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THE UNITED STATES FIRE ADMINISTRATION REAUTHORIZATION: ADDRESSING THE PRIORITIES OF THE NATION'S FIRE SERVICE

HEARING

BEFORE THE

SUBCOMMITTEE ON TECHNOLOGY AND INNOVATION

COMMITTEE ON SCIENCE AND TECHNOLOGY

HOUSE OF REPRESENTATIVES

ONE HUNDRED TENTH CONGRESS

FIRST SESSION

OCTOBER 2, 2007

Serial No. 110–59

Printed for the use of the Committee on Science and Technology

Available via the World Wide Web: http://www.house.gov/science

U.S. GOVERNMENT PRINTING OFFICE

37–985PS WASHINGTON : 2008

For sale by the Superintendent of Documents, U.S. Government Printing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512–1800; DC area (202) 512–1800
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THE UNITED STATES FIRE ADMINISTRATION REAUTHORIZATION: ADDRESSING THE PRIORITIES OF THE NATION'S FIRE SERVICE

TUESDAY, OCTOBER 2, 2007

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TECHNOLOGY AND INNOVATION,
COMMITTEE ON SCIENCE AND TECHNOLOGY,
Washington, DC.

The Subcommittee met, pursuant to call, at 10:05 a.m., in Room 2318 of the Rayburn House Office Building, Hon. David Wu [Chairman of the Subcommittee] presiding.

BART GORDON, TENNESSEE
CHAIRMAN

RALPH M. HALL, TEXAS
RANKING MEMBER

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The Subcommittee on Technology and Innovation

Hearing on:

The United States Fire Administration Reauthorization: Addressing the Priorities of the Nation's Fire Service

October 2, 2007
10:00 a.m. – 12:00 p.m.
2318 Rayburn House Office Building
Washington D.C.

WITNESS LIST

U.S. Fire Administrator Gregory B. Cade
United States Fire Administration

Dr. Sivaraj Shyam Sunder
Director, Building and Fire Research Laboratory
National Institute of Standards and Technology

Chief Steven P. Westermann
President and Chief Fire Officer
International Association of Fire Chiefs

Captain Robert Livingston
Legislative Director of the Oregon State Council of Fire Fighters
International Association of Fire Fighters

Chief Gordon Henderson
Past President of the Georgia State Firefighters' Association
National Volunteer Fire Council

Dr. John R. Hall
Assistant Vice President, Fire Analysis and Research
National Fire Protection Association

HEARING CHARTER

SUBCOMMITTEE ON TECHNOLOGY AND INNOVATION
COMMITTEE ON SCIENCE AND TECHNOLOGY
U.S. HOUSE OF REPRESENTATIVES

The United States Fire Administration Reauthorization: Addressing the Priorities of the Nation's Fire Service

TUESDAY, OCTOBER 2, 2007
10:00 A.M.—12:00 P.M.
2318 RAYBURN HOUSE OFFICE BUILDING

1. Purpose

On Tuesday October 2, 2007, the Subcommittee on Technology and Innovation of the House Committee on Science and Technology will hold a hearing to explore the priorities of the fire service community for the U.S. Fire Administration (USFA). The witnesses will discuss the effectiveness of USFA's current activities, priorities for future research and development and training activities, and areas of greatest concern and importance for the upcoming reauthorization.

2. Witnesses

Assistant Administrator Gregory B. Cade is the United States Fire Administrator.

Dr. Sivaraj Shyam-Sunder is the Director of the Building and Fire Research Laboratory (BRFL) at the National Institute of Standards and Technology (NIST).

Chief Steven P. Westermann is the President and Chief Fire Officer of the International Association of Fire Chiefs (IAFC).

Captain Robert Livingston is the Captain of the Salem, Oregon Fire Department, and is the representative of the Oregon State Council of Fire Fighters of the International Association of Fire Fighters (IAFF).

Chief Gordon Henderson is the Past President of the Georgia State Firefighters' Association, Chairman of the Georgia State Firefighters' Association/Georgia Fire Chiefs Association Joint Legislative Committee, representing the National Volunteer Fire Council.

Dr. John R. Hall is the Assistant Vice President, Fire Analysis and Research at the National Fire Protection Association (NFPA).

3. Overarching Questions

The hearing will address the following overarching questions:

- What is the current status of USFA core activities, including training through the National Fire Academy, educational programs, and the National Fire Incident Reporting System?
- What are the major priorities of the fire service community and USFA for the agency's reauthorization?
- What is the status and budget of USFA research activities? How are research activities prioritized and how does USFA leverage the fire-elated research activities of other federal agencies such as the National Institute of Standards and Technology (NIST) and the Department of Homeland Security's Science and Technology Directorate?
- How does USFA bring the needs and expertise of the fire service community to the Department of Homeland Security's (DHS) larger mission of disaster preparedness and response? How does USFA support State and local fire agencies?

4. Background

History of the USFA

In the early 1970's the President's National Commission on Fire Prevention and Control released a report entitled *America Burning* which presented a bleak assessment of fire safety in the U.S. According to the report, nearly 12,000 citizens and 250 firefighters lost their lives annually to fires in the United States. An additional 300,000 Americans suffered fire related injuries each year. In response to these findings, Congress passed the *Federal Fire Prevention and Control Act of 1974* (P.L. 93–498), which created the National Fire Prevention and Control Administration within the Department of Commerce. In 1978 Congress changed the agency's name to the U.S. Fire Administration and subsequent governmental reorganization by President Carter in 1979 placed USFA within the newly created Federal Emergency Management Agency (FEMA). USFA still resides within FEMA, which is now under DHS, and it operates from the national Fire Academy campus in Emmitsburg, Maryland.

USFA's Core Activities

When it was established in 1974, USFA's stated goal was to reduce fire-related fatalities in the Nation by half—bringing the number to approximately six thousand per year within a generation. By 1998, the agency had met this goal, and these numbers continue to drop. However, according to the National Fire Protection Association (NFPA) the U.S. still has on of the highest rates of death, injury, and property loss due to fire among all industrialized nations. NFPA reports that in 2005 there were 3,675 civilian fire deaths, 17,925 fire injuries, and an estimated $10.672 billion in direct property losses due to fire.[1] They estimate that the fire fatality rate is 14.8 per million. Also, USFA reports that in 2006, 106 firefighters died in the line of duty.

USFA continues to combat these high fire losses with activities in training, education and fire awareness, data collection, research, and the administration of the Fire Grant programs.

Training: USFA's National Fire Academy (NFA) offers educational opportunities for the advanced professional development of mid- and senior-level fire and emergency medical services (EMS) officers, as well as allied professionals involved in fire prevention and safety activities. The NFA also develops and delivers educational and training programs that supplement and support State and local fire service training. At the campus in Emmitsburg, the NFA teaches approximately 8,900 students annually. NFA curriculum reaches another 73,000 students through support and partnership with State and local programs, and their courses reach an additional 200,000 professionals through web-based distance learning programs. The NFA shares the Emmitsburg Campus with FEMA's Emergency Management Institute (EMI). Together these two entities form the National Emergency Training Center. In FY 2007, USFA funded training activities at $10.7 million, approximately $700,000 over the previous year.

Public Education and Awareness: Through partnerships and special initiatives, USFA involves the fire service, the media, other federal agencies, and safety groups in the development and delivery of fire safety awareness and education programs. These programs are targeted to those groups most vulnerable to the hazards of fire, including the very young, elderly people, and the disabled. USFA is also highly engaged in educational activities to improve firefighter health and safety in an effort to reduce the number of firefighter fatalities and injuries.

Data Collection: USFA's National Fire Data Center (NFDC) administers the National Fire Incident Reporting System (NFIRS), which collects, analyzes, and disseminates data and information on fire and other emergency incidents to State and local governments, and the fire community. The NFDC provides a nationwide overview and analysis of the fire problem, identifying problem areas for which prevention and mitigation strategies are needed. Examples of applications of the NFIRS data can be found in USFA authored reports on topics such as *Structure Fire Response Times, Fire and Older Adults,* and *Candle Fire in Residential Structures.*

Research and Related Activities: Through research, testing and evaluation, USFA works with federal agencies, like NIST and the Consumer Product Safety Commission (CPSC), and private organizations to promote and improve fire and life safety.

[1] Current data are not readily available, but according to the International Association for the Study of Insurance Economics, in 2003 the U.S. suffered 4,300 fire-related deaths, while Japan, the country with the second highest number, suffered 2,300 (*http://www.genevaassociation.org/FIRE%20N°22.pdf*).

Research conducted within these partnerships focuses on a variety of topics, such as fire suppression technology, optimal fire department coverage to reduce risk, and research to enhance firefighter health and safety.

Fire Grants: The Assistance to Firefighters Grants and the Staffing for Adequate Fire and Emergency Response (SAFER) grants, generally referred to as the FIRE grants, are administered through the Office of Grants and Training within FEMA. Through a Memorandum of Understanding, USFA drafts the guidance for proposals and manages the peer review process for the grants. These programs are authorized separately from USFA.

Fire Research Activities at NIST

NIST has been involved in fire technology related research since the turn of the century and Americans have benefited from standards development work by NIST's Building Fire and Research Laboratory (BFRL) in areas such as smoke detector technologies and flame retardant mattresses and children's sleepwear. More currently, BFRL has been working on improving fire alarm panel displays in buildings and thermal imagers to enhance vision for firefighters, among other projects. In addition to research to aid standards development, BFRL assists in the technical investigations of major fire incidents, like the collapse of the World Trade Center and the Station Nightclub fire in Warwick, Rhode Island.

NIST collaborates with USFA on many of USFA's research projects. The *Federal Fire Prevention and Control Act of 1974* gave NIST authority to perform and support research on fire-related issues and in 2002, NIST and FEMA signed a memorandum of understanding to establish a framework for NIST to serve as a standards and measurement science resource for FEMA in areas of fire, disaster prevention, and homeland security. Funding for fire research at BFRL has remained relatively flat for the past 26 years: in 1980 fire research at BFRL received $7.3 million (2006 dollars) and $8.2 million in 2006. BFRL's grants to fund extramural fire research, and stimulate the fire science and engineering professional pipeline dropped from $4.2 million (2006 dollars) in 1980 to $1.3 million in 2006.

5. Priorities for Reauthorization and General Issues

USFA's current authorization will expire at the end of fiscal year 2008. Priorities in the reauthorizing legislation will address updating NFIRS, addition of curriculum topic areas for the NFA, and increased focus on firefighting in the wildland-urban interface. Other issues demanding attention in light of reauthorization are the funding and prioritization for research activities and educational programs.

NFIRS Update

Updating NFIRS is one of the fire community's most urgent priorities as timely and accurate fire incident data is a crucial resource for local fire departments and policy-makers. The current system captures data from approximately 21,000 fire departments across the Nation and records about one million fires a year as well as 13 million other emergency incidents. Though participation in NFIRS is required to be a recipient of FIRE grant money, USFA estimates they still only capture about 50 percent of the fires that happen annually. Another concern is that the current reporting system is slow and bureaucratic. To report incidents, local departments send their data to a State office, either via a paper form or a computer file. The state then periodically sends their compiled data to the National Fire Data Center in Emmitsburg. This system can delay reporting of the incidents to the database by up to a year. Both USFA and the fire service community would like to see a more modern reporting system that would allow for real-time reporting of incident data on a web-based platform. They believe that transforming the system in this manner will speed up reporting and bring NFIRS closer to capturing data on all the fire and emergency incidents that occur in the Nation.

