fire deaths occur in the nation. A closely related issue is that the majority of those dying in residential fires are poor and people of color.

To further reduce the threat of fire in the United States, the USFA is revisiting the Congressionally commissioned “America Burning” report to study the progress and identify gaps since the creation of this evolutionary report. The USFA is committed to continuing its efforts working with federal and SLTT partners, as well as nongovernmental stakeholders, in collecting and analyzing data, administering the National Fire Programs to increase public awareness and reduce community risks, and operating the National Fire Academy.
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I. Legislative Requirement


The Administrator of FEMA shall report to the Congress and the President not later than ninety calendar days following the year ending September 30, 1980, and similarly each year thereafter on all activities relating to fire prevention and control, and all measures taken to implement and carry out this chapter during the preceding calendar year. Such report shall include, but need not be limited to:

(a) a thorough appraisal, including statistical analysis, estimates, and long-term projections of the human and economic losses due to fire;

(b) a survey and summary, in such detail as is deemed advisable, of the research and technology program undertaken or sponsored pursuant to this chapter;

(c) a summary of the activities of the [National Fire] Academy for the preceding 12 months, including, but not limited to—

(1) an explanation of the curriculum of study;

(2) a description of the standards of admission and performance;

(3) the criteria for the awarding of degrees and certificates; and

(4) a statistical compilation of the number of students attending the Academy and receiving degrees or certificates;

(d) a summary of the activities undertaken to assist the Nation’s fire services;

(e) a summary of the public education programs undertaken;

(f) an analysis of the extent of participation in preparing and submitting Fire Safety Effectiveness Statements;

(g) a summary of outstanding problems confronting the administration of this chapter, in order of priority;

(h) such recommendations for additional legislation as are deemed necessary or appropriate; and

(i) a summary of reviews, evaluations, and suggested improvements in state and local fire prevention and building codes, fire services, and any relevant federal or private codes, regulations, and fire services.
II. Background

On May 4, 1973, the National Commission on Fire Prevention and Control issued a report, “America Burning,” that focused attention on the nation’s fire problem and the needs of the fire services and allied professions. Much of the subsequent fire-prevention and response-enabling legislation was developed to address issues raised in “America Burning.” Consequently, to decrease tragic losses and to promote professional development of the fire and emergency response community, Congress passed the Federal Fire Prevention and Control Act of 1974 (Pub. L. No. 93-498), which, among other things, established the United States Fire Administration (USFA).

Section 5 of the United States Fire Administration, AFG, and Staffing for Adequate Fire and Emergency Response Grant Program Reauthorization Act of 2017 (Pub. L. 115-98) provides that the FEMA Administrator “may develop and make widely available an electronic, online training course for members of the fire and emergency response community on matters relating to the administration of grants.” Section 6 of that Act further provides that the FEMA Administrator “shall develop and implement a grant monitoring and oversight framework to mitigate and minimize risks of fraud, waste, abuse, and mismanagement relating to such grants programs” under sections 33 and 34 of the Federal Fire Prevention and Control Act of 1974 (15 U.S.C. 2229 and 2229a).” The FEMA Administrator undertakes the two provisions by acting through the USFA Administrator. USFA provides the subject matter expertise and necessary assistance for the FEMA Administrator’s successful fulfillment of the two provisions.

Under authorities of the FEMA Administrator, the USFA operates in support of FEMA’s strategic goals3 by: including all-hazard community risk reduction in NFA curriculum; providing first responders with the training and education to address all-hazard responses; staffing select positions in the National Response Coordination Center (NRCC); serving the emergency services sector through the operation of the Emergency Management and Response Information Sharing and Analysis Center; assisting other FEMA programs with a focus on emergency medical services, fire and fire mitigation; advocating “whole community” or “whole of community” in all programs; and actively participating in Joint Counterterrorism Assessment Team events at the National Counterterrorism Center to ensure fire service representation and collaboration with law enforcement.

3 https://www.fema.gov/about/strategic-plan. Note: At the end of FY 2021, the 2018-2022 FEMA Strategic Plan remained in effect. The 2022-2026 FEMA Strategic Plan was released in December 2021. USFA continues to operate in support of current strategic goals and objectives.
III. The National Fire Problem (15 U.S.C. § 2215(a))

The USFA has contributed to remarkable progress in reducing the adverse effects of fire on the United States. Most notably, civilian fire-related fatalities and total fires are less than half of what they were in the late 1970s.\(^4\) In addition, through partnerships with SLTT governments and private organizations, children up to 4 years of age are no longer a statistically high-risk group for fire-related fatalities. In fact, according to the National Center for Health Statistics mortality data in conjunction with U.S. Census Bureau population estimates, in 2019 children ages 4 and younger had a relative risk of fire death that was 50 percent less than that of the general population — the lowest relative risk for this age group since the mid-1970s.

Despite this progress in the reduction of fires and their adverse effects in the United States, there is still a need to continue the work of lessening the fire problem. Although there has been an overall reduction of the number of fires and casualties in absolute number, the United States still has similar rates of civilian casualties per reported fire dating back to the late 1970s. Trend analysis over the past 10 years indicates an increase of 23.7 percent in civilian fire deaths. Certain demographic groups remain at high risk potentially driven by socioeconomic and physical conditions. For example, older adults (age 65 and older) experience age-related physical and mental ailments which may decrease their chances of survival during a fire. This vulnerable population is growing, increasing the percentage of the population who are at high risk during a fire. Collected data indicates cooking fires comprise more than 50 percent of the residential building fires and nearly 30 percent of non-residential building fires.\(^5\) Those ages 85 and older now have the highest fire death rate of all age groups.\(^6\)

The following section provides a portrait of the fire problem in the United States, meeting the legislative requirement to provide a thorough appraisal, including statistical analysis and estimates of the human and economic losses due to fire. The primary sources of data are the USFA’s National Fire Incident Reporting System (NFIRS), a voluntary data collection system that has had success as shown by the more than 24,000 fire departments that participate in submitting data, and the National Fire Protection Association’s (NFPA’s) Annual Survey of Fire Department Experience. Additional data sources include USFA’s National Fire Department Registry, the National Interagency Fire Center, the National Center for Health Statistics, and the U.S. Census Bureau. The data referenced in this report represents CY 2020. This situation is due to the challenges of the existing data system and the barriers to receiving timely data input from local fire departments, states, tribes, and territories. Data are collected by calendar year and the information must be released for use by the SLTT prior to analysis. Therefore, as noted, the most current statistical information contained in this report represents CY 2020. The NFIRS individual state profiles for fire loss are available at https://www.usfa.fema.gov/data/statistics/states/.

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\(^4\) Data sources: USFA’s National Fire Incident Reporting System (NFIRS); National Fire Protection Association’s (NFPA’s) annual Fire Experience survey; U.S. Census Bureau; National Interagency Fire Center (NIFC); and various National Fire Data Center staff analyses and reports.

\(^5\) https://www.usfa.fema.gov/data/statistics/.

The following are summaries of the nation’s fire problem (referencing calendar years):  

**Total Fires:** The estimate for total fires during 2020 is 1,388,500 – a 7.5 percent increase from the number of fires in 2019 (1,291,500). During the past 10 years (2011 to 2020), the United States has averaged 1.3 million fires per year; linear trend shows a less than 1 percent (0.6 percent) reduction in total fires during this period. **In 2020, there were 4,214 fires per million population** – a 7.1 percent increase from 2019 (3,934).

![Fires Graph](image)

**Residential Structure Fires:** The estimate for residential structure fires during 2020 is 379,500 – a 5.0 percent increase in residential fires from 2019 (361,500). During the past 10 years (2011 to 2020), the United States has averaged 380,700 residential structure fires per year; linear trend shows a 3.3 percent decrease during this period. **In 2020, there were 1,152 residential structure fires per million population** – a 4.6 percent increase from 2019 (1,101).

![Residential Fires Graph](image)

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*Sources for statistics gathered in this section were taken from references noted in footnote 4.*
Civilian Fire Fatalities: The estimate for total civilian fire fatalities during 2020 is 3,500 – a 5.5 percent decrease since 2019 (3,704). During the past 10 years (2011 to 2020), the United States has averaged 3,330 civilian fire fatalities per year; linear trend shows a 23.7 percent increase during this period. In 2020, there were 10.6 civilian fire fatalities per million population – a 6.2 percent decrease from 2019 (11.3).

Civilian Fire Injuries: The estimate for total civilian fire injuries during 2020 is 15,200 – an 8.4 percent decrease in injuries since 2019 (16,600). During the past 10 years (2011 to 2020), the average was 15,772 civilian fire injuries per year; linear trend shows a 9.2 percent decrease during this period. In 2020, there were 46.1 civilian fire injuries per million population – a decrease of 8.9 percent from 2019 (50.6 percent).
Civilian Casualties (Fatalities and Injuries) Per 1,000 fires: The estimate for civilian casualties (fatalities and injuries) per 1,000 fires in 2020 was 13.5, a decrease of 14.0 percent since 2019 (15.7). During the past 10 years (2011 to 2020), the average was 14.4 civilian casualties per 1,000 fires; linear trend shows a 3.5 percent decrease during this period.

Firefighter Fatalities: While on duty in 2020, 102 firefighters died. Of these, 36 firefighters died from COVID-19 as reported to the USFA. The overall trend from the past 10 years (2011 to 2020) shows a 10.4 percent decrease in the number of on-duty firefighter fatalities. Excluding COVID-19 deaths, the overall trend from the past 10 years (2011 to 2020) shows a 27.3 percent decrease in the number of on-duty firefighter fatalities. The 10-year average (2011 to 2020) is 91 on-duty firefighter deaths per year. Excluding COVID-19 deaths, the 10-year average is 88 on-duty firefighter deaths per year. Firefighter fatalities in 2020 included 49 career firefighters, 44 volunteer firefighters, and 9 members of wildland or wildland contract fire agencies. A more in-depth analysis of on-duty firefighter deaths can be found in USFA’s report “Firefighter Fatalities in the United States in 2020,” released in FY 2022.8

Note: Firefighter fatality counts include firefighters who died under circumstances that were part of inclusion criteria changes resulting from the Hometown Heroes Survivors Benefit Act but does not include COVID-19 fatalities for purposes of a trend analysis.

**Property Damage – Dollar Loss:** The estimate for total dollar loss during 2020 was $21.9 billion, an increase of 46.0 percent from 2019 ($15.0 billion, adjusted to 2020 dollars).\(^9\) During the past 10 years (2011 to 2020), the average was $17.1 billion per year (in 2020 dollars); linear trend shows an 83.8 percent increase during this period.\(^{10}\)

**Wildland Fires:** There were 58,950 wildland fires reported during 2020. This resulted in 10,122,336 acres burned – a 117.0 percent increase from 2019 (4,664,364 acres burned.) During the past 10 years (2011 to 2020), the average was 62,769 wildland fires and 7,516,819 acres burned; linear trend shows a 14.6 percent decrease in wildland fires during this ten year period.\(^{11}\)

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\(^9\) The 2020 estimate of total dollar loss includes $4.2 billion losses from fires in the California WUI and includes a $3 billion naval ship fire in California.

\(^{10}\) The 2018 estimate of total dollar loss includes an over $12 billion loss in wildland fires.

\(^{11}\) https://www.nifc.gov/fire-information/statistics/wildfires.
Emergency Medical Services: The growth of fire service-based emergency medical services (EMS) has had a significant impact on local fire departments requiring additional resources to address the increased scope of responsibilities. According to the latest data, 70.6 percent of the nation’s fire departments provide EMS.\textsuperscript{12}

Fire Risk to Children: With the general population indexed at 1.0, the relative risk for child fire deaths (0 to 4 years of age) in 2019 was 50 percent lower than that of the general population – the lowest relative risk for this age group since the mid-1970s. In 2010, the relative risk for child fire deaths (0 to 4 years of age) was 0.9 (10 percent less than that of the general population). Although, from 2010 to 2019, the relative risk of dying in a fire for children under the age of 5 was lower than the overall U.S. population, children ages 0 to 4 had the highest fire death rates compared to children of all ages and, as a result, had a higher relative risk of dying in a fire compared to older children.\textsuperscript{13} The very young will always remain inherently vulnerable as children age 4 or younger generally lack the mental abilities to understand the need and the means of quickly escaping from a burning structure.