NFIRS was last updated in 1999 to include reporting on a broader range of emergencies to which fire departments respond. Cost estimates for creating a web-based, real-time reporting system range from $3 to $5 million over three years. These costs reflects both the development of the system and capital investments in IT software or hardware that USFA would have to make.

Training Curriculum

The training available at NFA's Emmitsburg campus and through their partnerships and distance learning programs is a vital resource to the fire service and allied professionals. In most cases, these courses are unique. As such, NFA strives to work with partners from local, State, and fire service organizations to keep curriculum up to date and aligned with the needs of the fire service. The fire service

community has identified additional programmatic areas that are of key concern, though in many cases NFA is has been proactive in engaging in these areas already. They include:

- Firefighting in the Wildland-Urban Interface (WUI): WUI areas are developed sites that are adjacent to wildland areas. This proximity to forests, grasslands and other undeveloped areas increases the fire risk to these homes. The methods of fighting forest fires are fundamentally different than those of fighting structure fires and unfortunately many fire departments that must protect the homes and businesses in these areas do not have personnel properly trained in this type of firefighting. Development in these areas is increasing. Thirty-eight percent of new home construction in the Western U.S. is in these types of areas[2] and according to the *Second Needs Assessment of the U.S. Fire Service* completed by USFA and NFPA in 2006, only 24 percent of fire departments could fight a fire in the WUI with local personnel. In response to this growing problem, USFA has partnered with the National Wildfire Coordinating Group to create curriculum that would teach structure firefighters the core competencies needed for wildfires.
- Emergency Medical Service (EMS) Activities: Fire department-based EMS operations across the country account for 90.8 percent of the emergency medical first response in the Nation's 200 most populous cities. Nearly every firefighter receives emergency medical training. Because of the fire service's large role in EMS activities, the fire service community would like to ensure that the NFA continue its high-level EMS management courses.
- Fighting Fires Involving Hazardous Materials: Fires involving a variety of chemicals and other hazardous materials pose unique technical and safety risks to firefighters. Many departments across the country do not have enough adequately trained firefighters to respond to fires or other emergencies involving hazardous materials. The NFA currently offers classes to train fire and emergency service providers, as well as other local officials, on issues related to mitigation, prevention and response to the incidents involving hazardous materials that are either accidental or terrorist in nature.

In addition to ensuring that the NFA spends adequate resources on curriculum development, the fire service community, especially volunteer departments, would like to highlight the importance of "train the trainer" courses and material. USFA has made a concerted effort to make many of their courses web-based or partnered with a local organization. However, there are still many courses that require a trip to Emmitsburg and volunteer firefighters are often faced with paying their own travel expenses and using vacation time from their jobs to attend valuable NFA classes.

Research and Related Activities

USFA has been very resourceful in leveraging limited research funds to accomplish many projects important to the fire service. In FY 1999, USFA's funding for research was $500,000. Re-budgeting by USFA in FY 2000, and increased Congressional emphasis in the FY 2001 and FY 2002 reauthorization more than doubled this funding. In FY 2000, USFA funded research activities at $2 million, and for the next two fiscal years, the research funding matched the authorization levels of $3 million (FY 2001) and $3.25 million (FY 2002). In that authorization (P.L. 106–503), Congress requested that USFA submit a report describing their research agenda and the plans for its implementation. USFA submitted a report detailing this agenda in March of 2001, compiling it based on priorities identified at a series of workshops with fire community stakeholders. Working from USFA's overall goal for the research—reducing the loss of life to fire by 15 percent over five years—these workshops identified both broad needs, such as technology transfer, and very specific research goals in areas such as fire suppression and personal protective equipment. This agenda has not been officially updated since USFA submitted the agenda to Congress in 2001. In June of 2005, the National Fallen Firefighters Foundation held the National Fire Service Research Agenda Symposium at USFA facilities in Emmitsburg. The purpose of this symposium was to produce a document that prioritizes areas where research should be directed to improve firefighter health and safety. The symposium outlined close to forty areas of research in line with that goal, well more than USFA and its partners can fund.

[2] U.S. Fire Administration Topical Fire Research Series; Vol. 2, Issue 16, March 2002: Fires in the Wildland/Urban Interface

USFA's Role Within FEMA/DHS and Disaster Preparedness

In February of 2005, IAFC convened a summit of the major fire service organizations to discuss what they perceived as a declining budget and role for USFA within DHS. Then Fire Administrator David Paulison addressed the organizations, maintaining that while some USFA programs had been cut over the last four years, the cuts were not drastic and some programs were being maintained by other means at DHS. The fire service organizations expressed their opinion that as the largest contingent of first responders, who respond to a range of disasters, that the fire service should maintain a highly visible role in DHS and FEMA with regard to disaster preparedness and response.

6. USFA Budget

Table 1. USFA appropriations levels for FY2006, FY2007, and FY2008.

	FY2006 (PL 109-90)	FY2007 (PL 109-295)	FY2008 Admin. Request	FY2008 (House passed)	FY2008 (Senate Passed)
USFA	40.037	41.249	43.300	43.300	43.300
Noble Training Center	4.462	5.500	*	*	*
Total	44.499	46.849	43.300	44.300	43.300

Source: Congressional Research Service Report to Congress, United States Fire Administration: an Overview. Lennard Krueger, July 2007.

*P.L. 109-295 transferred the Noble Training Center to the State and Local Programs (SLP) Appropriation, Center for Domestic Preparedness.

7. Proposed Bill Summary

Section 2. Findings

Establishes Congressional findings that: fire deaths, injuries, and property loses in the U.S. are the highest in the industrialized world; that USFA provides crucial support to State and local fire agencies; the collection of data on fire incidents is a vital tool for local departments and national policy-makers; the research and development activities performed by USFA in collaboration with NIST and other federal agencies help to provide firefighters with the most advanced equipment and knowledge possible; and that USFA should continue to actively advocate for the fire service within the Department of Homeland Security.

Section 3. Authorizations

Authorizes USFA at $70,000,000 for fiscal year 2009, $72,100,000 for fiscal year 2010, $74,263,000, and $76,490,890 for fiscal year 2012.

Section 4. Education and Awareness Activities

Authorizes USFA to collaborate with social scientists to conduct education and awareness activities focusing on promoting fire prevention and safety for the general public, with a special focus on vulnerable groups including children and the elderly.

Section 5. Training Activities

Authorizes additional curriculum at the National Fire Academy (NFA) addressing training related to firefighting in the wildland-urban interface (WUI), emergency medical services (EMS) management, and handling issues relating to fire and spills of hazardous materials. Authorizes curriculum development and courses in the field of instructor training for instructors involved in firefighter training activities.

Section 6. National Fire Data Center

Directs USFA to update the National Fire Incident Reporting System (NFIRS) to speed reporting and to capture more incident information. It authorizes $5 million total for FY 2008 through FY 2010.

Section 7. Research and Related Activities

Authorize additional research into firefighting technologies and techniques for the wildland-urban interface.

Section 8: Definitions

Defines "Administrator," "Wildland-Urban Interface," and "Hazardous Materials."

DRAFT USFA REAUTHORIZATION BILL

H.R.

United States Fire Administration Reauthorization Act of 2007

Section 1. Short Title

Section 2. Findings

1) The loss of life due to fire in the United States has dropped significantly over the last 25 years. However, the United States still has one of the highest fire death rates in the industrialized world, with the National Fire Protection Association reporting 3,675 civilian fire deaths, 17,925 civilian fire injuries, and $10.672 billion in direct losses due to fire in 2005. In 2006, the United States Fire Administration reported 106 on-duty firefighter deaths.
2) The United States Fire Administration provides crucial support to the Nation's 30,300 fire departments through training, emergency incident data collection, fire awareness and education, and support of research and development activities for fire prevention, control, and suppression technologies.
3) The collection of data on fire and other emergency incidents is a vital tool both for policy-makers and emergency responders to identify and respond to emerging hazards. Updating the U.S. Fire Administration's data collection capabilities is essential for accurately tracking and responding to the magnitude and nature of the Nation's fire problem.
4) The research and development activities performed by National Institute of Standards and Technology, USFA, and non-governmental organizations on fire technologies and standards setting for these technologies gives the Nation's firefighters access to the most effective firefighting tools possible.
5) USFA is one of the only channels between State and local fire agencies and the Federal Government, and as such deserves a prominent place within the Department of Homeland Security.

Section 3. Authorization of Appropriations

Section 17(g) (1) of the *Federal Fire Prevention and Control Act of 1974* (15 USC 2216(g)) is amended by striking subparagraphs (A) through (K) and inserting the following:

" (A) 70,000,000 for fiscal year 2009;

" (B) 72,100,000 for fiscal year 2010;

" (C) 74,263,000 for fiscal year 2011;

" (D) 76,490,890 for fiscal year 2012."

[Specific authorization of funds (either amount or percentage) to perform the research and related activities authorized **15 USC** Sec. **2207**]

Section 4. Fire Awareness and Educational Activities

[The Administrator shall collaborate with social scientists to develop, evaluate, and implement best practices for educating and promoting behavior change with regard to fire awareness and prevention among the general public, especially among vulnerable or high risk groups such as children, the elderly, minorities, and firefighters.]

Section 5. The National Fire Academy

Section (d)(1) of 15 USC 2206 is amended by re-designating sections (I) to (N) and inserting:

(I) Response tactics and strategies for dealing with fires occurring at the wildland-urban interface.

(J) Response tactics and strategies for fire involving hazardous materials.

(K) Advanced Emergency Medical services training.

[The Administrator shall make such sums as are necessary authorized available to engage in the "training of trainers".]

[The Administrator shall make such sums as are necessary available to carry out the activities in section (d)(2).]

Section 6. National Fire Incident Reporting System

$1.67 million each fiscal year FY 2009, FY 2010, and FY 2011 of the funds authorized in Section 3 shall be used to update the National Fire Incident Reporting system to a web-based, real-time, incident reporting data-base. Activities to carry out this update can include, but are not limited to, the hiring of additional staff, capital investment, engaging contractors, and educating users on the new system.

15 USC 2208 section (b)(2), after "assist" insert "Federal,"

Section 7. New Firefighting Technology

Re-designate sections (e), (f), and (g) of 15 USC 2207 as (f), (g), (h) respectively and insert after section (d) a new section:

> "Wildland Urban Interface Assistance:
>
> "The Administrator is authorized to assist the Nation's Fire Services directly or through contracts, grants, or other forms of assistance, to sponsor and encourage research into approaches, techniques, systems, and equipment to improve fire prevention and control in those urban areas that abut wildlands."

Section 8. Definitions

The term Administrator refers to the Fire Administrator who is the Assistant Administrator of the Federal Emergency Management Agency.

[The term Wildland-Urban Interface refers to:.]

[The term Hazardous Materials refers to:.]

Chairman WU. Good morning. I would like to welcome everybody to this morning's hearing on the United States Fire Administration. There are few issues more important than standing up for our nation's first responders. The Science and Technology Committee has historically been one of the fire service community's strongest backers through our support for and oversight of the United States Fire Administration. I am eager to hear today's testimony from our prestigious group of witnesses, who represent a broad group of stakeholders in the fire service community.

USFA was formed by Congress in 1974 in response to *America Burning,* a report by the President's Commission on Fire Prevention and Control that found there were over 12,000 deaths due to fire in this country and over 300,000 fire injuries every single year. Through the hard work of USFA and others, we have fortunately seen that number drop dramatically. We are now a much safer nation thanks to improved awareness of fire safety practices, increased use of smoke detectors and sprinklers, and other fire safety measures. Still, however, over 3,000 people die each year in fires and 10,000 more are injured. In addition, over 100 firefighters lose their lives annually in the line of duty as we saw tragically this past June in South Carolina.