Fire Risk to Older Adults: With the general population indexed at 1.0, the relative risk for adults ages 65 and older who died in fires in 2019 was 2.5 times higher than that of the general population. In 2010, that relative risk was 2.7.\textsuperscript{14} 2019 National Center for Health Statistics mortality data and U.S. Census Bureau population estimates show the relative risk of dying in a fire for individuals ages 85 and older was 3.6 times higher than that of the general population. In 2010, that relative risk was 4.6. Further investigation into all contributors would be required to determine cause of this decrease.

Overall Summary: The USFA serves as a valuable catalyst for great progress in overcoming the fire problem across the nation; however, we recognize the need to increase efforts to further reduce the adverse impacts of fire in the United States (e.g., increased fire activity in the WUI).

\textsuperscript{12} USFA National Fire Department Registry, as of October 1, 2021. (https://apps.usfa.fema.gov/registry/summary)
\textsuperscript{13} https://www.usfa.fema.gov/data/statistics/fire_death_rates.html#tab-2a.
\textsuperscript{14} Ibid.
The FEMA Administrator in the CY 2021 Annual Planning Guidance called for incentivized data-driven whole community actions to close identified capability gaps, particularly those related to national security, continuity, and wildland-urban interface fire threats.

Despite progress in detection and prevention, fires requiring fire department response continue to yield similar or higher rates of civilian injuries and deaths to the rates from more than a decade earlier. As indicated by collected data, fires in WUI locations continue to be a concern. National disasters, such as COVID-19, solidify the importance of a well-prepared, resourced, educated, and capable emergency services. The statistical information presented here is as important, if not more so, to the emergency responders that not only provide data to the system but leverage the data for their decision-making.

To further reduce the threat of fire in the United States, the USFA is committed to continuing its efforts in working with federal, SLTT partners, as well as non-governmental stakeholders, in collecting and analyzing incident data, administering National Fire Programs (NFP) and operating the NFA.
IV. Summary of Initiatives/Activities (15 U.S.C. § 2215)

Section 4.1 — Research and Technology
(15 U.S.C. § 2215(b))

The USFA provides federal fire focus for applied research and technology. Studies and research are accomplished in partnership with a wide range of organizations that share the USFA’s mission in reducing the nation’s fire loss. The following activities are brief summaries of the USFA’s significant initiatives in research and technology for FY 2021. Additional details are available online at https://www.usfa.fema.gov/.

“America Burning” Review: The USFA through a partnership with the International Association of Fire Chiefs (IAFC) is nearing completion of studies based on past USFA “America Burning” reports, current data sources and other pertinent information to examine and address the current American fire problem. The study topics include civilian fire deaths, injuries and property loss. It will further address occupational health and safety issues impacting the fire and EMS service including behavioral health effects. The completed report will provide necessary information on how the USFA with its fire and non-fire service partners can prepare solutions to America’s fire problem.

NFIRS Needs Assessment: The Needs Assessment is a large scale, thorough, independent investigation of what NFIRS should be to meet the future needs of the U.S. fire service. It will serve as the foundation for future work such as developing detailed requirements and specifications for NFIRS modifications.

NFIRS Operation, Modernization, and Stabilization Effort: The NFIRS is the largest incident-based system in the nation. The NFIRS is a valuable resource to SLTT fire agencies and serves as a leading platform for collecting and analyzing a wide range of all-hazards data from the nation’s fire and emergency services. Today, the NFIRS receives over 28.5 million incident response reports annually, of which about 1.2 million are fire responses. The remaining 27.3 million reports are dominated by EMS responses and public service calls. USFA regularly engages in efforts to ensure NFIRS is given the continued federal information technology (IT) authority to operate (ATO) and provides users the most valuable and efficiently operable system possible. A modernization and stabilization of NFIRS has been in the planning and development process for six years. The modernization efforts are necessary to complete web-enablement of all the NFIRS tools and update architecture and system security. Specifically, recent efforts provided single sign-on, user account management through the FEMA Enterprise Identity Management System (FEIMS), and updated interface/web-enablement. Given that NFIRS is a high-value dataset, the USFA has begun efforts to develop and launch a new cloud-based secure NFIRS data system and streamlined data standard. Once complete, the legacy NFIRS data will be archived, and the on-premises servers discontinued. Until completion, it is necessary to continue to stabilize and keep secure the existing legacy system.

An NFIRS modernization/stabilization effort was released in October 2020, and throughout 2021, the system operation was stable under the improvements (data collection for CY 2020 that occurred in FY 2021 will almost equal that of previous years, indicating little interruption to NFIRS business processes during system updates). The modernization/stabilization efforts had
specific objectives for several areas of the system: (1) update security components to meet U.S. Department of Homeland Security (DHS)/FEMA IT compliance requirements and standards; (2) update the web applications to newer technology to support future improvements and feasibility of a future mobile-compatible application; and (3) remove old back-end system code that was interfering with security and requiring separate release efforts to maintain. As per the modernization/stabilization objectives, the capability to make updates to the system and meet new security requirements has been successful. Monthly and quarterly security scans performed by DHS/FEMA IT system staff are returning less vulnerabilities and, therefore, NFIRS is meeting DHS/FEMA IT standards. Addressing security needs and minor data validation issues have been less costly given the ability to have smaller, less complex and frequent code releases. In FY 2021, five releases addressed application enhancements as compared to zero releases in the previous two years.

In addition, the NFIRS applications’ user interfaces were consolidated behind a single sign-on portal (SSO) and its account and password reset feature eased the burden on state program managers. The SSO also streamlined user access to the NFIRS Data Warehouse reports which improved the user experience. The NFIRS modernization/stabilization release gave state NFIRS program managers the ability to add the NFIRS Data Warehouse permission to users in their state. With that ability, some states granted the increased functionality to their users, increasing the use of the NFIRS Data Warehouse reports tool among state and fire department users who submit data to the NFIRS. Expansion of outreach and training were central to NFIRS, with staff completing and posting to the USFA website 29 training videos that have been helpful to and popular among the NFIRS user community.

The objectives achieved by the NFIRS operation and modernization/stabilization effort are milestones that enable NFIRS and National Fire Data Center staff to focus on expanding the plus one code and special studies functions, plan the next phase of improving NFIRS data quality, and review third-party data collection procedures. The modernization/stabilization release of October 2020 web-enabled the System Administration Tool. In turn, that allows us to fix the functions for creating and managing plus one codes and special studies. These functions were broken over the last decade or so, and because they are a local option in incident reporting, were given a low priority and deferred in order to make application updates of higher importance, like security updates required by DHS FEMA IT. The work to make functional the plus-one codes, and special studies features is scheduled for an upcoming release thanks to the web-enablement, code and architecture revision that was done in October 2020. The code and special functions also place the NFIRS system in a mature IT stature that supports future archival of the NFIRS legacy data and development of a cloud-based NFIRS system. Another accomplishment in year 2021 regarding NFIRS data availability was making the NFIRS 2020 annual public data files available for download by the public on OpenFEMA. OpenFEMA is the agency’s effort to fulfill several Presidential memorandums and federal legislative mandates to support whole community and data sharing initiatives.

**Coronavirus 2019 NFIRS Special Study and Other Pandemic Initiatives:** In 2020, the NFIRS system became a key component for a national level study on fire department responses involving COVID-19. Since inception of the study through September 30, 2021, over 11.4 million responses have been collected in this first ever national NFIRS special study. The goal of the study is to determine if COVID-19 was a factor during responses and to use this information to educate and prepare emergency responders for all-hazard situations that impact their
community and was among the first data collected about the fringe interface between the public and the response community. The resultant information has also been used by non-government and other federal entities addressing issues associated with COVID-19. The information provides near real-time analysis and a NFIRS first time ever fire service incident analysis at the county level (using geocoded data). This effort was used during the FEMA deployment to COVID-19 as part of the Pre-Hospital Task Force and was briefed to FEMA’s NRCC senior staff and FEMA regional administrators.

With the increase of COVID-19 incidents and their effect on communities, the need for the fire and emergency medical response services to receive timely information was critical. Due to the growing concerns surrounding COVID-19 responses, the USFA took a leadership role in providing much needed information that had a direct impact on response capabilities. To provide timely information, the USFA created a resource section on our website for funding, planning, response, infection control, and behavioral health information; implemented bi-weekly communications through widely distributed emails; and offered webinars to share and collect information essential to helping SLTT response partners. This effort included information on personal protective equipment, data studies, response protocols, and public assistance. USFA also developed and shared the COVID-19 Research Guide on the National Emergency Training Center (NETC) library webpage. This provides a one-stop shop to help researchers, students, practitioners, and the general public find materials related to the COVID-19 pandemic. These actions resulted in an informed and better prepared emergency response community that had accurate information in order to make critical decisions. In FY 2021, USFA’s NFP staff contributed nearly 13,000 hours in support of these initiatives.

**Responder Pandemic Operations Study:** USFA continues its study of Responder Pandemic Continuity of Response Operations, Health, and Safety. This is provided in conjunction with the National Association of State EMS Officials and is intended to provide current guidance in this area to the emergency services – primarily fire service and EMS responders. The findings of this study will be incorporated into a report updating previous work of USFA.

**National Fire Incident Reporting System Outreach and Marketing Initiative:** USFA completed its partnership with the IAFC to study and develop effective NFIRS outreach and marketing to include the content of tools and materials that can be used by USFA and other organizations. A component of this effort was the development of a series of webinars designed to disseminate important information regarding NFIRS to a wide audience. This project successfully initiated the development and deployment of the first “NFIRS Week” conducted February 22-26, 2021, with multiple live (and recorded) sessions covering various topics of the NFIRS standard, targeted at an audience including state NFIRS program managers, SLTT data managers, chief officers, data consumers, and end users. There were 5,160 total web site engagements with fire departments and others for NFIRS Week. This project provided valuable information to the fire service including information to the key NFIRS constituency on NFIRS enhancement and data accuracy. USFA will continue these efforts as the new cloud based NFIRS system is launched.

**Firefighter Suicide Data Collection Effort:** The Department of Homeland Security Appropriations Act of 2021 directs USFA to collect and maintain data concerning suicide rates of firefighters who are repeatedly exposed to trauma that impacts their mental health and wellness. In response, USFA plans to expand its firefighter fatality program to collect and report data on
suicides committed by all firefighters who are currently rostered with a fire department, including suicides that occurred while not on-duty. In preparation for this effort which has a current target implementation date of July 1, 2023, USFA has drafted a report to Congress that summarizes the status of fulfilling this required collection effort, including an internal implementation plan and several Privacy Threshold Analysis documents to FEMA and DHS privacy offices. In FY 2022, work will continue in the development of this collection effort as well as the necessary documents for compliance with privacy law and policies.

**Emergency Vehicle and Roadway Operations Safety:** In FY 2021, USFA initiated a study on Emergency Vehicle and Roadway Operations Safety in partnership with the IAFC with an expected completion in FY 2022. There have been numerous on-duty firefighter and emergency responder fatalities from vehicle crashes and roadway-struck-by incidents. The findings of this study will update a previous USFA report.

**Study of Volunteer Firefighter Retention and Recruitment:** The USFA is nearing completion of a study of volunteer retention and recruitment in partnership with the National Volunteer Fire Council. There has been an overall decline in the number of volunteer emergency responders nationwide. This research project concentrates on the essential roles and responsibilities of local-level governments in this effort as well as other innovative retention and recruitment programs. Additionally, it focuses on development of effective recruitment and retention of under-represented populations in the volunteer service including women and minorities. The findings of this study will update the 2007 USFA “Retention and Recruitment for the Volunteer Emergency Services: Challenges and Solutions” report.