Looking around the globe, though, our high numbers are an anomaly in the industrialized world. In Europe, their fatality rate per capita is 70 percent lower than ours. So truly we have more work to do.

USFA supports local fire departments in a variety of manners. They offer training and career development to thousands of mid-level firefighters, fire chiefs, and other emergency management officials. Through the National Fire Data Center, they collect and manage data on the millions of fires and other emergencies that fire departments respond to each year, data that can be used to manage trends and set policy. USFA develops fire education and awareness curriculum used across the country. They aim these messages at groups who suffer the highest fire casualties such as the young, the elderly, firefighters, as well as others.

In fact, my home state of Oregon was one of the first states to begin reporting fire data to USFA and also one of the highest users of USFA training programs.

Lastly, in partnership with the National Institute of Standards and Technology, or NIST, the Department of Homeland Security's Science and Technology Directorate, other federal agencies, and private organizations, USFA conducts and directs research on a variety of fire-related topics from technology—like thermal imaging cameras and protective clothing to assist firefighters in the line of duty—to studies of behaviors that cause fires.

As I am sure we will hear today, USFA's programs are incredibly important to the Nation's fire service who must meet an increasing number of challenges from preparing for terrorist attacks and catastrophic hurricanes to the everyday, but still scary, house fire.

Standards are also an essential part of the work of USFA and its many partners.

Our witnesses today will no doubt discuss USFA's role in the fire safety standards development process as well as the important contributions of NIST. As many of you know, fire was the inspiration

for some of the original standards done by NIST. In 1904, a large fire broke out in Baltimore. Fire companies from around the region responded, but they found that they were unable to fit their hoses onto the Baltimore hydrants because they were not built to standard sizes; and the fire burned for an additional 30 hours in spite of the regional response. Following the fire, NIST, which was then called the National Bureau of Standards, was asked by Congress to work with NFPA to set a standard that would avert similar future tragedies. To me this story exemplifies the challenge in coordinating a truly local service performed by over 30,000 different fire departments at the federal level.

These 30,000 different departments serve a variety of communities, from the largest to the smallest, and an overwhelming number of those who serve as firefighters do so on a volunteer basis. One asset the Federal Government can offer these departments is the U.S. Fire Administration.

As we look forward to reauthorizing the Fire Administration, I am very interested to hear from our witnesses today, who I believe represent a broad collection of views from the fire community, on what USFA is doing right, and what they need to be doing to meet the needs of the fire community more effectively.

[The prepared statement of Chairman Wu follows:]

PREPARED STATEMENT OF CHAIRMAN DAVID WU

Good morning. I would like to welcome everybody to this morning's hearing on the United States Fire Administration.

There are few issues more important than standing up for our nation's first responders.

The Science and Technology Committee has historically been one of the fire service community's strongest backers through our support for and oversight of the U.S. Fire Administration. I'm eager to hear today's testimony from our prestigious group of witnesses, who represent a broad group of stakeholders in the fire service community.

USFA was formed by Congress in 1974 in response to *America Burning,* a report by the President's Commission on Fire Prevention and Control that found there were over 12,000 deaths due to fire in this country and over 300,000 fire injuries each year. Through the hard work of USFA and others, we have fortunately seen that number drop dramatically.

We are now a much safer nation, thanks to improved awareness of fire safety practices like the increased use of smoke detectors and sprinklers, and other fire safety measures. Still, however, over 3,000 people die each year in fires and 10,000 more are injured.

In addition, approximately 100 firefighters lose their lives annually in the line of duty, as we saw tragically this past June in South Carolina. In looking around the globe though, our high numbers are an anomaly in the industrialized world. In Europe, their fatality rate per capita is 70 percent lower than ours. So truly we have a lot more work to do.

USFA supports local fire departments in a variety of manners. They offer training and career development to thousands of mid-level firefighters, fire chiefs, and other emergency management officials. Through the National Fire Data Center they collect and manage data on the millions of fires and other emergencies fire departments respond to each year—data that can then be used to manage trends and set policy. USFA develops fire education and awareness curriculum material to be used across the country. They aim these messages at groups who suffer the highest fire casualties, such as the young, the elderly, and firefighters, as well as others.

And in fact, my home state of Oregon was one of the first states to begin reporting fire data to USFA and also is one of the highest users of USFA training programs.

Lastly, in partnership with the National Institute for Standards and Technology (NIST); the Department of Homeland Security's Science and Technology Directorate; other federal agencies; and private organizations, USFA conducts and directs research on a variety of fire related topics, from technology like thermal imaging cam-

eras and protective clothing to assist firefighters in the line of duty, to studies of behaviors that cause fires.

As I am sure we will hear today, USFA's programs are incredibly important to the Nation's fire service who must meet an increasing number of challenges from preparing for terrorist attacks and catastrophic hurricanes to the everyday, but still scary, house fire.

Standards are also an essential part of the work of USFA and its many partners. Our witnesses today will no doubt discuss USFA's role in the fire safety standards development process, as well as the important contributions of NIST.

As many of you know, fire was the inspiration for some of the original standards work carried out by NIST. In 1904, a large fire broke out up in Baltimore. Fire companies from around the region responded, but found that they were unable to fit their hoses onto the Baltimore hydrants because they were not built to standard sizes, and the fire burned for an additional 30 hours in spite of the wide regional response.

Following the fire, NIST, which was then called the National Bureau of Standards, was tasked by Congress to work with NFPA to set a standard that would avert similar future tragedies. To me this story exemplifies the challenge in coordinating a truly local service, performed by over 30,000 different fire departments, at the federal level.

These 30,000 different departments serve a variety of communities from the biggest to the smallest and an overwhelming number of those who serve as firefighters do so on a volunteer basis. One asset the Federal Government can offer these departments is the U.S. Fire Administration.

As we look forward to reauthorizing the Fire Administration, I am very interested to hear from our witnesses today, who I believe represent a broad collection of views from the fire community on what USFA is doing right and what they need to be doing to meet the needs of the fire community more effectively.

Chairman WU. And now for his opening statement, our Ranking Member of the Subcommittee, Dr. Gingrey of Georgia.

Mr. GINGREY. Thank you, Chairman Wu, and good morning. And I want to thank you for holding the hearing today that will begin the process of reauthorizing the United States Fire Administration. The stated mission of USFA is to reduce life and economic losses due to fire and related emergencies through leadership, advocacy, coordination, and support. This organization provides vital assistance in the areas of training, fire education, and awareness and grants to a number of local fire departments across the country including my district, these very, very important grants. The testimony that our witnesses will provide this morning will help better shape the future priorities of the USFA as we work on the agency's reauthorization, and certainly I look forward to hearing from them on this important matter.

USFA's training, education, and monitoring activities have made a substantial impact over the last 30 years. Smoke alarms are now standard issue to residences across the country. I wish they were all wired instead of battery operated, but we continue to work on that. Over one million firefighters have received advanced training from USFA, and firefighter equipment and safety continually improves. However, while USFA should be proud of its record of achievement, it is also clear that improvements still need to be made. In the last ten years, deaths related to fires have decreased by approximately 25 percent from nearly 5,000 in 1996 to 3,675 in 2006. Although that decrease in fire-related deaths is commendable, the United States still has one of the highest death rates from fire in the industrialized world. It is hard to believe. Additionally, despite decreases in the number of fires, direct damage costs are increasing and have topped $10 billion per year. Put that another

way, in an average year, fire causes as much damage in the United States as do hurricanes.

These statistics highlight the importance of the USFA, United States Fire Administration, and why we are here today. USFA has a substantial public safety mission whose magnitude is not often recognized.

Therefore, as the Committee begins drafting legislation that will provide a framework for USFA in the coming years, I look forward to this panel of witnesses to sketch out where the needs are the greatest, what programs have been successful to this date and maybe where we currently may be a little bit off-course.

Before I finish, though, let me bring up one particular area of concern for me. Several of our witnesses I think will discuss potentially updating the National Fire Incident Reporting System. I think that's referred to as NFIRS. I want to urge a little caution and diligence in approaching the upgrade. IT projects like this one, even on this committee and Chairman Gordon has a bill pertaining to IT in regard to health information technology, electronic medical records, but IT projects can rapidly fall apart potentially leaving USFA with some very unhappy users and ballooning infrastructure costs. So the USFA and the fire community, I think, need to be very specific about the goals and limitations in creating a new system. Will web-based reporting bring in better quality data or provide tangible benefits over the current system? That is the big question, and how will the upgraded system meet the needs of local, State, and USFA personnel?

These are just a couple of questions that need to be addressed as we begin the process of reauthorizing USFA, and I look forward to hearing the testimony of all of our witnesses today. Mr. Chairman, thank you again for convening the hearing to address the future of USFA and I yield back.

[The prepared statement of Mr. Gingrey follows:]

PREPARED STATEMENT OF REPRESENTATIVE PHIL GINGREY

Good morning Chairman Wu. I want to thank you for holding this hearing today that will begin the process of reauthorizing the United States Fire Administration. The stated mission of USFA is "reduce life and economic losses due to fire and related emergencies, through leadership, advocacy, coordination and support." This organization provides vital assistance in the areas of training, fire education and awareness and grants to a number of local fire departments across the country. The testimony that our witnesses will provide this morning will help better shape the future priorities of USFA as we work on the agency's reauthorization, and I look forward to hearing from them on this important matter.

USFA's training, education, and monitoring activities have made a substantial impact over the last 30 years. Smoke alarms are now standard issue in residences across the country; over a million firefighters have received advanced training from USFA; and firefighter equipment and safety continually improves.

However, while USFA should be proud of its record of achievement, it's also clear that improvements still can be made. In the last ten years, deaths related to fires have decreased by approximately 25 percent, from nearly 5,000 in 1996 to 3,675 in 2006. Although that decrease in fire-related deaths is commendable, the United States still has one of the highest death rates from fire in the industrialized world. Additionally, despite decreases in the numbers of fires, direct damage costs are increasing and have topped $10 billion per year. Put another way, in an average year, fires cause as much damage in the United States as hurricanes.

These statistics highlight the importance of the United States Fire Administration and why we are here today. USFA has a substantial public safety mission whose magnitude is not often recognized.

Therefore, as the Committee begins drafting legislation that will provide a framework for USFA in the coming years, I look to this panel of witnesses to sketch out where the needs are greatest, what programs have been successful to date, and where we currently may be a bit off course.

Before I finish, let me also bring up one particular area of concern for me. Several of our witnesses will discuss potentially updating the National Fire Incident Reporting System or NFIRS (en-firs). I would like to urge caution and diligence in approaching this upgrade. IT projects like this one can rapidly fall apart, potentially leaving USFA with unhappy users and ballooning infrastructure costs. USFA and the fire community need to be very specific about the goals and limitations of a new system. Will web-based reporting bring in better quality data or provide tangible benefits over the current system? How will the upgraded system meet the needs of local, State, and USFA personnel?

These are just a couple of questions that need to be addressed as we begin the process of reauthorizing USFA. I look forward to hearing the testimony of all of our witnesses today. Mr. Chairman, thank you again for convening this hearing to address the future USFA. With that, I yield back.