**Funding Alternatives for Fire and Emergency Medical Services:** The USFA is finishing the study with the Oklahoma State University/International Fire Service Training Association to update the USFA report “Funding Alternatives for Fire and Emergency Medical Services.” With tighter agency budgets, fewer government subsidies, fewer donations, etc., it is becoming increasingly harder for fire and EMS departments to meet greater and more complex demands for their services. This study will develop the most up-to-date information on grant and alternative funding for local-level fire and EMS departments.

**Study of Emergency Vehicle Warning Lighting Systems:** The USFA released this study in December 2021. The project was conducted with the Cumberland Valley Volunteer Firemen’s Association’s Emergency Responder Safety Institute to study emergency vehicle warning lighting systems with a goal to effectively mitigate the disorientation of motorists caused by modern emergency warning lighting.

**Emergency Medical Services Responder Safety Study:** With the IAFC, USFA continues the study on the occupational safety of EMS responders. This partnership will update older USFA reports on this topic, one of which was released in 1997. The safety and health of EMS responders is a critical issue for both fire departments and third service EMS providers. This study will provide the most up-to-date comprehensive information regarding EMS responder health and safety, including infection control for local level EMS and fire departments.

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EMS Medical Directors Handbook and Online Training Program Update: USFA has initiated a partnership with the IAFC to update 2012 USFA “Handbook for EMS Medical Directors” as well as the related EMS Medical Director’s online training program through the IAFC’s website. Completion of this study is planned for late calendar year 2022.

USFA Emergency Medical Services Needs Assessment: USFA has initiated a study with the IAFC to conduct a large scale, thorough and independent EMS Needs Assessment to determine the correct level of organizational coordination as well as the activities to be provided by USFA as referenced in statute. This effort will seek information from federal, SLTT, and nongovernmental agencies develop an assessment of their findings along with recommendations for the activities needed by USFA to effectively address and meet the future and changing needs of EMS.

Fire Department Marketing and Outreach: USFA is starting a project revising its report released in 1998, “Strategies for Marketing Your Fire Department – Today and Beyond” which is in need of an update. Completion is expected in FY 2023.

Response to Civil Unrest by Fire and Emergency Medical Services: USFA initiated a comprehensive study to assess, improve and manage situations dealing with civil unrest by local-level fire and EMS. This study will enhance the operational safety of firefighters and EMS responders in these situations. Completion is expected in FY 2023.

Fire and Emergency Response to Electric Vehicle Fires: USFA, with support and funding from the U.S. Department of Transportation National Highway Traffic Safety Administration, has initiated a study with the IAFF to enhance the operational safety and effective response to electric vehicle fires and crashes by fire, EMS, law enforcement, and U.S. Department of Transportation emergency responders. Completion is expected in FY 2023.

Roadway Safety Outreach: Firefighters and other responders have lost their lives and been seriously injured because of emergency responders being struck by vehicles while conducting roadway operations. In the previous fire years (2016-2021) 20 firefighters have died on duty from being struck by vehicles. USFA continues its long-term partnership with the Cumberland Valley Volunteer Firemen’s Association’s Emergency Responder Safety Institute in education and outreach to prevent roadway struck by vehicle incidents of the fire service, EMS, law enforcement, and other emergency responders through their “ResponderSafety.com” web site.

Flashover Prevention System Study: The USFA, in partnership with the Underwriters Laboratories, has completed a study on the second phase of a flashover prevention system to continue the development of a residential fire control system that can be retrofitted into existing homes by homeowners with moderate construction skills.

16 Section 21(e) of the Federal Fire Prevention and Control Act of 1974 (15 U.S.C. 2218(e) as amended Oct. 8, 2008 states: “Coordination of Emergency Medical Service Programs-The Administrator shall provide liaison at an appropriate organizational level to assure coordination of the activities of the Administrator related to emergency medical services provided by fire service-base systems with Federal, State and local government agencies and departments and nongovernmental organizations so concerned, as well as those entities concerned with emergency medical services generally.”
**National Fire Department Registry:** USFA’s National Fire Department Registry is the only nationwide registry that provides a current directory of registered fire departments with basic information such as address, department type, website, and number of stations. The National Fire Department Registry is a voluntary program, and it does not include all fire departments in the United States and its territories. USFA uses the registry to conduct special studies that guide program decision making and improve direct communication with individual fire departments. The number of fire departments registered increased by 15 departments — from 27,174 in FY 2020 to 27,189 in FY 2021. The registered departments represent 92 percent of the NFPA-estimated 29,705 departments in the United States in 2018.17

**Other Reports:** In FY 2021, the USFA published 5 topical reports: “Fire Department Overall Run Profile as Reported to the National Fire Incident Reporting System in 2019,” “Residential Building Fires (2017-2019),” “Civilian Fire Fatalities in Residential Building Fires (2017-2019),” “Civilian Fire Injuries in Residential Buildings (2017-2019),” and “Residential Building Cooking Fires (2017-2019).” These reports, part of the USFA’s Topical Fire Report Series,18 are designed to explore facets of the U.S. fire problem as depicted through data collected in the USFA’s NFIRS. Each report briefly addresses the nature of the specific fire or fire-related topic, highlights important findings from the data and may suggest other resources to consider for further information. In addition, USFA also published the “Recreational Vehicle Fires (2016-2018)” Data Snapshot.

The 2019 fire death rates and relative risk for the overall population, children, older adults, and states were published to the USFA website.19 In the case of fire deaths, fire death rates measure the number of fire deaths per million population. Relative risk compares the per capita rate for a particular group (e.g., older adults) to the overall per capita rate (i.e., the general population). Trends in fire death rates were also computed to show how the rates have changed over time by smoothing fluctuations or variations in the data from year to year.

The USFA also published the “USFA Fire Estimate Summary Series (2010-2019)” for residential and nonresidential building fires and losses.20 Each summary addresses the size of the specific fire or fire-related issue and highlights important trends in the data. In addition to these reports, the USFA created and disseminated the 2019 NFIRS fire and hazmat incident and the 2019 NFIRS all-incident Public Data Release files.21

**Wildfire-Related Data Projects:** During FY 2021, the USFA published the first two reports in its Wildfire Report Series -- a series of reports that are aimed at exploring and analyzing NFIRS data, in conjunction with other external data, as it relates to the wildfire problem in the United States. Report findings will help determine where additional and separate analyses and recommendations may be needed for NFIRS wildfire and wildland fire data collection. One of the published reports, “Investigation of MODIS-Detected Fires in NFIRS,” examines the extent to which NFIRS data can be matched to Moderate Resolution Imaging Spectroradiometer (MODIS) wildfire satellite imagery. In other words, what is the potential magnitude of missing wildfire data in NFIRS? USFA found that only 1.1 percent of the MODIS observations occurred

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18 https://www.usfa.fema.gov/data/statistics/reports/.
within 1 kilometer and 24 hours of any NFIRS-reported incident. The other report is “Analysis of NFIRS Incidents in the Wildland Urban Interface: An Analysis of California NFIRS Data, 2009-2011.” (Note: Because the U.S. Forest Service (USFS) shapefiles, the files that establish WUI geographic boundaries, are only created once every 10 years, the most recent set of shapefiles from 2010 was used at the time the analysis for this report was completed. For consistency, NFIRS fire incidents in California for the years 2009 to 2011 were selected for analysis.) This report uses geocoded NFIRS data and WUI classifications established by the U.S. Forest Service and explores the differences between NFIRS data in California WUI areas versus California non-WUI areas finding that SLTT fire incident data for WUI areas were insufficiently reported in the NFIRS system. Additionally, the USFA initiated two new wildfire-related data projects in FY 2020 that are slated to be published in FY 2022. The first project, the third report in the Wildfire Report Series, “Analysis of Selected Named Wildfires as Reported to NFIRS,” will seek to understand how certain named wildfires are recorded in NFIRS and how that data compares to data reported by the media or other data sources. It will also attempt to answer the question — what practices can be put into place to improve NFIRS reporting for large named wildfires? The second project, the Wildfire Analyst’s Toolkit, will create a catalog that can be used by analysts to examine aspects of the wildfire problem. This web resource is a first step toward creating the first nationwide metadata warehouse for wildfire incident response information as reported by SLTT fire departments.
Section 4.2 — The National Fire Academy
(15 U.S.C. § 2215(c))

The NFA is focused on supplementing, not duplicating, existing programs of training, technology and research, data collection and analysis, and public education. The NFA provides courses, curriculum, and programs that are not readily available throughout the nation for reasons of economy, scale, or demand. Students are selected for participation in NFA classes based on their current job responsibilities and the completion of prerequisite training.

The NFA courses are externally reviewed, validated and recommended for college credit by the American Council on Education (ACE), as the NFA is not a degree granting institution. Certificates of completion are issued to students who meet the requirements of the respective course, and these successfully completed credit recommendations are added to an official transcript.

FY 2021 will be remembered as a challenging time across the world for the events that took place and those that didn’t as a result of the effects of COVID-19. Around the nation, career and volunteer fire and emergency medical services personnel demonstrated their resolve by serving their communities and responding to incidents undeterred through the pandemic. While demands for service due to the pandemic were high, the need for professional development offerings continued to be strong.

During the COVID-19 pandemic, the NFA continued to be a mission-critical organizational unit within DHS/FEMA as it directly supports FEMA’s USFA mission to support citizens and first responders to ensure that, as a nation, we work together to build, sustain, and improve our capability to protect against, prepare for, mitigate, respond to, and recover from all hazards.

On an annual basis, the NFA provides training to tens of thousands of career and volunteer fire and EMS personnel, primarily through classes delivered in-person on its Emmitsburg, Maryland campus and through partnerships that enable two- and six-day classes to be offered around the nation with state and metropolitan fire training organizations. The COVID-19 global pandemic had a significant impact on the NFA’s ability to deliver training opportunities just as it did during FY 2020. This resulted in the cancellation and rescheduling of hundreds of classes in both Emmitsburg and around the nation.

NFA staff worked with its FEMA training partners at the Emergency Management Institute (EMI) and Center for Domestic Preparedness to create robust guidelines in close coordination with FEMA’s medical, legal, safety and health, human resources, and leadership teams. The guidelines developed would meet those established by the Centers for Disease Control and Prevention (CDC) and various federal workplace health and safety directives. These guidelines include reduced campus population; social distancing; changes to the NFA’s heating, ventilating, and air conditioning (HVAC) systems, especially in air exchange; student temperature checks; increased sanitation practices; and changes to on-campus food service. The NFA staff actively engaged with local health agencies to ensure established guidelines implemented at the NFA also met local requirements, in addition to those of the CDC.
As the NFA continued to deliver off-campus classes on a regional basis in partnership with state fire training academies, procedures were developed to ensure NFA classes and instructors followed local/state health guidelines for the safety and health of students and instructors at each respective location. This was done with much success and enabled NFA staff to not only offer classes on a state-by-state basis, but also to reallocate NFA classes to other states that could host classes from those states that were unable to. With many in-person classes planned for delivery at the NFA in Emmitsburg being cancelled until the Spring of 2021, the NFA offered additional classes to states that had the ability to host training.

While in-person, on-campus delivery classes were suspended until the Spring of 2021, staff used the time to diligently develop new offerings, implement new and upgraded technology, provide quality control and updates to existing offerings, and enhance outreach and communication across all programs. For the first time ever, the NFA delivered several two-day classes in a virtual format using Zoom for Government. While the technology was basic and courses selected for this delivery platform were limited, it enabled the NFA to deliver more than 60 classes to almost 2,000 career and volunteer fire and EMS personnel around the nation. This also enabled the NFA to reach students in remote communities around the country who have never had the opportunity to attend a NFA class. This outreach was successful, and plans are underway to continue the use of virtual deliveries to augment in-person classes.