Chairman WU. Thank you very much, Dr. Gingrey. At this point, I would like to introduce our witnesses today. First, the United States Fire Administrator, Gregory Cade of the USFA. Before taking this position, he was the Fire Chief and Emergency Services Coordinator for the City of Virginia Beach. Dr. Shyam Sunder is the Director of the Building and Fire Research Laboratory at the National Institute of Standards and Technology. Chief Steven Westermann is the President and Chief Fire officer for the International Association of Fire Chiefs and the Fire Chief of Central Jackson County Fire Protection District in Missouri. An old friend, Captain Robert Livingston is the Legislative Director of the Oregon State Council of Fire Fighters of the International Association of Fire Fighters and also a Captain in the Salem, Oregon, Fire Department. Chief Gordon Henderson I will let Dr. Gingrey introduce in a moment, and Dr. John Hall is the Assistant Vice-President of Fire Analysis and Research for the National Fire Protection Association. And I yield to Dr. Gingrey to further introduce Chief Henderson.

Mr. GINGREY. Mr. Chairman, I thank you very much for that courtesy of allowing me to introduce Chief Gordon Henderson from Ford County, Georgia, my district, the 11th District of Georgia in Northwest Georgia, the greatest part of the state. Chief Henderson has served in the fire service for 32 years. He spent the last 16 as Deputy Chief of Operations for the Rome, Floyd County, Fire Department. Chief Henderson is also Past President of the Georgia State Firefighters Association, and he currently serves as the Chairperson of the Georgia Fire Service Legislative Committee. That is an important one. He is appearing before us today on behalf of the National Volunteer Fire Council, and it is always nice to welcome a fellow Georgian to testify before the Subcommittee. Mr. Chairman, I know that you will be able to provide Chief Henderson with a unique and interesting perspective due to your years of service and leadership experience, and I certainly thank you for joining us today. Thank you, Mr. Chairman.

Chairman WU. I reclaim my time. As all of the witnesses know, your written testimony will be submitted in full, and your spoken testimony, please try to limit it to five minutes after which the Members of the Committee will have five minutes each to ask questions; and if any other Members have opening statements to submit, they will be submitted for the written record.

[The prepared statement of Mr. Matheson follows:]

PREPARED STATEMENT OF REPRESENTATIVE JIM MATHESON

Chairman Wu and Ranking Member Gingrey, I thank you both for holding this important hearing this morning regarding the U.S. Fire Administration (USFA). The U.S. Fire Administration plays a critical role in protecting communities against fire losses through its training, education, data collection and research activities.

Coming from Utah, I am particularly interested in hearing more about what the USFA and other agencies are doing to address the challenges of fighting fire in the Wildland-Urban Interface. In reading your testimony in preparation for this hearing, I was interested to learn about the rising costs and dangers associated with firefighting in these rural areas.

I look forward to hearing from this distinguished panel of witnesses about the USFA's current priorities as well as their thoughts as to how we can best address the challenges of firefighting in the Wildland-Urban Interface. Thank you, Mr. Chairman.

[The prepared statement of Mr. Mitchell follows:]

PREPARED STATEMENT OF REPRESENTATIVE HARRY E. MITCHELL

Thank you, Mr. Chairman.

The United States Fire Administration serves an important role in making sure that our first responders have all the latest training and information available.

For the last 33 years, this agency has partnered with the National Institute of Standards and Technology and others to set forward technology, curriculum, and consumer education standards that have helped significantly decrease fire-related deaths and injuries.

As you know, my district lies in the heart of Arizona's arid, hot, Sonoran desert.

This climate attracts thousands of new residents and millions of visitors every year, and it is our responsibility to keep them safe.

In my capacity on the Transportation and Infrastructure Committee, I have fought to provide Arizona with adequate resources to make sure this population growth is met with adequate infrastructure improvement.

My district has 29 fire stations that employs 555 active volunteer and career firefighters.

These brave men and women protect 671,000 residents day and night, and contribute to keeping Arizona among the lowest rate of fire-related deaths in the Nation.

Unfortunately, the Fire Administration has not been able to keep up with maintaining an efficient fire incident database. This is due to bureaucratic red-tape and aging database technology.

We owe it to our constituents and first responders to update this system and minimize bureaucratic barriers.

I am also concerned about protecting Wildland-Urban Interface areas.

With cities expanding into forests, deserts, and other fire-prone environments, it is important that our firefighters are properly trained, equipped, and fully prepared to deal with emerging threats.

I am looking forward to hearing from our panel on how we can achieve these goals, and I yield back.

Chairman WU. At this point, we will begin our testimony with Administrator Cade. Please proceed, Mr. Cade.

STATEMENT OF MR. GREGORY B. CADE, ASSISTANT ADMINISTRATOR, FEDERAL EMERGENCY MANAGEMENT AGENCY; U.S. FIRE ADMINISTRATOR, UNITED STATES FIRE ADMINISTRATION, DEPARTMENT OF HOMELAND SECURITY

Mr. CADE. Thank you, Mr. Chairman. I would like to say good morning to both of you and all of the rest of the Members of the Committee. It is a pleasure to be here this morning to speak on behalf of the United States Fire Administration and Secretary Chertoff. I appreciate what the Committee is getting ready to do.

I think the reauthorization of the United States Fire Administration is something critically important.

As you pointed out in my biography, I have had the pleasure of being in the fire service now for 40 years, and the things that are done as part of the United States Fire Administration are extremely important. USFA is truly a leader in providing fire safety and fire prevention programs. We don't do it by ourselves, and sitting here today with me is a distinguished panel of other people that we work with and partner with to get the things done that we need to do.

There is nothing more important in my opinion than the education of the first responders in the first response community. Yes, my experience has been the first responders truly are there when things start, and they are there when everybody else goes home. So making sure that they have the tools and the training and the education to be able to do their job, I see as a very critical issue, and I see the role of the United States Fire Administration as one that can help not only provide some of the training directly to that community but also, truly with our State partners and local partners, to be able to provide it out at the local level. It is impossible for everyone to get up to the wonderful facility at the National Emergency Training Center, even though we get about 9,000 people through there a year. There are 1.2 million firefighters here in the United States that need that training. So clearly, we have to partner with many of the organizations that sit here at this table today to be able to get our job done.

I think that there is a critical need for the fire service to continue to take the leading role in teaching how to provide incident command training that meets the National Incident Management System. There is no one in my opinion who uses the ICS system on a daily basis more effectively than the fire service, and hopefully, what we are going to be able to do with the United States Fire Administration is to help them to become a center of excellence in their local communities and take the knowledge that they have and provide that to everyone else.

I know that when you look at the other issues that are facing the fire service, the critical issue that has come about certainly in the last few years, but probably something we have been working on for the last ten is this whole issue of the national wildland urban interface and the problems that it is creating for the communities. The USFA has been working very diligently with its partners, not only in the U.S. Fire Service, but also in the Bureau of Land Management, to try and figure out how do we do a better job of preparing first responders at the structural firefighting level that are continuing more and more to be engaged in doing wildland firefighting. So we are working with those and other partners.

It is important for me to be sitting here today the week before the National Fire Prevention Week starts, and I am glad that you chose today to conduct the hearing because next week we are going to put an even greater focus, and hopefully get our whole country to focus on, fire prevention and fire prevention activities, such as changing the batteries in their smoke detectors; and I, too, wish they were all wired together. It would certainly make a significant difference.

I agree that the numbers of fire deaths and fire injuries here in the United States is something that we continue to need to work on and do a much better job with. Our commitment within the United States Fire Administration is to look at using the data collection capabilities that we have to put the facts out there to help guide the research that is being done with our partners and to look at better ways to be able to safeguard not only the communities but certainly safeguard the firefighters. Unfortunately, so far this year, we are at 96 line-of-duty deaths. That really concerns me. I am afraid before this year is out, we will be over 120. I have spoken out about it numerous times, and I am going to continue to speak about it. I think that there is a role that needs to be continued to be pushed from the United States Fire Administration standpoint in the use of residential sprinklers as a way of hopefully being able to address the next level of injuries and deaths that are taking place. I think that putting a greater emphasis on residential sprinkler systems will not only do a better job of suppressing the fires but I think it will help to deal with the $10 billion a year loss and even more importantly, with the loss of lives that we are seeing, not only in the community but also with our firefighters.

So it is important, I think, to be able to do that, to look at how do we collect that data. We are looking at trying to make some modifications in our data collection capability and go to a web-based program. One of the dilemmas that we have right now is the way the system is structured. In some cases, we are not getting the data out of the states until 12 or 18 months. When I went through my confirmation hearing, and I have said this before, some of the questions that I had that I wanted data to be able to answer, I couldn't get 2006 statistics, which I thought was pretty amazing. When you can go on the internet today and Google something and find out tons of information, to me, a fire chief sitting at his or her desk ought to have that same capability to look at using the data. There is no one else in the world who has better fire statistics and more of it than the United States Fire Administration and the National Fire Data Center. We have over 21,000 fire departments that are continuing to provide information to us across this country. We are looking at expanding it. We have a program right now where we have been working not only with the Department of Defense but also with our tribal partners to see about how we can do a better job of correlating the data for them and be able to use that.

We have a lot of relationships and you will hear that, I am sure, from the other people that are going to speak after me about the good things that are going on and the needs that we have across the fire service.

With that, Mr. Chairman, I will be happy to answer whatever questions that you have.

[The prepared statement of Mr. Cade follows:]

PREPARED STATEMENT OF GREGORY B. CADE

Good morning, Mr. Chairman and Members of the Committee. My name is Gregory B. Cade and I am an Assistant Administrator at the Federal Emergency Management Agency (FEMA) and the United States Fire Administrator in charge of the United States Fire Administration (USFA) at the Department of Homeland Security (DHS). I appreciate the opportunity to appear before you today on behalf of Secretary Chertoff.

Each year fires injure and kill more Americans than the combined losses from floods, hurricanes, tornadoes, earthquakes, and other natural disasters. Death rates from fires in the United States are among the highest in the industrialized world. Part of the USFA's mission is to reduce loss of life and property due to fire and related emergencies. This is not an easy task, but it is one the USFA takes on every day, in coordination with other federal agencies, and in partnership with fire protection and emergency service communities. We take the mission of preparing the Nation's fire service seriously and will continue to work tirelessly to reduce the loss of life among the civilian population as well as among the Nation's fire service.

As you are aware, USFA recently completed a transition to FEMA as part of the *Post Katrina Emergency Management Reform Act.* As a part of "New FEMA," the staff will continue to work diligently to reduce deaths, injuries, and the damage to property through leadership, advocacy, coordination and support in USFA's long standing four basic mission areas: training, public education and awareness, applied research and technology, and data collection and analysis.

To accomplish our mission, we work with the fire service, other emergency responders, Federal, State, local and tribal governments, and allied professionals to better prepare them to prevent, protect against, and respond to all incidents, including acts of terrorism. Being prepared for all types of incidents is by far the biggest challenge in this day and age. With the threats today's fire services face, preparing them to respond to all incidents is essential. We will continue to provide educational programs through the National Fire Academy (NFA) and provide educational materials to our partners at the State, local, and tribal level to help achieve higher levels of preparedness.

We are interacting with State, local and tribal governments, the private sector, and DHS's Science and Technology Directorate to provide standardized, practical, inter-operable equipment. We are helping first responders and emergency managers practice and refine their response plans with partners at all levels of government.

Today, I will focus my remarks on USFA's programs and services. Through these programs we will improve the preparedness, effectiveness and safety of our first responders. I will also summarize our current activities and future needs.

USFA is a national leader in providing fire safety and prevention programs. We also lead the way in preparing communities to deal with fires and other hazards. USFA is supporting the efforts of local communities to reduce the number of fires and fire deaths, and it champions federal fire protection issues and coordinates information about fire programs.