During FY 2021, NFA staff continued to contract with subject matter experts to ensure that courses are current and relevant. The work of NFA staff is commendable as it strives to embrace technology to meet the needs of the fire service during the COVID-19 pandemic. While technology does provide additional opportunities, it cannot replicate the student-instructor, student-student and student-staff interactions that take place on the NFA campus and during in-person regional classes. It is important to recognize that career and volunteer fire service personnel in many portions of our country do not have the ability to take advantage of NFA distance-learning opportunities — especially those in tribal and rural communities — because of a lack of digital infrastructure and connectivity.

The suspension of in-person delivery of classes at the NFA in Emmitsburg did have significant impacts on both the Managing Officer (MO) and the Executive Fire Officer (EFO) Programs.

NFA engaged in active communications and outreach efforts with not only students and instructors, but also with national fire and EMS stakeholder organizations. The use of social media as a communications vehicle has also been embraced.

The NFA continued its efforts to close out the FY 2020 state fire-training assistance grant program for the 45 states that participated in the FY 2020 program. A $20K grant is provided to each state. These grants are in essence a cost-effective “force multiplier” for the NFA as it enables states to deliver NFA classes to local career and volunteer fire and EMS providers using state qualified instructors.

In FY 2021, the NFA provided 2,068 course offerings, reaching 86,584 students. This is an increase of 252 offerings and 12,195 attendees from FY 2020. Because of the COVID-19 pandemic which resulted in the suspension of in-person classes at the NFA for many months, this was accomplished through the strong and far-reaching delivery system of NFA-sponsored
courses held off-campus at state and local sites, state and local partner-sponsored courses, technology-based (instructor-led and self-study) courses and higher education courses delivered in cooperation with more than 100 colleges and universities.

Included in the NFA overall delivery system are the NFA-Approved State Courses. This cooperative effort adds state-developed courses to the NFA curriculum, thereby reducing some development costs. This adds curriculum content that is otherwise unavailable to other state and local training partners. In FY 2021, the NFA delivered 1,092 of these courses to 16,193 students.

The FY 2021 NFA training data for all modes of delivery by individual states is available at https://www.usfa.fema.gov/training/nfa/about/profiles.

Executive Fire Officer Program: The Executive Fire Officer (EFO) Program is the pinnacle of the USFA’s commitment to support the needs of fire and EMS agencies in preparing men and women from diverse backgrounds who are current and future executive officers to meet the ever-changing demands of the dynamic communities in which they serve.

The 2019 version of the EFO program saw a significant revision and course correction in FY 2021 and it continues into FY 2022. Based on student feedback, stakeholder input, and data collection, the program was significantly revised and brought more in line with student needs.

Through the EFO program, the NFA seeks to inspire, educate, and empower current and future fire service leaders and create public service champions within communities.

The revised program, organized around three component areas of study, is outlined below:

**Self:** The first component is a resident course that focuses on self. This component provides learning and practice opportunities that foster the exploration of personal leadership philosophy, life-work balance, theoretical aspects of leadership, and the value of ethics and integrity. This course introduces research practices and communication skills amidst leadership challenges.

**Organization:** The second component of the EFO Program focuses on the organization. It is comprised of substantial self-paced, online pre-course work to provide students with theoretical, academic, and foundational elements that are applied during a resident course focused on building organizational strength. This course applies analysis and adaptive leadership components that result in building an internal culture that promotes a safer, healthier, more prepared, and resilient organization. Students collect, evaluate, and demonstrate the use of organizational data and research in their pursuit to achieve a diverse, resilient, and safe organization.

**Community:** The third component of the EFO Program transitions the foundational elements previously addressed for the organization to focus on the community. This component is comprised of substantial self-paced, online pre-course work to provide students with theoretical, academic and foundational elements that are then applied during a resident course. The resident experience underscores the exercise of executive-level leadership in the context of the whole...
community, and the strategic role of the executive officer within both emergent and prospective events is considered. The central focus is relational interoperability between the many facets required to determine, evaluate, and meet the needs of the community.

**Capstone:** The culminating portion of the EFO Program is comprised of three pillars to demonstrate bold and imaginative solutions to critical issues, cultivated by the executive throughout the program. Students integrate, synthesize, and apply the knowledge, skills, and perspectives acquired throughout the EFO Program and demonstrate mastery of all program elements during an online, instructor-led course and a resident course. All components of the capstone project are graded assignments.

The Capstone pillars are:

- **A portfolio** of artifacts is compiled throughout the program and serves as a valuable reference that students can access and build upon far into the future. The portfolio demonstrates the affective as well as cognitive learning domains by integrating program deliverables with a reflection paper that discusses how students receive, respond, apply, and value the lessons learned throughout the EFO Program.

- **A capstone research paper** is the culmination of theory and application where the executive displays both the vision and competencies highlighted throughout the EFO Program. The paper incorporates complex problem identification and exploration, research, data, and the ability to author solutions to multifaceted problems while presenting the information in a convincing, logical, and academically sound format.

- **A presentation** in the final resident course mirrors a real-life event, such as a town hall, council meeting, or catastrophic event. This essential experience is designed to provide a complex and dynamic environment with both peer and expert feedback that uniquely informs each student’s professional and personal insight.

Each year the NFA holds an EFO Program symposium. This two-day symposium provides cutting-edge topics for fire and emergency services leaders. Unfortunately, due to the COVID-19 pandemic, the FY 2021 EFO Symposium was canceled.

**Managing Officer Program:** The Managing Officer Program is a two-year program for first-level or mid-level officers/supervisors. The purpose of the program is to engage emergency service leaders in professional development earlier in their careers and to instill within the student the whole community risk-reduction model. For FY 2021, the NFA was unable to offer in-person Managing Officer classes for a number of months due to the COVID-19 pandemic, and because of the complexity of class content could not be offered virtually.

**College- and University-based Course Deliveries:** With a strong connection to the nation’s colleges and universities, 533 NFA courses were offered to 4,643 students.
Fire and Emergency Services Higher Education: The Fire and Emergency Services Higher Education (FESHE) Program is an acknowledgment that a collegiate emergency services degree program meets the minimum standards of excellence established by FESHE professional development committees and the NFA.

These regionally or nationally accredited colleges and universities deliver a standard curriculum using standard syllabi and course titles, easing credit transfer when students change schools. It is a competency-based curriculum that standardizes what a “fire degree” means to the student and employer. As a result of the FESHE Program, all fire textbook publishers produce texts that comport with the syllabi and curriculum. The standard degree program concentrates on fire engineering, prevention and mitigation, emergency response, fire administration, and EMS management. Currently there are more than 100 colleges/universities from 34 states recognized through this program.

North American Fire Training Directors: In FY 2021, the USFA was unable to host the North American Fire Training Directors (NAFTD) in-person at the NETC as it had in previous years. Instead, the NFA staff actively participated in monthly meetings held by NAFTD during the COVID-19 pandemic as a way for state fire training directors and NFA staff to share updates on training programs, organizational projects, and as a communications vehicle to gather feedback and answer questions. The partnership with NAFTD includes representation from 45 states, as well as Canada.

Training Evaluation: The NFA continually evaluates the outcome of its training using the Kirkpatrick Training Evaluation Model. This model helps the NFA to measure the effectiveness of training in an objective way. Through the NFA evaluation process, three of the four levels are measured (reaction, learning and behavior) from student and supervisor evaluations. This is a systematic study of resident courses soliciting anonymous feedback from students and their supervisors to determine long-term training effectiveness. As with responses from previous years, students indicated that they were able to transfer the training and learning skills to their jobs, and supervisors reported improved performance as follows:

<table>
<thead>
<tr>
<th>Long-term Evaluation Reporting Elements</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students reporting that they were able to apply NFA training at home</td>
<td>93.9%</td>
<td>88.1%</td>
</tr>
<tr>
<td>Students reporting that NFA training improved their job performance</td>
<td>96.4%</td>
<td>91.8%</td>
</tr>
<tr>
<td>Students reporting that they shared NFA training with their peers</td>
<td>97.2%</td>
<td>91.7%</td>
</tr>
<tr>
<td>Students reporting that they conducted formal courses with NFA material</td>
<td>24.2%</td>
<td>17%</td>
</tr>
<tr>
<td>Students reporting that they established new policies and procedures based on NFA training</td>
<td>70.8%</td>
<td>63.2%</td>
</tr>
<tr>
<td>Supervisors reporting improved performance from NFA training</td>
<td>92.3%</td>
<td>92.5%</td>
</tr>
<tr>
<td>Supervisors reporting improved departmental performance</td>
<td>91.4%</td>
<td>91.7%</td>
</tr>
<tr>
<td>Supervisors who say that they will recommend NFA training to others</td>
<td>96.9%</td>
<td>96.2%</td>
</tr>
<tr>
<td>Supervisors reporting that NFA benefits outweigh costs</td>
<td>95.2%</td>
<td>93.9%</td>
</tr>
</tbody>
</table>

Note: Reported data were derived from NFA Long-Term Evaluation forms sent to both students and their supervisors four to six months after the NFA training class ended.
**NFA Online:** The NFA Online self-study training catalog currently includes 53 web-based courses and exams. This includes 27 NFA self-study courses and 26 courses and exams offered in conjunction with the National Wildfire Coordinating Group (NWCG). In FY 2021, the NFA pilot tested four new self-study courses. These courses are all set to release in early FY 2022. In FY 2021 there were 69,674 course completions. The NFA Online Self-Study program continued to see a considerable increase in both new users and course completions as a result of COVID-19 and the resulting training activity shutdowns around the country. NFA Online Self-Study was used to administer course exams to 1,988 students who participated in virtual offerings of instructor-led courses.

In FY 2021, the NFA continued to move forward with a plan to migrate its mediated courses from a no longer operable Desire to Learn (D2L) BrightSpace Learning Management System (LMS) to a Blackboard Learn LMS. This migration was initiated to enhance security (meeting Federal Risk and Authorization Management Program requirements) and to ensure NFA students are given the best possible learning experience.

During the COVID-19 pandemic, the NFA continues to rapidly adapt resident courses to alternate formats for a variety of deliveries using distance learning technologies. The diverse formats allow for both synchronous and asynchronous instructor-led classes, allowing NFA to reach a broad audience of emergency responders.

**American Council on Education:** The American Council on Education (ACE) reviewed and approved 21 NFA courses in November 2020. Eight of these courses were new, and 13 reviewed by ACE were for the three-year re-review requirement. It is important to note one of the new EFO courses was evaluated and approved at the graduate level which was a goal of the NFA Board of Visitors when it asked NFA staff to update the EFO Program to increase its academic rigor while compressing the time commitment of participants from four years to two. The ACE review process provides an independent and objective third-party assessment of the NFA’s academic quality, as well as a tangible benefit for students who can use the credits to pursue higher education through other academic institutions.

**Continuing Education Units:** The NFA awards Continuing Education Units for all NFA courses through the International Association of Continuing Education and Training (IACET). This year, the NFA has been recognized as its own IACET-accredited provider. This is extremely beneficial to a growing number of NFA students who are required to meet continuing education requirements for certification.

**International Code Council:** The NFA is an approved Preferred Provider with the International Code Council (ICC). This program recognizes and promotes ICC-approved educational opportunities as they relate to codes, standards, building construction and other subject-related areas. Nine NFA courses have been approved for Continuing Education Units through the ICC and are listed in their catalog at https://ppp.iccsafe.org.

**Significant Curriculum Enhancements:** The NFA continues to use recommendations from national level sources and subject matter experts to ensure its curriculum is both current and relevant for today and future needs. The following updates and revisions were implemented in FY 2021.
Emergency Medical Services Curriculum: The important work of our career and volunteer fire and EMS personnel was visible in every community around the nation in FY 2021 as our dedicated first responders provided pre-hospital medical care during the COVID-19 global pandemic. The classes that had been offered by the NFA to our EMS leaders, prior to FY 2021, paid dividends as communities effectively worked to deliver services to residents, implement incident management teams, develop safety and health programs for their personnel, or manage community vaccination sites. The impact of the pandemic unfortunately led to less EMS personnel being able to attend NFA classes as their safety and health measures, agency and state guidelines, and staffing needs did not enable these women and men to attend professional development opportunities. In FY 2021, the NFA continued review and revision of its EMS curriculum and program pursuant to Congressional directives and have begun the process of a full curriculum review by subject matter experts from our nation’s emergency medical services. This program’s goal is to provide education and training to the nation’s EMS responders and leaders for improved knowledge and skills of advanced EMS concepts. Continued course revisions and developments were refocused with virtual and online educational delivery model opportunities based on educational outcome requirements.