In terms of our preparedness programs, we recognize the importance of education as a vital step toward a first responder community prepared to respond to any kind of emergency, ranging from a small fire to a terrorist attack involving a large number of victims or extensive infrastructure damage. We continue to administer educational programs for community leaders and first responders to help them prepare for and respond to emergencies regardless of cause or magnitude. USFA also strongly advocates for local fire departments to be the center of preparedness within their jurisdictions. We believe these local departments should take the lead in preparing their communities through public education and training other departments and agencies on the concepts of the Incident Command System and the National Incident Management System. These fire departments should set the standard for the rest of the community by ensuring their members all have family emergency plans and at least 72 hours worth of supplies. The public looks to the fire department for help once a disaster strikes, and we believe fire departments should set the example of how to prepare before the disaster strikes.

USFA will continue to work with the Centers for Disease Control and Prevention and their National Center for Injury Prevention and Control. Through this partnership we can share data and analyses to help both agencies better track civilian fire injuries and deaths.

We are working closely with other divisions within FEMA, including the National Preparedness Directorate (NPD). USFA has been collaborating with the NPD's National Integration Center to coordinate training programs and to ensure NFA courses are not in competition with or repetitive of NPD's, the Emergency Management Institute's or Center for Domestic Preparedness courses. USFA has also been working closely with NPD to ensure all NFA courses are in line with the new National Preparedness Guidelines and touch on elements of the Universal Task List and the Target Capabilities List.

Education and Preparedness Programs

NFA offers a wide variety of training and educational programs to promote the professional development of command level fire officers, emergency managers, emer-

gency responders, technical staff, and allied professionals such as architects and engineers.

Students and their supervisors who have attended NFA courses have told us Academy courses have improved their job performance and increased their professional development. An assessment conducted in FY 2006, revealed that 82 percent of supervisors who responded reported an improvement in the student's job performance following training. In addition, 93 percent reported that attending courses at NFA contributed to the student's professional development and almost 87 percent reported that the training improved their department's performance.

State and local support for fire service training must be increased and the federal role is to foster this participation. USFA will continue to:

- Coordinate the exchange of training materials and information among State and local fire training systems;
- Focus on distance learning and alternate training delivery methods such as National Fire Academy Online (NFAOnline);
- Revise courses to include the most current information, public fire safety education and emergency response;
- Partner with associate and bachelor degree programs to align the national academic fire curricula;
- Include multiple delivery formats in future course development so the nexus of the course may be provided to the field in a variety of adaptable formats;
- Shorten some resident classes to offer more educational opportunities; and
- Provide faster turnaround to get newly learned skills applied in the field.

Distance learning strategies and strategic partnerships with State fire service training organizations have helped us realize a continued increase in the number of students the NFA trains each year. The most recent admissions statistics show in FY 2007 8,278 students attended on-campus residential training courses and 76,918 students attended off-campus/distance learning training courses, which include classroom-based training at the State/local/tribal level as well as online distance learning. This represents a 13 percent increase over the previous fiscal year.

USFA's NFA works in partnership with accredited State Fire Training Programs. These State programs have over $700 million in capital facilities and trained over 750,000 firefighters last year.

For the past 10 years, we have partnered with colleges and universities across the country to ensure important fire safety concepts are delivered to the Nation's fire service. Our training programs continue to focus on courses aligned with USFA's Operational Objectives. The NFA continues to develop and deliver training that cannot be obtained through other institutions. A curriculum review for the NFA curriculum is scheduled for FY 2008 and we expect to see those results by June 2008.

USFA is working with the National Incident Management System division within FEMA and National Wildfire Coordinating Group to prepare regional All Hazard Incident Management Teams (AHIMT). These teams provide support for major incidents prior to, or in lieu of, the arrival of a Federal IMT. We are training these teams on almost a weekly basis throughout the Nation. So far this year we have helped establish 12 teams, coordinated 48 training sessions, and expect another nine course offerings within the next six months.

Our National Fire Programs division has assumed additional preparedness roles since our last reauthorization hearing. The division now has staff dedicated to:

- Work with the Department of Agriculture to provide expertise in structural firefighting as part of the National Response Framework Emergency Support Function 4;
- Support the Emergency Management and Response—Information Sharing and Analysis Center (EMR–ISAC) for non-classified intelligence sharing with America's first responders; and
- Provide a presence at the DHS National Operations Center to keep first responders apprised of emerging threats and events.

Public Education and Awareness

USFA continues to deliver fire safety messages to those most vulnerable to fire—the very young, the elderly, and others. USFA works closely with National fire service organizations to push the message of fire safety out to all at risk sectors of the population. For example, this year USFA will once again partner with the National Fire Protection Association for the National Fire Prevention Week, which is scheduled for October 7–13, 2007. We will continue to manage the Quick Response pro-

gram where we blitz local media with proactive fire safety messages following fire fatalities.

USFA works to identify and develop public, private, and fire community partnership opportunities to implement and enhance fire prevention and awareness activities. We do this by providing professional, managerial, and technical assistance to State, local, and tribal fire service organizations and individuals.

We are working with our State and local partners, as well as industry representatives, to support residential fire sprinkler initiatives—a low-cost and reliable life saving solution to one segment of America's fire problem.

We have initiated a thriving program entitled Prevention Advocacy, Resources, and Data Exchange (PARADE) that provides State and metropolitan fire officials a venue for sharing their own successful fire prevention and protection strategies.

Data Collection

USFA continues to collect, analyze, publish, and distribute data to define and describe the national fire problem while assisting State, local, and tribal agencies in developing standardized incident reporting methods for the collection and analysis of local fire incident data.

USFA's National Fire Data Center (NFDC) administers the National Fire Incident Reporting System (NFIRS), which is used by over 21,000 fire departments to document incidents to which they respond. In addition, the NFDC manages the National Fire Department Census, a voluntary online directory of almost 26,000 fire departments.

NFDC also tracks on-duty firefighter fatalities and has conducted an annual fatalities analysis for more than 20 years. Through the collection of information on the causes of firefighter deaths, USFA is able to focus on specific problems and direct efforts toward finding solutions to reduce the number of firefighter fatalities in the future. This information is also used to measure the effectiveness of current programs directed toward firefighter health and safety.

NFDC disseminates a wide range of technical, educational, and marketing information to the general public and fire services organizations through Internet and print-based mediums.

Research and Technology

To maximize the impact of limited resources, USFA uses its national position to serve as a focal point for developing cooperative relationships among the diverse organizations that have a shared interest in developing new technologies to address fire safety and firefighting. USFA-supported fire research, almost without exception, is accomplished through partnerships.

USFA is working closely with the DHS Science and Technology (S&T) Directorate to identify areas of complementary research, inform S&T on research needs specific to the fire community, and explore ways of combining resources for maximum impact.

USFA has long standing working relationships with a variety of federal agencies including the Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Consumer Product Safety Commission, Department of Transportation, Department of Housing and Urban Development, Department of Justice, Occupational Safety & Health Administration, and the National Institute of Standards and Technology. In addition, there are partnerships with national-level fire trade associations such as the National Volunteer Fire Council, the International Association of Fire Chiefs, the International Association of Fire Fighters, International Code Council, and the National Fire Protection Association. USFA also reaches out to academic institutions and non-fire service organizations to address topics of mutual interest. By sharing resources and expertise, the partners are able to achieve much more together than they could achieve individually.

The data and information derived from these partnership research efforts have influenced the decisions of consensus standards-making committees on a number of topics such as thermal imaging cameras, firefighting protective clothing, chemical protective clothing, protective clothing for urban search and rescue, self-contained breathing apparatus, and residential sprinkler systems.

USFA also leverages research partnerships and technology developments to improve fire prevention and promote public safety. Currently, USFA is working with others in the fire sprinkler community to promote installation of residential fire sprinklers. Residential sprinklers can substantially reduce the impact of residential fire incidents, injuries, and fatalities. The National Fire Protection Association reports that when sprinklers are present the chances of dying in a fire are reduced by about two-thirds, regardless of whether smoke alarms were present or not. If sprinklers are introduced before smoke alarms, the death rate would fall about 69

percent; if smoke alarms are introduced first, the death rate would be expected to fall by one-half; sprinklers would reduce the remaining fatality rate by 63 percent. Together with smoke alarms, sprinklers cut the risk of dying in a home fire by 82 percent, relative to having neither, and there is a potential for a dramatic decrease in the over 2,500 residential fire deaths which occur each year in America. Average property loss per residential fire is about one-half less when compared to fires where sprinklers are not present. In addition, as more than 25 percent of firefighter on-duty deaths are associated with residential fires, a long-term benefit of residential sprinklers is firefighter injuries and deaths will also be reduced. Simply put—we will have fewer firefighters killed on-duty if we have fewer firefighters responding to major fires that could have been extinguished or contained by a residential sprinkler system.

Since FY 2005, 15 Firefighter Research and Development grants have been awarded through the Assistance to Firefighters Grants (AFG) program. These grants have totaled nearly $17 million and were granted to 19 different organizations. While USFA does not operate the AFG program, it does work closely with the AFG program office within FEMA to ensure the fire service is represented.

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This collaboration also includes working with the AFG program office on the Fire Prevention and Safety Grants (FP&S) and Staffing for Adequate Fire and Emergency Response (SAFER) Grant. The FP&S grants support projects that enhance the safety of the public and firefighters from fire and related hazards. The primary goal of the FP&S is to target high-risk populations and mitigate high incidences of death and injury. USFA's work with the SAFER Grants ensures funding goes directly to fire departments in order to help increase the number of trained, firefighters available across the country.

PREPnet

The Preparedness Network (PREPnet) is a satellite-based distance learning system used by USFA to bring interactive training programs into virtually any community nationwide. With a wide variety of programs for the public safety community, there's something for everyone. All programming is open and in the public domain, so any community with access to a C-band or Ku-band analog satellite dish or a community cable vision provider can receive broadcasts and participate in the training programs.

On Wednesday, September 19th, USFA's PREPnet supported the roll-out of the National Response Framework (NRF) from the PREPnet studios in Emmitsburg, MD. This broadcast, which was simultaneously a TV broadcast via the Dish Network, a Video Teleconference over FEMA's internal VTC system, and a web cast available on the Internet to any interested parties, featured NPD Deputy Administrator Dennis Schrader and Al Fluman, Acting Director of FEMA's Incident Management Systems Division (IMSD), who presented an overview of the NRF and answered a series of questions received from actual viewers during the broadcast.

PREPnet also recently hosted a Virtual Town Hall on School Preparedness as a part of National Preparedness Month. A panel of experts from the Department of Education's Office of Safe and Drug-Free Schools and FEMA's NPD discussed grant opportunities and planning, training, and other preparedness tools available to school districts nationwide.

Challenges

Reducing the loss of life and property caused by fire remains a significant challenge. Each year, fire kills more than 3,000 people and injures more than 16,000. Annual property losses due to fire are estimated at more than $11 billion. The Centers for Disease Control and Prevention tells us fire and burn injuries represent one percent of the incidence of reported injuries and two percent of the total costs of injuries, or $7.5 billion each year. Unfortunately, our nation's firefighters continue to also pay a large price in keeping fire deaths and property losses down. As of September 21, 2007, 93 firefighters have been killed while on duty this calendar year.

Although the numbers are still too high as most of these deaths can be prevented, great progress is being made to reduce the toll from fires. Since 1974, when Congress passed the *Federal Fire Prevention and Control Act* (Pub. L. No. 93–498), and established the United States Fire Administration and its National Fire Academy, USFA has helped to reduce fire deaths significantly. Over the last 10 years, fires

have declined by 13 percent. During this same period, a 12 percent decline in civilian deaths and a 31 percent drop in civilian injuries were also reported.