The NFA recognizes future challenges for EMS. These include pre-incident planning and EMS specific incident management for EMS aspects of disasters of all scales and causes; evolving partnerships amongst emergency response and planning organizations; EMS management and response considerations as part of a national health care strategy; and the challenges of EMS service delivery with consideration to economic constraints, professional staff shortages, and situational restrictions on normal operations.

Fire and Investigative Sciences Curriculum: With an emphasis on the convergence of science, law and investigative responsibility, courses, and instructors ensure learners receive exceptional education and training. Course deliveries are conducted in cooperation with the Bureau of Alcohol, Tobacco, Firearms and Explosives, Underwriters Laboratories, and professional associations. The NFA continues to lead the nation in the delivery of fire investigation, forensic and fire science, arson investigation, and interviewing and courtroom testimony education and training.

The programs feature extensive student activities, hands-on participation, live burns, scene processing, mock testimony and an instructor/mentor student interaction that is unparalleled and consistently results in highly positive feedback from the students. Continuing from FY 2021, into FY 2022, development and revisions are proceeding with the expected delivery of a new “Fire Investigation: Forensics” course which will highlight the identification, preservation and collection of non-fire crime scene evidence. This will provide the fire investigator with an enhanced understanding of “traditional” crime scene evidence. This course builds off materials covered in the previously revised “Fire Investigation: Essentials” course.

Due to the COVID-19 pandemic, the in-person instruction was highly limited. Prior to the campus shutdown and since the reopening, the Fire Investigations program has hosted almost 350 students for hands-on fire investigation and electrical systems analysis training. Additionally, throughout the pandemic periods of FY 2020 and FY 2021, the Fire Investigations program presented offerings through virtual and off-campus settings, reaching more than 1,600 students throughout the country.
**Fire Prevention — Management Curriculum:** This curriculum area offers a wide array of courses intended for individuals new to fire prevention/community risk reduction and those who are ascending to leadership positions overseeing community risk reduction strategies. The curriculum area begins with online self-study courses that articulate the concept of “strategic” risk reduction and empower students with skills on how to perform a basic community risk assessment. Intermediate level students enjoy a robust course on program planning and evaluation. Senior level students are offered leadership courses for new fire marshals and how to use public policy to address community risk. The biggest enhancement to the curriculum in 2021 has been a significant update to the youth firesetting prevention and intervention program. The course now includes advanced training on how adverse childhood experiences and mental/behavioral health disorders can impact firesetting behaviors. Due to the high demand of this training, in 2022 an instructor-led online course will be constructed that includes virtual interviewing with at-risk children. These courses are offered on and off campus.

**Fire Prevention — Public Education Curriculum:** This curriculum area offers courses for a person newly assigned to fire and life safety education and/or community risk reduction, as well as those seeking ways to evaluate their programs. The “Fire and Life Safety Educator Fundamentals” course has been completed and piloted and will launch in Spring 2022. The course empowers learners with the knowledge, skills and abilities to deliver programs that facilitate measurable learning outcomes resulting in behavioral change. It features a section on how to strengthen partnerships with local schools, so fire and life safety education becomes a key component of an educational institution’s essential core curriculum and is evaluated accordingly.

**Fire Prevention — Technical Curriculum:** The NFA’s Fire Prevention: Technical curriculum provides the necessary education, leadership and future vision for fire safety enforcers with respect to the highly detailed and sophisticated provisions afforded in the building and fire safety codes. Through effective and comprehensive fire prevention and fire protection/risk management efforts, the goal is to reduce the risk of injury and loss of life and property in their communities and to the fire service, as well as to increase sustainability and recovery efforts. In today’s built environment, there are ever changing technologies that result in new challenges for the fire service every day.

This curriculum teaches finely detailed and meticulously specific content concerning construction and maintenance codes, standards, guides, recommended practices, testing criteria, and manufacturers’ specifications for the built environment. The classes are heavily application-based, with techniques and evaluative skills taught in the courses, which correlate directly with lessons learned. These professional experiences are incorporated into the development and implementation of the latest editions of building and fire codes and standards.

The NFA Fire Prevention: Technical curriculum consists of five primary core educational elements:

- Fire Prevention, Ignition and Mitigation
- Fire Combustion Properties and Dynamics
- The Built Environment’s Characteristics and its Impacts
- Passive and Active Fire Protection and Life Safety Systems
- Community Risk Reduction, Strengthening and Sustainability
In 2021, the built environment continued to go through changes attempting to deal with the pandemic. Issues arise from housing and safety of additional COVID patients in temporary shelters or converted non-medical portions of the facility to physical sheltering arrangements in an attempt to prevent exposure, with alternative building component utilization because of the increased costs or delayed delivery of building construction materials, closed exits in an attempt to control access to spaces, and dwindling numbers of employees. The industry is attempting to shift its needs post-COVID by utilizing numerical data, fire and life safety testing results, and documented real-life experiences.

The industry continues to march forward with new innovative ideas dealing with mass timber tall buildings and cannabis growth and processing, including retail sales, stationary energy storage systems, remotely located inspections using drones, and other electronic communication devices and addressing wildland-urban interface research, technology, and enforcement. Students are exposed to the strengths and weaknesses of each new issue when this curriculum incorporates all levels of learning capabilities to translate the intricacies of building design, use, and occupancy, and the many complex fire protection features and systems that are found in today’s built environment. The goal of this program is to develop a national corps of fire and building code officials highly trained and prepared to make informed decisions about life safety and fire protection issues that directly impact community safety.

**Hazardous Materials Curriculum:** In 2021, the USFA’s NFA encountered several challenges associated with the COVID-19 pandemic, including delayed contractual course revision and development, delayed pilot deliveries and constant changes and cancellations to the course schedule. The USFA’s NFA continued to support the interagency partnership with the Pipeline and Hazardous Materials Safety Administration (PHMSA) and the Federal Railroad Administration of the Department of Transportation (DOT). This partnership provides for the input and informational needs to have a positive impact on the safety of our communities and responders. The USFA/NFA continues to assist the Hazardous Materials Emergency Planning Grant Process as well as PHMSA Crude by Rail and Liquified Natural Gas by Rail products, including Liquified Natural Gas Town Hall Meetings. The most current agreement provides for collaboration and participation with the PHMSA to host the annual Hazardous Materials Roundtable Meetings. These meetings assist in identifying gaps, needs and emerging issues related to planning, training, and response within the hazardous materials response community.

The USFA and the NFA continue to support and participate in the development of output products, as data becomes available, associated with the DHS Science & Technology (S&T) “Jack Rabbit” project — a field project in collaboration with DHS S&T Chemical Security Analysis Center, Department of Defense’s Defense Threat Reduction Agency, DOT PHMSA and others analyzing the large-scale, catastrophic release of toxic industrial chemicals in urban areas — and incorporating relevant information into our current curriculum. A third phase of testing occurred in FY 2021 and further testing is scheduled for FY 2022. The USFA and NFA continue to evaluate the data from the trials to affect change in planning, response and training associated with catastrophic bulk carrier releases of compressed liquefied gases in an urban environment. The lessons learned are currently being disseminated nationally and continue to be incorporated into training programs across the nation.

In 2021, the pilot delivery for one new course, “Management and Safety in Response to Hazardous Materials/Weapons of Mass Destruction Incidents” was completed. Two additional

**Incident Management Curriculum:** The Incident Management curriculum is an important component of the NFA training program, and with over 30,000 completions, is one of the most successful and popular of the NFA curricula offered. One of the many reasons for the success of this curriculum is the currency of the materials and the applicability to the day-to-day duties of the students. In FY 2021, NFA incorporated new visions toward how we lead during incidents and address community lifelines in whole community, integrated environment simulations to reflect the current best practices as related to complex incidents as well as the current relevant national standards. This curriculum area embraces FEMA’s all-hazards / all-risk approach to incident management.

The key component of this training method is NFA’s Simulation Laboratory. Using the Simulation Laboratory, NFA trains career and volunteer fire and EMS officers in incident decision-making and the use of the National Incident Management System (NIMS) to include the Incident Command System (ICS) to better manage command and control for major incidents. Included in this program are 35 scenarios that have been developed with all supporting documentation and includes associated fire and smoke patterns that can be changed in response to student actions. Three-dimensional models of more than 40 simulations, all placed in fictitious jurisdictions known as Central City and Liberty County, can be viewed from various angles. A graphic plan is included for each simulation to provide the situational awareness necessary to make appropriate decisions and supplements the plot plans and floor plans. Each simulation provides escalating and de-escalating views that can easily be selected by the instructor, who can then tailor the conduct of any of the 35 incidents to respond to student decision-making.

The Simulation Lab and simulation-based learning project has grown rapidly and gained significant credibility, both nationally and internationally, as a viable training tool using computerized simulations.

Simulations were enhanced to reflect current trends from incidents nationwide. Increased technology use has provided a higher degree of image fidelity and better display. The NFA also introduced a virtual capability that allows us to engage audiences around the nation to discuss some of the nation’s critical yet infrequent incidents. This allows the NFA to remain current yet manage costs. The scenarios have also been enhanced to account for changes in building construction and student learning points, which allow for a better understanding of actual fire progression and the impacts of actions taken by incident commanders and command staff.

The Incident Management area expanded its partnerships with National Institute of Standards and Technology and DHS S&T allowing the NFA to integrate Virtual and Augmented reality into its Incident Management curriculum using educative 360-degree video from a wildfire and structure fire. The footage allows the learner to immerse themselves in the scene and see
different aspects of the fire. NFA continued to bolster its partnership with DHS S&T with participation in the Enhanced Dynamic Geo-Social Environment, Predictive Modeling, Next Generation First Responder, and the DHS First Responder Group to include testing current technologies as well as integrating a school setting and other simulated environments to enhance learning. This partnership allows NFA to strengthen our stakeholders’ abilities to respond to events in an all-hazards environment. As the coordinating element for NFA, the Incident Management program area has utilized this partnership to maximize efficiencies crossing over to other curriculum areas including Arson/Fire Investigation, Hazardous Materials, and Firefighter Safety.

The NFA continued to update courses to reflect the refreshed NIMS doctrine and Emergency Operations Center skillsets. NIMS provides a common nationwide approach to enable the whole community to work together to manage all threats and hazards. NIMS applies to all incidents, regardless of cause, size, location, or complexity. These concepts and principles are integrated within the entire Incident Management curriculum to include lessons learned from incidents and whole community approaches and best practices.

Staff analyzed data regarding risks and capabilities with the SLTT communities. Curriculum was updated to include techniques and strategies to increase effectiveness in incident and disaster operations to better position jurisdictions to respond to catastrophic incidents. Updates also incorporated FEMA’s Community Lifelines and how they promote the importance of situational awareness, prioritization of response efforts and decision-making processes during a disaster response to work toward incident stabilization.

The Incident Management curriculum staff are major participants in the lessons-learned project. These activities support our efforts to maintain current and relevant training and education by learning from real world incidents and the successes, best practices, and issues associated with those events. This program will allow continuous improvement of NFA’s courses and advances the NFA’s ability to enhance the delivery of programs, services and support in a manner that can measurably improve outcomes for the fire and emergency services community. Curriculum updates based on lessons learned from the 2018-2020 hurricane and wildfire seasons continued with case study development and exercise-based training implementation. These enhancements integrated contemporary topics and issues relevant to today and the future of societies as it relates to fire, emergency services and emergency management. Students assess major incidents/disasters from both domestic and international viewpoints and theorize about impacts and effects on the community. Discussions also include implications of these types of events in their communities one year, five years, and ten years from now.

The Incident Management staff continued to update courses and incorporate real-world events. Staff deployed to events and gained valuable insight from those incidents. The data gathered, along with best practices and lessons learned, were used to better inform the NFA and supported our mission and the commitment to America’s responders. Reports developed from staff deployments include research from publicly available documents, interviews with responders, reviews of similar recent incidents, and in-person analysis of the incident site and surrounding area that is impacted. As a result of this project, speakers were brought in to address classes both in person and virtually to speak about best practices, lessons learned, and unique problem sets faced during these incidents. Incidents represented include past wildfires, active shooter, terrorism, mudslides, flooding, and large-scale building fires.
Staff worked to bolster efforts to support training which helps develop Type 3 All-Hazards Incident Management Teams (AHIMT) across the country through classroom and field training. AHIMTs play an essential role in the management of, and response to, local/regional/national emergencies, natural disasters and public events. The “All-Hazard” designation implies that the team consists of members from across the emergency services sector. This cross-discipline team lends more expertise to emergency incidents such as natural and man-made disasters and terrorist events.

The overall goal of the Type 3 AHIMT course is to develop state, regional, and tribal AHIMTs to function under the NIMS during a large and/or complex incident or a major event. This course is designed for those who are assigned to function in a Type 3 AHIMT during a large/complex incident, typically extending into multiple operational periods. The course provides students with a solid foundation of the activities, processes, leadership elements, and the knowledge, skills, and abilities necessary to function within the framework of a Type 3 AHIMT deployed to an incident or planned event. The course is considered fast-paced, highly interactive and challenging as the students, formed into the Command and General Staff positions on an All-Hazards Incident Management Team, navigate through multiple activities and rapidly expanding incident scenarios. To date, the NFA has over 11,000 responder completions with continuous offerings throughout the country.

**Leadership and Executive Development Curriculum:** The delivery methodology for 16 courses in the Leadership and Executive Development curriculum continue to be revised, moving from an instructor-led lecture format to a facilitator-led Socratic method.

In FY 2021, the “Administration of Public Assistance for Community Recovery” course, which supports communities recovering from disasters, continues to be revised to meet changes with the FEMA Public Assistance Policy and Program Guide. FEMA’s Public Assistance policies constantly evolve which requires NFA to adapt course content each year.

The new 6-day course “New Executive Chief Officer,” developed and piloted in FY 2019, was finalized and implemented during FY 2021. The course is now fully operational with many deliveries scheduled during FY 2022.

**Planning and Information Management Curriculum:** One on-line mediated and one self-study course were developed during this fiscal year. “Planning for Catastrophic Incidents and Unusual Events” has been fully developed and will be delivered as the NFA LMS comes online. This course focuses on all-hazards community planning and targets not just fire and EMS, but all emergency planning personnel including local emergency planning committees, emergency managers and law enforcement. “Introduction and Application of Data for Fire and Emergency Medical Services,” a self-study course, has been piloted and is being readied for release. This course focuses on the application and sharing of fire and emergency services data to assist in the development of policy and data-driven, risk-based decision making.

**Responder Health and Safety Curriculum:** Firefighting is a very dangerous profession, and the USFA is committed to reducing the fatal and non-fatal injuries and illnesses that occur while firefighters are serving their communities. The latest USFA on-duty firefighter fatality statistics indicate a positive pattern of decline in on-duty deaths. The overall trend from the past 10 years
(2011 to 2020) shows a 10.4 percent decrease in the number of on-duty firefighter fatalities. Excluding COVID-19 deaths, the overall trend from the past 10 years (2011 to 2020) shows a 27.3 percent decrease in the number of on-duty firefighter fatalities.

Three new mediated courses are ready for initial delivery: “Occupational Exposures,” “Health and Wellness” and “Safety Program Operations.” A self-study online course, “Safety Essentials,” is also ready for delivery.

Training Program Curriculum: The 2-day “Training Operations for Small Departments” course underwent a complete review and rewrite and has been released for initial delivery as “Training Supervision,” using synchronous, on-line methods. The course focus remains on small department training officers and ensuring that they have the knowledge and skills to manage the training function in their organizations. In addition, contemporaneous revisions were made to Training and Professional Challenges for Fire and Emergency Services Leaders.

Facilities and Support: The USFA Management, Operations, and Support Services (MOSS) Division is responsible for managing, operating, and providing administrative and emergency support services for all USFA activities (which includes the NFA and the NFP Division) and FEMA’s EMI located on the 107-acre campus in Emmitsburg, Maryland.

In FY 2021, the USFA MOSS Division provided numerous facilities and support services for federal employees, federal contractors, students, and instructors from across the nation. Operations and support consisted of but were not limited to the following: facility operations and maintenance; renovation and improvements; food services; security; information technology; and student admissions, housing, and transportation for NFA, EMI, and FEMA students. Due to the COVID-19 pandemic, NETC resident training was drastically curtailed; however, resident training resumed on campus during the April through September timeframe. COVID-19 restrictions were in-place to include limited capacities in classrooms, dining hall, and dormitory buildings. Social distancing, testing, and mask requirements were in place. From April 5, 2021, when in-person classes resumed, to the end of September 2021, 3,225 students completed resident training (NFA 1,749; EMI 1,476).

The MOSS Division oversees and maintains an installation master plan, a deferred maintenance and capital improvement plan as well as a process to achieve NETC’s vision of a historic, state-of-the-art, multiuse, student-focused campus. The master plan lays out the existing state of and vision for NETC in a comprehensive and graphic manner that can be referenced when expansion or reconfiguration is necessary. The plan establishes a planning framework with specific recommended solutions for identified issues, and it outlines planning standards to help create a sense of place and a destination that presents a professional image and fosters a supportive working environment. In addition, USFA MOSS maintains a listing of past, present and future campus climate change initiatives.

In 2021, MOSS continued to install various energy efficient products on campus to achieve substantial energy cost savings and reduce environmental impacts associated with the facility resulting in greater efficiency and sustainability. Solar panels were installed on the roof of Building J. Storm windows were installed in Buildings G and R. The roof was replaced on Building H. The installation of the new fire alarm system in six buildings was completed as part
of Phase 3. The NETC Main Gate entrance area was completed, which included two new security guard buildings, a new Visitor Center, roadway, parking, and various security improvements. All work was completed in accordance with Maryland State Historic Preservation and FEMA Historic Preservation Programmatic Agreement.
Section 4.3 — Activities to Assist the Nation’s Fire Services
(15 U.S.C. § 2215(d))

The USFA provided support and assistance to the nation’s fire services operations and response through the following activities in FY 2021.

COVID-19 Response Support: USFA provided broad support to the national pandemic response including: NFP Division provided extensive fire, EMS, and data subject matter expertise for the Health and Human Services/FEMA COVID-19 Healthcare Resilience Task Force, Prehospital Working Group. Three NFP staff who are certified paramedics were deployed to the Task Force for 110 days and remain engaged with the working groups to assure fire and emergency medical service equities are represented. Contributions included development of guidance for first responders on Personal Protective Equipment, First Responder Testing, Crisis Standards of Care, Data, Stakeholder Engagement Cross-cutting, Telemedicine, and Response Best Practices. The NETC MOSS Division provided continuity of operations for the NETC campus and developed and implemented plans on infection control for operations and the resumption of in-person learning.

USFA Response to Assistance to Firefighters Grant (AFG) Monitoring and Oversight Requirement, §6 of the Reauthorization Act: USFA and AFG Program Office staff continue to work collaboratively to address this requirement. There are two areas of focus for monitoring and oversight – programmatic and financial. USFA staff assist FEMA’s AFG Program Office when conducting targeted post-panel reviews. USFA staff have been conducting these reviews with the FEMA AFG Program Office since FY 2017 and continue to assist with this effort. USFA and FEMA AFG Program Office staff also coordinated to develop and administer an online grants management training program. The first course was developed in FY 2021 and will be available for students on the USFA Learning Management System in FY 2022. Also, in FY 2022, USFA will host members of the fire service from across the Nation to review eligible AFG, Fire Prevention and Safety, and Staffing for Adequate Fire and Emergency Response grant applications. In 2020 and 2021, the review panels were held virtually. Returning to in-person peer review panels provides an additional level of collaboration and allows further oversight by USFA in response to the §6 of the Reauthorization Act requirement.

National Fire Academy Board of Visitors: The NFA Board of Visitors (BOV) plays an important role in supporting the academic stature of the NFA. The BOV is charged with the annual review of the NFA programs, and it also provides advice and recommendations to the USFA.

In FY 2021, the NFA BOV completed the following actions.

- Acknowledged the NFA’s ability to provide online and mediated learning opportunities when COVID-19 caused the suspension of in-person, on campus training, while also identifying a technology gap in some rural and tribal communities impacting their ability to participate in technology-based training opportunities.
- Assessed the work of NFA programs and facilities virtually, supported curriculum development and maintenance work underway, and received information on deferred maintenance projects at the NETC campus.
• Maintained sub-committees and conducted activities addressing the NFIRS, and the NFA’s Professional Development Initiative.

• Supported the enhanced emphasis on WUI to include development of an additional training curriculum, and enhanced delivery.

• Conducted three meetings which were efficiently supported by using online conferencing technology. The annual in-person meeting was held online due to COVID-19.

• Developed their annual report.

The culmination of the year’s activities included numerous recommendations for the enhancement of the NFA’s educational program, upgrades, and expansion of the NETC physical facility, specific technology needs, and support for budgetary increases.

Federal Fire Working Group: The Federal Fire Working Group (FFWG) provides an opportunity for federal agencies to share and discuss one another’s programs, research, and additional resources to promote coordination and collaboration among federal partners. It is the only interagency group within the federal government with a focus only on fire and life safety. The FFWG was established in 2001. The USFA is required to provide federal agency coordination and information exchange activities under Sections 8(e), 12, and 21(e) of Public Law 93-498, October 29, 1974, the Federal Fire Prevention and Control Act. The FFWG provides the forum for USFA to lead that coordination. The FFWG meets on a quarterly basis and during FY 2021 provided updates to members on emergent fire-related topics including fire prevention, prediction and detection in the WUI; recent research on fluorine-free firefighting foams; and various federal research on fire and life safety.

Federal Interagency Committee on Emergency Medical Services: The USFA is a statutory member of the Federal Interagency Committee on Emergency Medical Services (FICEMS), established by Congress in 2005 through the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, to ensure coordination among federal agencies supporting local, regional, state, tribal and territorial EMS and 911 systems. The FICEMS was also created to improve the delivery of EMS throughout the nation.

Wildland and Wildland Urban Interface Coordination: The USFA has worked with respected agency partners and non-government organizations to coordinate wildfire safety efforts and innovations to help firefighters, emergency managers and community leaders create neighbors and cities that are better prepared for a wildfire event and recover more quickly. This year USFA assisted NWCG with developing protocols for wildfire response due to COVID-19 which made wildfire response more difficult.

The USFA collaborated with the NFPA and various FEMA components to promote the Wildfire Community Preparedness Day. FY 2021 marked the seventh anniversary for this activity. According to the NFPA, the purpose of the event is to improve a community’s ability to withstand and recover from a wildfire, which may also improve the safety of firefighters. Almost 10 million Twitter followers were touched through various social media outreach efforts. The USFA provides full-time staffing at the National Interagency Fire Center (NIFC) in Boise, Idaho, which enhances interagency functions and technical assistance programs that are critical.
to wildland firefighting operations. Working directly with the NIFC Office of Predictive Services, interagency partners, and Geographical Area Coordination Centers, the USFA provides technical support on numerous wildland firefighting resource management programs.

Additionally, the USFA has served as the Interagency Coordinator to interface with various FEMA national and regional programs and with existing programs from the interagency representation at NIFC. Serving as host, the USFA has supported various mitigation, planning, logistics, and grant meetings through the year.