New programs need to be developed which will prepare responders to deal with the Wildland/Urban Interface. This involves the issue of urban sprawl and how to reduce fire risk for the population. Population decentralization in the U.S. has resulted in rapid development in the outlying fringe of metropolitan areas and in rural areas as people want to move out of the city centers.

We need to enhance our emphasis on preparing the Nation's first responders for all hazards, including natural, technological and terrorist incidents. We will accomplish this through education and information sharing with our partner organizations and agencies.

The USFA will continue to work with the United States Department of Justice's (DOJ), Public Safety Officer Benefits (PSOB) program as it relates to death benefits for first responders who are killed in the line of duty. Unfortunately, there are an overwhelming number of families of firefighters who have been killed in the line of duty who have yet to receive any death benefits. We look forward to working with DOJ on relieving this deadlock and getting benefits to those families who qualify.

Conclusion

Thank you, Mr. Chairman, for giving me this opportunity to appear before you today. Your continued support is greatly appreciated. I will be glad to answer any questions you and other Members of the Committee may have.

BIOGRAPHY FOR GREGORY B. CADE

Gregory B. Cade is the Federal Emergency Management Agency's (FEMA) Assistant Administrator (Fire Administrator) for the U.S. Fire Administration (USFA). Appointed in May 2007, Assistant Administrator Cade is responsible for supporting State and local fire service programs as well as implementing FEMA Administrator R. David Paulison's initiatives for emergency readiness, firefighter training, and equipment.

Before accepting this post, Assistant Administrator Cade was the Fire Chief/Emergency Services Coordinator of the City of Virginia Beach (VA) Fire Department. From 1998–2007, he managed 900 personnel with a $38 million operating budget. He also oversaw the Virginia Task Force 2 Urban Search and Rescue Team and operated 19 fire/rescue stations covering 311 square miles of land and 35 miles of Atlantic and Chesapeake coastline out to the international line.

Assistant Administrator Cade has 39 years of fire and rescue services experience. He began his career in Prince George's County Maryland as an entry-level firefighter. He served as a risk manager, budget analyst, and training instructor, rising through the ranks to his last assignment as the Bureau Chief, Division of Fire/Rescue before leaving and becoming Fire Chief of the City of Hampton (VA) in 1992. His emergency management experience includes activities related to preparing for, responding to, and recovering from several Presidentially-declared man-made and natural disasters.

Assistant Administrator Cade earned a Bachelor of Science from the University of Maryland and completed the Program for Senior Executives in State and Local Government at Harvard University's John F. Kennedy School of Government. He received the Victoria J. Adams Award for Excellence in Equal Employment Opportunity/Affirmative Action from the Virginia Department of Fire Programs in 1997 and holds positions in several professional associations. Assistant Administrator is also past Vice President of the National Society of Executive Fire Officers.

Chairman WU. Thank you. We will do questions all together at the end of all the witness testimony. Next, Dr. Sunder, please proceed.

STATEMENT OF DR. SIVARAJ SHYAM SUNDER, DIRECTOR, BUILDING AND FIRE RESEARCH LABORATORY, NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, DEPARTMENT OF COMMERCE

Dr. SUNDER. Thank you Chairman Wu, and Dr. Gingrey and Members of the Subcommittee. NIST fire research is focused on reducing losses and risk by advancing innovative fire protection technologies and increasing the safety of buildings that are threatened

by fire, and we do that by improving building and fire codes, standards, and practices. Our work is aimed at filling research gaps in areas such as how the fire-related characteristics of modern furnishings, building materials, and designs affect the time available for safely exiting buildings, particularly in high-rise buildings and for impaired populations, including those in hospitals, nursing homes, residences or other facilities.

Our research also provides the science, performance measures, and tools critical to developing and implementing new and emerging technologies that would improve the effectiveness and safety of firefighters. They go beyond developing tools and methods by actually getting our results into the hands of firefighters, incident commanders, and other emergency responders.

In addition, NIST is working on science-based approaches for limiting fire growth and spread, particularly in residential settings, where the vast majority of fire deaths occur, by reducing the flammability of the materials and products within our homes, by reliably detecting a fire in its nascent state, and by automatically suppressing fires once they develop.

As part of the President's American Competitiveness Initiative, or ACI, we are developing tools for reducing community losses from fires at the wildland-urban interface. These tools will assist communities all across the U.S. in assessing their risk for such fires and choosing economically-balanced mitigation strategies. Also as part of the ACI, NIST has begun examining fire safety issues associated with the emerging use of hydrogen as a fuel in transportation and in domestic and commercial power generation.

NIST will provide the scientific and technical information to support the development of codes and standards for the design of engineered containment and transport systems and for mitigating potential fire and explosion hazards in both the residential and commercial sectors.

Finally, NIST's Fire Research Grant Program has been the primary federal source for fire research at universities for the past 30 years and a source for training in the next generation of fire protection engineers and researchers.

Our fire research priorities are determined in a deliberate and inclusive fashion. We work with a broad range of industries, codes and standards, developing organizations, fire service organizations, professional societies, public safety groups, universities and other government agencies. We identify the needs of these customers and the capabilities of our research collaborators, both here and abroad, through workshops, direct contact, technical meetings, roadmaps, and established national priorities. Our Fire Research Program evolves from these needs after considering the potential impact and probability of success that fit to our mission, match of the technical challenges to the staff capabilities, and the potential for leveraging the investment. There are many examples of how our research program is coordinated with the U.S. Fire Administration. We regularly hold joint workshops with USFA that includes representatives from the fire service industry and other laboratories to establish priorities for fire service research. The results of these workshops have helped set the current research agenda for both NIST and USFA. Our research plans are coordinated through an established

liaison arrangement where in fact a NIST employee spends about a day a week at USFA. Together, we jointly fund high priority research topics, transfer research results to the fire service, and conduct investigations of firefighter fatalities. Recent research projects include characterizing the performance of personal protective equipment, developing structural collapse prediction technology, and assembling the components of virtual firefighter training for next generation firefighting.

We are also working together to analyze the recent Charleston furniture store fire that resulted in nine firefighter fatalities. Our research results are transferred to the fire service, we have training courses at the National Fire Academy, and we produce an electronic newsletter for fire service personnel called Fire.Gov, an electronic publication distributed directly to fire departments and training academies. Our research has been used to develop entire courses or has been integrated into course modules at the fire academy. We also continue to work closely with standards development organizations. Our research has provided the technical basis for new NFPA standard for the Personal Alert Safety System, or PASS device, that is used by firefighters. In a similar fashion, our research has provided the technical basis for the development of new NFPA standards for the effective use of thermal imagers for tracking fire spread and locating fallen firefighters and building occupants.

In summary, we are proud of our role as a partner in science and technology resource for USFA helping to play a significant role in the development of science-based consensus standards and reliable, safe, and effective firefighting equipment and techniques in the United States. Thank you.

[The prepared statement of Dr. Sunder follows:]

PREPARED STATEMENT OF SIVARAJ SHYAM SUNDER

Chairman Wu, Dr. Gingrey, and Members of the Subcommittee, I appreciate the opportunity to appear before you today to discuss the fire research program at the National Institute of Standards and Technology's (NIST) Building and Fire Research Lab (BFRL). NIST conducts research to promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life. BFRL supports this mission by anticipating and meeting these needs for the U.S. building and fire safety industries. In relation to fire research, NIST was given specific authority under the *Federal Fire Prevention and Control Act of 1974* as amended (15 U.S.C. 278f(a)) for *"performing and supporting research on all aspects of fire with the aim of providing scientific and technical knowledge applicable to the prevention and control of fires."*

Fire remains a serious problem for our country as evidenced by the continuing high rates of fire deaths in the U.S. Each year, more than 3000 people die in fires and per capita fire deaths are 70 percent higher in the U.S. than in the European Union. Fire codes that are overly prescriptive—that is, detailed and restrictive—can increase the cost of construction and major renovations and possibly stifle innovative new approaches without actually improving the fire safety of the building and its occupants. There is much that we do not know about how the fire-related characteristics of modern furnishings, building materials, and designs affect the time available for safely exiting buildings. This is an issue of particular concern in high rise office buildings and for impaired populations, including those in hospitals, nursing homes, residences, or other facilities. Manmade fire threats—whether they are accidental, intentional, or due to new higher risk technologies—increase the need for strategies to prevent or limit the flammability of materials and structures or to improve the ability of occupants to exit or survive in buildings where fires take place.

NIST fire research is focused on reducing losses and risk by advancing innovative fire protection technologies and increasing the safety of buildings threatened by fire. This research has been highlighted as a critical need in a National Academies study (*Making the Nation Safe from Fire, a Path Forward in Research,* National Academies Press, 2003).

In addition to improving fire safety in buildings, NIST research provides the science and performance measures that are critical for developing and implementing the new technologies necessary to improve the effectiveness and safety of emergency responders. This includes developing science-based standards and testing protocols, firefighter training tools, and innovative new technologies. We go beyond developing new tools and methods—NIST gets its research results into the hands of firefighters, incident commanders, and other emergency responders. Over the last few years, NIST research has been used to develop entire courses or has been integrated into modules for use in courses at the United States Fire Administration's (USFA) National Fire Academy (NFA), including the courses *Introduction to Fire Dynamics and Fire Modeling, Management of Fire Prevention Programs,* and *Evaluating Performance Based Designs,* as well as several courses in the NFA's Degrees at a Distance Program.

NIST is developing strategies for cost-effectively reducing the Nation's fire losses, both human and financial, based on approaches for limiting fire growth and spread. The vast majority of fire deaths occur in residential settings. The key to reducing fire deaths lies in reducing the chance for a fire to reach "flashover," a condition in which the entire contents of a room begin to burn simultaneously and produce the toxic smoke and hot gases that can kill people at remote locations within a building. Flashover can be controlled by: 1) reducing the flammability of the materials and products within our homes, 2) reliably detecting a fire in its nascent state, and 3) automatic suppression systems. NIST researchers have been pursuing—and succeeding—in all three avenues for reducing the likelihood of flashover.

NIST research supports improvements to building and fire codes, standards, and practices that reduce the impact of extreme threats to the safety of buildings, their occupants and emergency responders. As part of the President's American Competitiveness Initiative (ACI), NIST is developing tools for reducing community losses in wildland-urban interface fires. The U.S. faces extreme losses of life and property due to wildland-urban fire. Since 1990 in Colorado, over 450,000 acres, 484 homes and 25 lives were lost to wildland-urban fires.[1] In 2003 alone in California, fires cost an estimated $2 billion in insured damages and destroyed more than 3,600 homes.[2] During 2000–2003, the cost to federal agencies fighting wildland fires averaged $1.3 billion annually (in 2004 dollars).[3] The NIST tools will assist communities all across the U.S. in their fire risk assessment and choices of economically-balanced mitigation strategies that limit the ignition of residences and improve firefighter and community safety.

Issues associated with the emerging use of hydrogen as a fuel in transportation and domestic/commercial power generation are also being examined by NIST as part of the ACI. NIST is working to remove technical barriers that impede the implementation of a hydrogen economy, and to provide the scientific and technical information, needed to support the development of codes and standards for the design of engineered containment and transport systems, and provisions for the mitigation of potential fire and explosion hazards in both the residential and commercial sectors.

NIST Fire Grants Program

For the past 30 years, NIST has been supporting university research through its fire grants program—currently funded at $1.3 million per year. NIST relies on the special expertise of the academic community to assist in surmounting the complex physical, sociological, and economic barriers to significantly reducing U.S. fire losses. This program has been the primary federal source for fire research in universities and a source for training the next generation of fire protection engineers and researchers.