The USFA maintained membership with the following FEMA efforts and interagency wildland fire groups: Wildland Fire Leadership Council (the U.S. Fire Administrator is a principal member); Mitigation Framework Leadership Group; FEMA Building Codes Strategy Development; FEMA Climate Change Assessment; Wildfire Resilience Interagency Working Group established under the National Climate Change Task Force; NWCG; Fire Executive Council; Fire Management Board; NWCG WUI Mitigation Committee; and the NWCG Communication, Education, and Prevention Committee; the NWCG Risk Management Committee; NWCG Incident Position Standards Committee; NWCG Mental Health Sub Committee; and NWCG Training Development Committee; along with Fire-Adapted Communities Learning Network and Regional Cohesive Strategy groups. Through these groups, the USFA represented SLTT structural fire and emergency services and encouraged collaboration on how FEMA offices engage on fire service issues and federal land management agencies and departments manage existing resources, research, technical development, training, qualifications, and mobilizations.

In collaboration with FEMA, DHS S&T, and other key stakeholders, the USFA worked to determine what new and emerging technologies could be applied to wildland fire response. Given the loss of life and property that occurs in wildfires annually, USFA continues to collaborate with DHS S&T to specifically address what technology could be applied to save lives in the wildfire response. This effort developed a Wildland Urban Interface Fire Operational Requirements and Capability Analysis Report, May 31, 2019. FY 2021 marks the fourth year of this collaboration with the intent of sharing key findings with the broader fire and emergency response communities. USFA continues to collaborate with DHS S&T with this ongoing research.

Federal operations and national preparedness: During disaster activations, the USFA deployed staff filling the Emergency Services Group Supervisor position supporting FEMA’s NRCC. FY 2021 was an unprecedented year that continued to break records with all 50 states, the District of Columbia, and five U.S. territories getting major disaster declarations for COVID-19 response. The Atlantic Basin also saw a record number of named storms and the most U.S. landfalls. USFA also provided subject matter experts in support of NRCC augmentation training and exercises preparing new FEMA staff for NRCC activations.

USFA staff coordinated and provided input and review for the National Contingency Preparedness Concept of Operations, FEMA NRCC Resource Support Section Standard

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**Type 3 All-Hazards Incident Management Teams:** During 2021, the USFA continued to support AHIMTs by establishing competency standards for the teams to follow as they respond to national disasters. These standards will define what an AHIMT should be capable of in terms of administrative, operational, and logistical readiness. The USFA provided development assistance for 22 USFA Type-3 AHIMT course deliveries that trained 467 students for the nation’s emergency services. Currently, the USFA maintains contact with 71 AHIMTs throughout the country, representing SLTT incident management teams that establish a robust national capability for emergency services.

**Critical Infrastructure Protection:** The USFA’s Critical Infrastructure Protection Program promotes information sharing and threat analysis with emergency services sector departments and agencies nationwide. The USFA manages the Emergency Management and Response-Information Sharing and Analysis Center (EMR-ISAC), which is a national clearinghouse for critical infrastructure protection and emergent threat information specifically targeted to the nation’s emergency services sector personnel. The EMR-ISAC publishes a weekly InfoGram that addresses current issues impacting first responder operations, planning, health and safety concerns and the challenges of responding during incidents of civil unrest and active shooter situations. In FY 2021, the weekly InfoGram was shared with over 105,000 emergency services-sector personnel nationwide.

Additionally, the USFA-managed Emergency Services community of interest on the Homeland Security Information Network (HSIN) has vetted more than 27,000 emergency services sector leaders for access to current situation reports, emerging threat information, public health and safety bulletins, cyber and terrorism threats, and other critical “For Official Use Only” information. The USFA Critical Infrastructure Protection program also hosts monthly informational webinars on developing trends with SLTT fire service personnel that serve as liaisons with their State fusion center.
Section 4.4 — Public Education
(15 U.S.C. § 2215(e))

In FY 2021, the USFA led or participated in the following activities to deliver public education materials and messages that were easily understood by the general public and specific at-risk groups, while emphasizing the whole community concept modeled by the Fire is Everyone’s Fight® initiative. Additional information is available at https://www.usfa.fema.gov/prevention/outreach.

**Arson Awareness Week:** “Arson During Civil Unrest – An Unjustifiable Crime!” was the 2021 theme for Arson Awareness Week and provided first responders and the public at large with a host of considerations to keep in mind when a civil unrest incident occurs. The main purpose of Arson Awareness Week this year was to promote safety when responding to incidents during civil unrest, promote before action plans with entities responding to the scene, tactical considerations when investigating the scene, and make the public aware of the totality of the aftermath resulting from of these criminal actions. We also marketed multiple courses offered through USFA/NFA programs for first responders.

First responders need to develop a sense of awareness and prepare to back away if the scene is not immediately safe for entry. Firefighters, EMS and law enforcement must first coordinate and plan how best to approach any scene during civil unrest incidents. Additional precautions need to be addressed during and after the fire investigations as the area may remain under threat of another incident. It is also important to apprise the public of the penalties for these egregious crimes and the long-term fiscal impact that can result from setting fires and causing damage to private, commercial and government owned properties.

The USFA 2021 Arson Awareness Week webpage had 4,637 views and 3,789 visits.

**National Emergency Training Center Library:** In FY 2021, the NETC library focused on maintaining core services to USFA staff, instructors, students, and the public under pandemic restrictions, while increasing the resources offered online. The NETC library’s core services include building the NETC Library Catalog and Periodical Index, providing reference services, and delivering student orientations and instruction. From October 2020 to March 2021, the library provided virtual reference, document delivery, and interlibrary loan to a student population that was entirely off-campus. When on-campus students returned in April, the NETC library was open day and evening hours to provide in-person assistance in a safe and socially distanced environment.

The NETC Library Catalog and Periodical Index is a public discovery tool for over 229,000 books, reports and articles in all-hazards subjects. In FY 2021, 2,414 documents were added to the index, primarily scholarly journal and trade magazine articles.

The NETC library responds to reference questions from USFA affiliates and the first responder community around the world. In FY 2021, library staff answered 941 reference questions and responded to 2,867 email and telephone inquiries. A total of nine classroom orientations and library mini classes were presented, reaching 158 students. These were presented both virtually and in-person.
To make more resources available to students participating in online training, the library increased the number of electronic resources available. Two databases were added to the library’s subscription databases, bringing the total number of active full-text journals available online to over 3,900. Ninety (90) e-books covering climate change, EMS and fire service, emergency management, WUI, and executive leadership were also added to the collection. The library also extended access to databases and e-books to EMI students.

**Home Fire Fatalities:** The NFP Prevention & Information Branch undertakes a daily media monitoring effort to capture and analyze in real time, news reports of home fire fatalities from around the country. The intent of this effort is to provide an estimate of deaths due to fire as well as demographic trends and fire causes in the United States. Guided by this data and analysis, the Prevention and Information Branch designs educational and informational prevention resources for distribution to the fire service and the public. These resources are also made available on the USFA website.

**Fire and Life Safety Messages:** The USFA is involved with a wide variety of outreach efforts in partnership with fire and life safety organizations and agencies. USFA is part of the NFPA Emergency Messaging Advisory Committee. The committee reviewed messaging suggestions and edits and released the 2020 Educational Messages Desk Reference for the Fire Service and Fire and Life Safety Educators. This desk reference provides messages that are consistent with NFPA’s codes and standards and other related criteria. The resource is provided to the fire and life safety services to ensure consistent messaging throughout national and SLTT materials.

**The Fire Marshal Interchange:** The Fire Marshal Interchange (FMI) was established to provide a platform for fire marshals across the nation to safely communicate within the secure HSIN. Using this site allows for sharing knowledge outside jurisdictions to bring awareness of problems and trends that may threaten the lives of those they have sworn to protect from fire and life safety issues. The world of the fire marshal is always changing. This site is designed to advocate for positive reinforcement of the basic and often complex situations that arise. The FMI is specifically designed for the fire marshal mindset. The USFA fully supports the collaboration of fire marshals throughout the nation and internationally to help better serve their communities.

Since its release in March 2019, the FMI has garnered 683 active members from federal, state, territorial, tribal, county and local municipalities, and the Departments of Defense for Canada and New Zealand. We are using various marketing tools to advertise the network to the fire marshal community including the USFA website, Gov Delivery, National Association of State Fire Marshals, HSIN, Certified Fire Investigator Trainer Network (CFITrainer.net), International Association of Arson Investigators, Community Risk Reduction (CRRNet), and LinkedIn.com.

**Hotel–Motel National Master List:** The Hotel–Motel National Master List, published on the USFA website, is one of the fire and life safety assets created as a result of the Hotel and Motel Fire Safety Act of 1990. Properties that provide lodging to the public and meet the minimum fire safety requirements are approved for official travel by federal government employees. A property can apply to be on the list if it has at least one single-station, hard-wired smoke alarm in each guest room and all conference rooms. If the building is four or more stories tall, fire sprinklers must be in each guest room. The property receives a FEMA ID that can also be used for the Emergency Lodging Assistance Program funded by FEMA.
The Office of Management & Budget Collection 1660-0068, Federal Hotel & Motel Fire Safety Declaration Form is in place for the information collection. This renewal process keeps the information collection active on the Office of Management and Budget inventory for three years. The current expiration date is March 31, 2025.

In 2021, the USFA added 1,972 new lodging properties to the list, bringing the number of properties on the National Master List to 54,781. The USFA partners with the U.S. General Services Administration to assist in maintaining accurate property information as part of our ongoing commitment to ensure fire safety for travel lodging.

**Digital Communications and Social Media:** Our followers on the USFA’s Twitter account (@usfire) totaled 50,200 people (a decrease from FY 2020 due to Twitter account clean-up). This year we posted over 675 tweets. Our likes on the USFA Facebook page are over 28,000, and we had 390 posts. The USFA LinkedIn channel currently has 18,800 followers and have posted over 125 times. In addition to supporting FEMA digital platforms by sharing/retweeting posts, we participated in several major campaigns on our platforms such as Human Trafficking Awareness Month, the inaugural NFIRS Week, Community Risk Reduction Week, Arson Awareness Week, and hurricane/severe storm safety to name a few.

USFA staff sent approximately 500 bulletins to GovDelivery subscribers on community risk reduction, fire prevention and life safety, and available USFA resources, including NFA training. The number of subscribers to one or more USFA email lists is 143,000.

**U.S. Fire Administration’s Website:** The USFA’s website received 4 million visits from 3 million unique visitors during the reporting period. A variety of fire prevention outreach materials were added to the USFA’s website including animated social media cards in both English and Spanish, customizable home fire-safety handouts for local fire prevention campaigns and resources for NFIRS Week/Arson Awareness Week/Fire Prevention Week/EMS Week/National Preparedness Month. Also added to the site was content to inform communities about how to lower risk of fire and electric shock injury related to charging electrical vehicles and a short, shareable video on how to prevent kitchen fires.

The USFA published 53 articles to its blog on current events, emergent issues, training, and protection of critical infrastructure relevant to the fire service to increase national awareness about them. Included were articles on the impact of climate change on the fire service, how to prevent outdoor activities from turning into wildfire disasters, the impact of COVID-19 on public safety, and supporting women in fire and EMS. In early 2021, USFA redesigned the site formerly known as WUI Toolkit and launched the refreshed WUI website to make it more prominently visible and more user friendly for finding WUI resources. Other content added for fire and EMS included a resource section on the WUI, state fire profiles and statistical reports, statistical updates to support the NFIRS COVID-19 Special Study, and free stock photos to support fire department community outreach.