Fire Research Agenda Strategic Approach

NIST research priorities are determined in a deliberate and inclusive fashion. We work with a broad range of industries (e.g., building materials and contents manufacturers, fire protection equipment suppliers), codes and standards developing organizations (e.g., International Code Council (ICC), National Fire Protection Association (NFPA), American Society for Testing and Materials International (ASTMI),

[1] *http://csfs.colostate.edu/library/pdfs/fire/statistics/fire_history.pdf*
[2] *http://www.gao.gov/new.items/d05380.pdf*
[3] Ibid.

Underwriters Laboratories (UL), FM Approvals (a business unit of FM Global for commercial property and building insurance), fire service organizations (e.g., International Association of Fire Chiefs (IAFC), International Association of Fire Fighters (IAFF), National Association of State Fire Marshals (NASFM), International Association of Arson Investigators (IAAI), Conference of Fire Safety Instructors (CFSI), National Fallen Firefighters Foundation (NFFF)), professional societies (e.g., Society of Fire Protection Engineers (SFPE), American Society of Mechanical Engineers (ASME), American Society of Civil Engineers (ASCE)), public safety groups (e.g., Skyscraper Safety Campaign, Operation Life Safety, Home Safety Council, Center for Campus Fire Safety), universities, and other government agencies—including USFA, Consumer Product Safety Commission (CPSC), Department of Homeland Security (DHS), U.S. Forest Service (USFS), Department of Transportation (DOT), Department of Defense (DOD), National Aeronautics and Space Administration (NASA), National Institute for Occupational Safety and Health (NIOSH), and the Bureau of Alcohol, Tobacco, and Firearms (ATF).

NIST identifies the needs of these customers and the capabilities of our collaborators (national and international) through workshops, direct contact at technical meetings, roadmaps, and established national priorities. The NIST fire research program evolves from these needs after considering the potential impact and probability of success, the fit to the NIST mission, the match of the technical challenge to staff capabilities, and the potential for leveraging the investment.

The *Federal Fire Prevention and Control Act of 1974* as amended (15 U.S.C. 278f(a)) specifically stipulates that "the content and priorities of the [NIST] research program shall be determined in consultation with the Administrator of the United States Fire Administration." There are many examples of how the NIST research program is coordinated with the USFA.

NIST regularly hosts joint workshops with USFA that include representatives from the fire service, industry, and other laboratories to establish priorities for fire service research. Specific examples include the *National Fire Service Research Agenda Symposium* hosted jointly with USFA in Emmitsburg, MD; the *National Fire Fighter Life Safety Summit* hosted by USFA; and workshops hosted by the National Fallen Fighters Foundation in Tampa, FL; Indianapolis, IN; San Diego, CA; and Washington, DC. The results of these workshops have helped set the current research agenda for both NIST and USFA. Other federal programs, such as the DHS Assistance to Firefighter Grants, are incorporating these prioritized research areas as part of their proposal evaluation criteria. Similar workshops are being considered to establish priorities and timelines for the development of measurements, test methods, and consensus standards.

NIST's and USFA's research plans are coordinated through an established liaison arrangement. Together, NIST and USFA jointly fund high-priority research topics, transfer research results to the fire service, and conduct investigations of firefighter fatalities. Recent research projects include characterizing the performance of personal protective equipment, developing structural collapse prediction technology, and assembling the components of a virtual firefighter trainer for next generation firefighting. The research results are transferred to the fire service via incorporation into training courses at the National Fire Academy, an electronic newsletter for fire service personnel (*FIRE.Gov*), and electronic publications distributed directly to fire departments and training academies. A USFA employee participated as a member of the team formed and led by NIST under the *National Construction Safety Team Act* to perform a building and fire safety investigation of the Rhode Island Station Nightclub fire in 2003. Currently, USFA and NIST are working together to analyze the Charleston furniture store fire that resulted in nine firefighter fatalities. The objectives of this study are to understand the unusual and rapid fire spread, the impact of smoke and gases on human life, the effect of ventilation on fire growth and roof collapse, and the possible influence of a sprinkler system had one been installed. In addition, the study is considering fire service response and operations with a focus on establishing a timeline for reconstructing the fire, and to identify areas in building and fire codes, standards, and practices that warrant revision. The recommendations from these kinds of investigations are communicated to the fire service and national voluntary consensus standards organizations to improve the safety of first responders and the public.

NIST continues to work closely with standards organizations to support the development of consensus standards. NIST provides an unbiased source of technical information and data, which is critical to the success of standards development. Recent NIST research has characterized the performance of personal alert safety systems (PASS), demonstrating that serious flaws can cause the alarm signal generator to failed at high temperatures—precisely when this safety equipment is most needed. Based on data collected at NIST, a joint safety warning was issued nationwide

by USFA, NIST, NIOSH, NFPA, IAFC, and IAFF. NIST research has provided the technical basis for rewriting the test standards for the PASS device, increasing the likelihood that the device will work under the extreme conditions typical of a fire environment.

In a similar fashion, NIST research funded internally and by USFA and DHS has led to the development of a complete suite of performance metrics and standard test protocols for thermal imagers for first responder applications. During the last five years, thermal imaging cameras have become more readily available to fire departments for tracking fire spread and locating fallen firefighters or building occupants. Previously, there were no performance metrics or standard test protocols for firefighter thermal imagers. The NIST research has provided the technical basis for the development of a new NFPA standard for thermal imagers. With this standard in place, the performance of this critical piece of technology can be evaluated to ensure that thermal imagers are as effective as possible.

Each year, a significant number of firefighter fatalities are due to structural collapse. USFA- and NIST-funded research has identified a promising new technology to continuously monitor the structural integrity of buildings experiencing fire. This emerging technology, when fully developed, could provide incident commanders with early warning of an impending collapse, allowing first responders more time to safely evacuate from the interior of structures before collapse occurs.

Positive pressure ventilation fans are available to many fire departments and could provide cooler and smoke-free stairwells for firefighter operations or occupant egress. Unfortunately, in the past, this ventilation technology has been under-utilized due to lack of scientific data on the interaction between ventilation and fire growth. A current USFA and NIST collaborative effort has characterized the fan/building interaction in single story residential structures, high rise apartment/office structures, and warehouse type structures. NIST research provides a science-based set of guidelines for the deployment and operation of positive pressure ventilation fans to improve the effectiveness of firefighting activities and evacuation of building occupants.

As the Nation's primary measurement laboratory, NIST is proud of its roles as a partner and science and technology resource for USFA, helping to play a significant role in the development of science-based consensus standards and reliable, safe, and effective firefighting equipment and techniques.

I am delighted to have had the opportunity to describe the fire research program at NIST. The problems we tackle affect people every day, and the technical challenges require the resources and expertise of institutions like NIST, working together with the USFA and other organizations to improve fire safety and the effectiveness of firefighting in America.

Thank you and I would be happy to answer any of your questions.

BIOGRAPHY FOR SIVARAJ SHYAM SUNDER

Dr. Shyam Sunder is Director of the Building and Fire Research Laboratory (BFRL) at the National Institute of Standards and Technology (NIST).

BFRL has an annual operating budget of about $42 million and its staff includes about 175 federal employees and 100 research associates and guest researchers from industry, universities, and foreign laboratories.

Dr. Sunder also:

- is the lead investigator for the federal building and fire safety investigation of the World Trade Center disaster;
- oversees NIST activities as lead agency for the National Earthquake Hazards Reduction Program (NEHRP); and
- co-chairs the National Science and Technology Council's (NSTC) Subcommittee on Buildings Technology (SBT) Research and Development.

From June 1996 to December 1997, Dr. Sunder was on assignment to the Program Office, the principal staff office of the NIST Director, first as a Program Analyst and later as the Senior Program Analyst for NIST.

Dr. Sunder was appointed Chief of the Structures Division in January 1998 and Chief of the Materials and Construction Research Division in June 2002. He was appointed Acting Deputy Director of BFRL in March 2004, Deputy Director of BFRL in June 2005, and Acting Director of BFRL in July 2006.

Prior to joining NIST in 1994, Dr. Sunder held a succession of positions at the Massachusetts Institute of Technology (MIT) beginning in 1980: Instructor, Assistant Professor, Associate Professor, principal research scientist, and senior research scientist.

Dr. Sunder holds a Bachelor of Technology (Honors) degree in civil engineering from the Indian Institute of Technology, Delhi (1977), a Master of Science degree in civil engineering from MIT (1979), and a Doctor of Science degree in structural engineering from MIT (1981).

Dr. Sunder's awards include the Gilbert W. Winslow Career Development Chair (1985–87) and the Doherty Professorship in Ocean Utilization (1987–89) from MIT, the Walter L. Huber Civil Engineering Research Prize (1991) from the American Society of Civil Engineers, the Equal Employment Opportunity Award (1997) from NIST, and the Gold Medal Award (2005) for his distinguished leadership of the federal building and fire safety investigation of the World Trade Center disaster from the U.S. Department of Commerce.

Chairman WU. Thank you, Dr. Sunder. Chief Westermann?

STATEMENT OF MR. STEVEN P. WESTERMANN, PRESIDENT AND CHIEF FIRE OFFICER, INTERNATIONAL ASSOCIATION OF FIRE CHIEFS

Mr. WESTERMANN. Good morning, Chairman Wu, Ranking Member Gingrey, and Members of the Committee. As chief of the Central Jackson County Fire District in Missouri and President of the nearly 13,000 members of the International Association of Fire Chiefs, it is a true honor to be here as we begin the process of reauthorization and to discuss the USFA and the priorities of the Nation's fire service.

The USFA plays a major role in preparing the fire service for all hazards. The mission of the USFA is to reduce life and economic loss to fire and related emergencies through leadership, coordination, and support. The major focus of the USFA's activities is the National Fire Academy. In fiscal year 2007, the NFA trained over 8,000 fire and emergency service officers on campus and over 76,000 off-campus and distance-learning to respond to regional and national incidents involving all hazards. The USFA also plays important roles in educating the public about fire safety and prevention, collecting, analyzing, and disseminating fire information and partnering with the public and private sector to conduct research on new fire-related technologies.

In fiscal year 2007, Congress appropriated $46.8 million for the USFA, an increase of $2.3 million above fiscal year 2006 level. Both the House and Senate have passed appropriation bills containing $43.3 million for the USFA in fiscal year 2008. Congress authorized $68.8 million for the USFA in fiscal year 2008. We urge the Committee to reauthorize the USFA in '09 as $70 million with a five-year authorization to ensure long-term funding stability for the Agency.

The National Fire Incident Reporting System, known as NFIRS, is an essential tool for America's fire service. The NFIRS is the world's largest, national, annual database for fire and emergency incident information. Over 21,000 fire departments report to the NFIRS each year. These departments report an average of 14 million incidents and one million fires each year. The NFIRS is designed to receive data pertaining to all incidents in order to cover the full-range of fire department activities.

Unfortunately, the NFIRS is not being utilized to its fullest potential. The current format requires fire departments to submit data on paper or as computer files to the states, which then periodically upload the data to the USFA. Under the current system, there can be a delay of 12 and 18 months in compiling national

data. In addition, NFIRS only includes about half of the reported fires that occur annually, and this simply is not acceptable. Therefore, the IAFC would like Congress to authorize $3 million over three years for the USFA to enhance the NFIRS data collection system and transform it into a real-time web reporting tool. While we do not expect overnight fire data analysis, the collection of more, timelier data may help to reduce the current 12- to 18-month delay and may make it easier to distinguish major trends. For example, earlier this year, a number of fires caused multiple fatalities in New York and the Midwest. Without timely data from NFIRS, it was difficult to ascertain whether these deaths were a record number, a growing trend, or simply an anomaly receiving heightened media attention.