**Fire is Everyone’s Fight®:** The USFA’s branded prevention initiative, Fire is Everyone’s Fight®, works to unite the fire service, life safety organizations, and professionals to reduce home fire injuries, deaths, and property loss by changing how people think about fire and fire prevention. All USFA prevention activities and resources bear this brand. At the end of FY 2021,
3,493 fire departments and other organization supporters had registered to use the brand. Supporters include all 50 state fire marshal offices, the District of Columbia, and government and non-government organizations from Australia, Canada, Denmark, Egypt, England, Guam, Mexico, New Zealand, and South Africa. Additionally, in FY 2021, two federally recognized tribes joined the initiative, Seneca Nation of Indians (Northeast), and Sauk-Suiattle Indian Tribe (Northwest).

Working through a contracting vehicle, USFA created social media ads for Twitter and Facebook and search ads for Google. The campaign ran from February through September 2021 and earned a total 25,040,439 impressions. The 15 weeks prior to the campaign launch, the Fire is Everyone’s Fight® landing page had between 1,345 sessions and 1,031 new users. Since the campaign launch in February 2021, the Fire is Everyone’s Fight® landing page had 47,743 sessions with 41,072 new users: a roughly 90 percent increase in traffic to USFA’s website.

USFA created a Strategic Outreach plan for Fire is Everyone’s Fight® to increase participation in the initiative.

**Publications Center:** The center processed nearly 2,500 publication orders, accounting for the distribution of approximately 340,000 fire prevention and life safety items. The outreach products include booklets, manuals, technical reports, handouts, CDs, and DVDs – many provided in both English and Spanish. In addition to providing hard copy publications upon request, most of the USFA publications are searchable and available for electronic download through the USFA’s website as 508-compliant PDF files. Many of the electronic fire prevention and public education outreach publications can be customized by fire/EMS departments and community organizations for use within their local communities.

Publication Center staff provide customer service to approximately 600 inquiries per fiscal year that come in through email and phone.

**The Media Production Center:** The center creates a wide variety of communication graphics including animated outreach videos, posters, displays, animated social media messages, presentations, publications, etc., for display on the USFA’s website; in NFA courses’ classrooms and on-campus locations; and at conferences, meetings, and course locations across the country. The Media Production Center also supports FEMA’s EMI with communication graphics, posters, displays, and online electronic assets.

**U.S. Department of Homeland Security Blue Campaign on Human Trafficking:** The USFA supported the Blue Campaign during Human Trafficking Awareness Month by distributing resources to enhance first-responder awareness of human trafficking. These materials are disseminated at the NETC campus and across the nation at various meetings where the USFA exhibits for first responders and the general public. In addition, our social media platforms regularly share human trafficking awareness for first responders as well as supporting the DHS Blue Campaign channels through shares and retweets.
Section 4.5 — Fire Safety Effectiveness Statements
(15 U.S.C. § 2215(f))

Although initially a reporting requirement for the USFA, the authority for code enforcement remains at the SLTT levels and is outside the federal purview. The code development and compliance process has evolved since the 1970s and essentially meets the need to provide fire safety standards to which buildings should comply. The USFA continues to support the promotion of current codes and compliance through training at the NFA and through staff involvement in the national consensus codes and standards process.
Section 4.6 — Outstanding Initiatives
(15 U.S.C. § 2215(g))

National Fire Incident Reporting System: An extreme gap exists between the current and desired data system with data readily available to inform community emergency response capacity and capability daily and during disasters.

NFIRS is the only national reporting system that SLTT fire departments use to report emergency response activities, including response to fire, hazardous materials, and the range of responses during severe weather and manmade and natural disasters. Fire department reporting is voluntary, with incentives built into the FEMA AFG grant application requirements.

After responding to an incident, each participating fire department has a mechanism for data entry either into a vendor-solution records management system or directly into the National Fire Data Center based on a prescribed data standard (NFIRS 5.0) that is unwieldy and extremely outdated (1995).

Currently, NFIRS software releases and system updates serve only to keep the system stable and secure. The existing system has numerous security vulnerabilities and continuous patching is expensive and inefficient. This manner of only “keeping the lights on” must be sustained until a new cloud-based system can be developed, pilot tested, and moved to production. The current system has ~80 percent participation. Significant improvement is possible by reducing burden for data entry and improving data quality, quantity, and usability.

The quantity, quality, and timeliness of NFIRS data submitted by states and local fire departments is inadequate. The current antiquated system uses ancient code and regular fixes are costly. The system is not cloud based and does not have desired level of security, nor capability for direct data capture, geolocation, analytics, dashboard reporting, or data exchange via application program interface (API). Gaps in the data standard limit wildland fire data, community risk reduction factors, and timeliness of data reporting. In addition to the gap in emergency resource capability assessment noted above, the lack of accurate, complete, and timely all-hazards incident data means the federal government is ill-prepared to identify the nation’s fire problem, or the risks involving other hazards. If the NFIRS system and the data standard is not modernized, accuracy of threat and hazard identification is severely hampered. Relevant performance metrics and useful customized intelligence from SLTT agencies in risk reduction and disaster planning will be unavailable to USFA and FEMA. Finally, the current NFIRS cannot share data with FEMA equities via an API. This situation must change to facilitate resource assessment, better preparedness, and response efficacy.

In compliance with FEMA Directive 262-5, Cloud Smart Computing, to move all data operations to the cloud, the USFA is prepared to do just that. A new NFIRS data system must be developed. It will be a high value cloud-based data system for use by the FEMA/USFA, SLTT community, and users at the national level including researchers, and academia. This effort will be accomplished through the implementation of a modern cloud-based data capture system with secure API data exchange capability and a streamlined data standard for interoperability and maximum efficiency. The system will allow for modernized workflow and scalability, leveraging modern data tools to process data and analyze at scale. The system will have enhanced computing power and minimize the burden to data contributors while providing incentives
through user friendly interactive dashboard analytics. The data system must have capability for aggregating data from multiple sources, now and in the future, including automatic vehicle location, GIS, biometrics, and field sensors.

Using secure multifactor authentication login to designated accounts, fire departments using the new NFIRS data capture, aggregation, analytics, and reporting system can assess the impact of their response availability, capability, and operational effectiveness on the outcome of a fire or other emergencies. Key performance metrics will include measures of the ability to provide intelligent insights sufficient to inform decisions that minimize the occurrence of firefighter injury and death, civilian injury and death, and property loss.

Users will have access to data contribution and aggregation opportunities that reduce the burden of data entry and allow them to evaluate risk, deploy resources and respond to emergencies with greater situational awareness and understanding. User fire departments will be able to monitor their call processing, alarm handling, turnout time in near real time while better understanding their overall response capability. Through data aggregation from varied existing data sources, users will have insights for more effective preventative measures to reduce the incidence of fire in their community.

As noted, USFA/NFIRS is the only system that documents fire, EMS, and all-hazard incident response details for the nation. Those data are the foundation on which other data systems rely. For example, the National Firefighter [Cancer] Registry (NFR) must have incident-level exposures for firefighters in the registry to connect their toxic exposure on scene to longitudinal occurrence of cancer. Currently this option is not available. Additionally, FEMA components in Resilience need live data feeds from the field to supplement and complete risk and preparedness data projects.

The proposed system and resulting dataset will empower DHS FEMA, our federal partners, and Congress with intelligence for decision making and opportunities for predictive analytics in Wildland Urban Interface (WUI) events, Community Risk Reduction (CRR), and future pandemic emergency response resource preparedness. The new system will be flexible and adaptable to the changing needs of the fire service and first responders to ensure equity of service availability at a local level and to enable local fire departments to access and use their own data for informed decisions. The proposed system will initiate with the President’s Budget in 2023 through a phased development approach. It is anticipated that the archiving of the existing system and the stand up of the new system will be completed by end of budget year 2025.

Once the new cloud-based system is operational, and fire departments are transitioned to the new system, the legacy system must be decommissioned. All legacy data will be securely archived for use as needed. Transition will involve development of educational messaging and training modules orienting users to the new system, and helpdesk consultation for live interaction with experts.

**State Fire Training Grants:** National statistics indicate that approximately 70 percent of the nation’s firefighters are volunteers serving their local community and 85 percent of the nation’s fire departments are all or mostly volunteer. The Nation’s fire departments are struggling to respond to calls for assistance and to recruit and retain firefighters while trying to provide lifesaving and important training and education to these dedicated men and women. The USFA
has provided small grant funds to state fire training agencies. The $20,000 per state has been critical in providing training to the Nation’s emergency responders. These funds have proven to be an effective “force multiplier” for the NFA and continue to reach thousands of fire and EMS personnel on an annual basis but unfortunately additional funds are needed to make a more significant impact to address the needs of our SLTT partners around the country.

**Wildfire:** The Bipartisan Infrastructure Law, passed in December 2021, establishes the Wildfire Mitigation and Management Commission to be led by the Department of Interior, the Department of Agriculture, and FEMA including USFA. The Commission is tasked to study and make recommendations to improve Federal policies relating to— (1) the prevention, mitigation, suppression, and management of wildland fires in the United States; and (2) the rehabilitation of land in the United States devastated by wildland fires. USFA is currently working to support the legislative mandates; FEMA and USFA are partnering closely with USDA and Dept of Interior to build and execute the Wildland Fire Mitigation and Management Commission. The Commission kicked off on July 20, 2022, with an information session for members representing federal agencies, state, local, and Tribal governments, and the private sector. The first in-person meeting scheduled for September 14-15, 2022, will begin the year-long collaboration to determine recommendations for the nation. The Commission recommendations will be submitted as a report to Congress proposing federal legislation, policies, and strategies to prevent, mitigate, suppress and manage wildfires more effectively.

USFA also engages in the wildfire Interagency Working Group and the Wildland Fire Leadership Council. USFA is leading an initiative to explore methods and technology that integrates and analyzes data collected by each participating agency to include USFA, USDA, and Department of Interior. These efforts will provide for a more comprehensive and accurate accounting of the WUI challenges facing the Nation. Our goal is to enhance USFA’s data collection capability for WUI fires, providing more accurate analysis and reporting of all fire data in support of its legislative mandate, while identifying areas USFA could address to reduce the incidence of these fires.

**The Fire Problem in America:** Throughout 2021, there were 2,265 civilian fire deaths across the nation, including 268 children under 14 and 560 elderlies over 65. The USFA currently has no investigation authorities to supplement other federal investigators and fill the gaps in knowledge in the investigations of major or remarkable fires.
Section 4.7 — Suggested Improvements to Fire Prevention and Building Codes
(15 U.S.C. § 2215(i))

The USFA continues to monitor and participate with code development/change activities of the NFPA and the ICC. Through an ongoing basis, USFA supports various initiatives with technical expertise as appropriate. The USFA regularly coordinates with our partners within FEMA and in the fire service and the fire prevention community in these efforts. The USFA recommends that local jurisdictions adopt and adhere to the latest edition of at least one of the model building and fire codes promulgated by either the NFPA or the ICC. The codes and standards promulgated by these two organizations include consensus requirements that adequately address home smoke and carbon monoxide alarms, residential fire sprinklers, fire safe building construction including fire resistant building materials, and fire safety in the WUI using the whole community approach.
V. Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>ACE</td>
<td>American Council on Education</td>
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<td>AFG</td>
<td>Assistance to Firefighter Grants</td>
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<tr>
<td>AHIMT</td>
<td>All-Hazards Incident Management Team</td>
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<td>API</td>
<td>Application Program Interface</td>
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<td>BOV</td>
<td>Board of Visitors</td>
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<tr>
<td>CDC</td>
<td>U.S. Department of Health and Human Services Centers for Disease Control and Prevention</td>
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<tr>
<td>COVID-19</td>
<td>Coronavirus Disease 2019</td>
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<td>U.S. Department of Homeland Security</td>
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<td>DOT</td>
<td>U.S. Department of Transportation</td>
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<td>EFO</td>
<td>Executive Fire Officer</td>
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<td>EMI</td>
<td>FEMA’s Emergency Management Institute</td>
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<td>EMR-ISAC</td>
<td>Emergency Management and Response-Information Sharing and Analysis Center</td>
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<td>IACET</td>
<td>International Association of Continuing Education and Training</td>
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<td>United States Fire Administration</td>
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<td>Wildland Urban Interface</td>
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