The Senate appropriated $1 million to modernize the NFIRS in H.R. 2638, the fiscal year 2008 Department of Homeland Security Appropriations bill. We hope that Congress will pass this appropriation and authorize the USFA reauthorization bill.

USFA brings the perspective of the front-line firefighter to policy discussions. As the DHS develops federal policies such as National Response Framework, USFA should continue to be involved to ensure that these policies are practicable for the local first responders during an emergency, terrorist attack, or disaster.

The ISC urges the Committee to support the USFA's current seat at the National Operations Center. Operating 24 hours a day, 365 days a year, the NOC serves as the Nation's nerve center for information sharing in domestic incident management. The USFA can play a critical role in the NOC by obtaining information from fire departments around the country for fusion with other potential threat information. In addition, the USFA can relay on information of a possible threat to a local fire department. For example, if there was a threat of a chlorine bomb in the Kansas City area, the NOC would inform me of that threat so that the hazmat teams in the Kansas City area would be on heightened alert status.

The ISC also supports the USFA's current plan to educate the public about the lifesaving benefits of residential fire sprinklers. Currently, only about two percent of American homes have fire sprinklers. However, fire sprinklers can play a major role in saving lives and preventing property damage. According to the National Fire Protection Association, when sprinklers are present in structures, the fire death rate per 1,000 reported structure fires is lower by at least 57 percent and the rate of property damage per reported structure fire is lower by one-third to two-thirds. The installation of more fire sprinklers in homes should reduce both civilian and firefighter deaths as well as reduce property damage.

A growing challenge for the fire service is the growth of the wildland-urban interface. As residential growth expands into traditionally rural areas, there is an increase in the amount of property damage that has occurred from fires. The annual estimated costs for combating wildland fires exceeds $500 million for local governments and $2 billion for State and federal agencies, a large portion of which is in the wildland interface. Insurance companies spend over $250 million per year covering the damage caused by interface fires.

Many fire departments, especially those not in the West, are just beginning to recognize the challenges of fighting fires in the WUI. By working more closely with the U.S. Department of Agriculture and U.S. Department of Interior, the USFA can become a leading agency in educating the traditionally structural fire departments about how to safely and effectively respond to fires in the interface and help educate the public about fire prevention and mitigation in the interface.

I know I am out of time, but there is one more critical area that we do need to discuss, and that is EMS. EMS is an important part of the U.S. fire service. According to the USFA's *"Four Years Later—A Second Needs Assessment,"* 67 percent of the responding fire departments provide EMS. And of all the major metropolitan areas, 100 percent of those departments provide EMS. USFA should educate the DHS leadership, other federal agencies, and the public about the role of the fire-based EMS in their areas.

And with that, we thank you again for the opportunity to address the Committee, and on behalf of America's fire and EMS chiefs, we look forward to working with you and the reauthorization of the USFA.

[The prepared statement of Mr. Westermann follows:]

PREPARED STATEMENT OF STEVEN P. WESTERMANN

Good morning, Chairman Wu, Ranking Member Gingrey, and Members of the Committee. I am Chief Steven P. Westermann, CFO, of the Central Jackson County, Missouri, Fire Protection District and President of the nearly 13,000 members of the International Association of Fire Chiefs. The IAFC represents the leadership of America's fire, rescue, and emergency medical services (EMS) from large, metropolitan, career fire departments to small, rural, volunteer fire departments. Today, I would like to thank the Committee for the opportunity to discuss the U.S. Fire Administration (USFA) and the priorities of the Nation's fire service.

The Fire and Emergency Service Community

America's fire and emergency services are the only organized group of American citizens that is locally situated, staffed, trained, and equipped to respond to all types of emergencies. There are approximately 1.1 million men and women in the fire and emergency services—305,150 career firefighters and 795,600 volunteer firefighters—serving in 30,400 fire departments around the country. They are trained to respond to all risks and hazards ranging from earthquakes, hurricanes, tornadoes and floods, to acts of terrorism, hazardous materials incidents, technical rescues, fires, and medical emergencies.

The fire service protects America's critical infrastructure—the electrical grid, interstate highways, railroads, pipelines, petroleum and chemical facilities—and is, in fact, even considered part of the critical infrastructure. The fire service protects most federal buildings, provides mutual aid to most military bases, and protects interstate commerce. No passenger airliner takes off from a runway that is not protected by a fire department. The transport of hazardous materials is an integral part of the U.S. economy, and when they spill or ignite, the fire service responds to protect lives and clean up the mess.

The U.S. Fire Administration

The U.S. Fire Administration plays a major role in preparing the fire service for all hazards. The mission of the USFA is "to reduce life and economic loss to fire and related emergencies through leadership, coordination, and support." In Fiscal Year (FY) 2007, the USFA's National Fire Academy trained over 8,000 fire and emergency service officers on campus and over 76,000 through off-campus and distance-learning to respond to regional and national incidents involving all hazards. The USFA also helps educate the public about fire safety and prevention through partnerships with the fire service, the media, other government agencies, and safety interest groups. Data collection is also a vital function of the USFA, including the collection, analysis, and dissemination of information on fires and other emergency incidents. Finally, the USFA also works with federal agencies, such as the U.S. De-

partment of Homeland Security (DHS)'s Science and Technology directorate and the National Institute of Standards and Technology, and other public and private entities to conduct research into new technologies to improve firefighter and public safety, and fire prevention, detection, and suppression.

For FY 2007, Congress appropriated $46.8 million for the USFA, an increase of $2.3 million above the FY 2006 level. Both the House and Senate have passed appropriations bills containing $43.3 million for the USFA for FY 2008. Congress authorized $68.8 million for the USFA in FY 2008. We urge the committee to reauthorize the USFA in FY 2009 at $70 million with a five-year authorization to ensure long-term funding stability for the agency.

Modernizing the National Fire Incident Reporting System

The National Fire Incident Reporting System (NFIRS) is an important tool for America's fire service. The NFIRS is the world's largest, national, annual database of fire and emergency incident information. Nationally, over 21,000 fire departments report to the NFIRS each year. These departments report an average of 14 million incidents and one million fires each year. The NFIRS is designed to receive data pertaining to all incidents in order to cover the full-range of fire department activity.

To participate in the NFIRS, local fire departments fill out reports for fires and other incidents using paper forms or computer files. These reports are sent to a State office where the data are validated and consolidated into a single computerized database. The participating fire departments receive feedback reports from the State office. Periodically, the aggregated statewide data is sent to the National Fire Data Center at the USFA to be included in the national database.

While the NFIRS system is a helpful tool for the fire service, it is not being utilized to its potential. The current format requires fire departments to submit data on paper or as computer files to the states, which then periodically upload the data to the USFA. Under the current system, there can be a delay of between 12 and 18 months in compiling national data. In addition, the NFIRS only includes about half of the reported fires that occur annually. Without accurate and timely information, the NFIRS system cannot correctly produce a timely analysis of fire damage in the U.S., and can only produce historical information based on half of the actual fire incidents.

The current NFIRS process creates long delays in getting fire data into the national reporting system, and creates the potential for decision-makers to make policy using old or incomplete information. For example, there were a number of fires in early 2007 that caused multiple fatalities in New York and the Midwest. Without timely data from the NFIRS, it was difficult to ascertain if these deaths were a record number, a growing trend, or an anomaly receiving heightened media attention.

The IAFC urges Congress to authorize $3 million over three years to enhance the NFIRS data collection system and transform it into a real-time web reporting tool. While we understand that it is not possible to analyze fire data overnight, we believe that it is possible to close the 12- to 18-month delay by making the system easier and more user-friendly for inputting data. The Senate appropriated $1 million to modernize the NFIRS in H.R. 2638, the FY 2008 Department of Homeland Security Appropriations bill and we hope that the USFA reauthorization bill will include language authorizing this project.

The Role of the USFA in the U.S. Department of Homeland Security

Considering its unique relationship, the USFA can play an important role in influencing DHS' preparedness and response policies. In the post-9/11 world, a number of federal policies affect the local fire department, including the National Preparedness Guidelines, the National Infrastructure Preparedness Plan, the National Incident Management System and the new National Response Framework. It is important to ensure that these federal policies are practicable for the local first responder during an emergency, terrorist attack or disaster. The USFA brings the perspective of the front-line firefighter to policy discussions.

Currently, the USFA staffs a seat at the National Operations Center (NOC). The NOC serves as the Nation's nerve center for information sharing and domestic incident management. Operating 24 hours a day, 365 days a year, the NOC collects and fuses information from a wide variety of sources to help deter, detect, and aid in the response to terrorist attacks and natural disasters. The USFA can play an important role in the NOC by obtaining information from different fire departments around the country and making sure that it is fused with other information regarding a possible threat. In addition, the USFA can relay information on a possible threat to a local fire department. For example, if there was a threat of a chlorine

bomb in Kansas City, the NOC could inform me of that threat so that the hazmat teams in the Kansas City area would be ready to respond.

It is important to ensure that the USFA is adequately funded to perform its DHS role. By having more policy staff, the agency can play a stronger role in policy discussions here in Washington. The NOC position also is a vital resource for the fire service that needs funding.

Residential Sprinkler Campaign

The USFA is engaged in an aggressive plan to advocate the increased use of residential fire sprinklers. Currently, only about two percent of American homes have fire sprinklers. However, fire sprinklers can play a major role in saving lives and preventing property damage. According to the National Fire Protection Association, "when sprinklers are present in structures. . ., the fire death rate per 1,000 reported structure fires is lower by at least 57 percent and the rate of property damage per reported structure fire is lower by one-third to two-thirds (34–68 percent)." The USFA's public education program can inform the public about the advantages of installing fire sprinklers in homes, which should reduce both civilian and firefighter deaths and property damage resulting from fires.

Wildland Fires

A growing challenge for the fire service is the growth of the wildland-urban interface (WUI). As residential growth expands into traditionally rural areas, there is an increase in the amount of property damage that has occurred from fires. The annual estimated costs for combating wildland fires exceed $500 million for local governments and $2 billion for State and federal agencies, a large portion of which is in the WUI. In addition, insurance companies spend over $250 million per year in covering the damage caused by WUI fires.

Many fire departments, especially those not in the West, are just beginning to recognize the challenges of fighting fires in the WUI. There are many tactical differences between fighting a structural fire and a wildland fire. The USFA has traditionally developed strong relationships with the structural departments around the country. By working more closely with the U.S. Department of Agriculture and U.S. Department of Interior, the USFA can become the leading agency in educating the traditionally structural fire departments about how to safely and effectively respond to fire in the interface and help educate the public about fire prevention and mitigation in the WUI.

Emergency Medical Services

It is important to recognize that EMS is an important part of the U.S. fire service. According to the USFA's *"Four Years Later—A Second Needs Assessment,"* 67 percent of the responding fire departments provide emergency medical service. In communities with populations over one million people (major metropolitan areas), 100 percent of the departments provide EMS. As the Nation develops policies to deal with threats such as large-scale terrorist attacks and pandemic influenza, the USFA can play a role in helping the fire service and fire-based EMS prepare for these threats. In addition, the USFA can help to educate the DHS leadership, other federal agencies, and the public about the role of fire-based EMS in their areas.

Conclusion

Thank you again for the opportunity to address this committee. On behalf of America's fire-EMS chiefs, I would like to thank you for your continued support. I look forward to working with you as the Committee takes action to reauthorize the USFA.

BIOGRAPHY FOR STEVEN P. WESTERMANN

Chief Westermann has served as Chief of Department to the Central Jackson County Fire Protection District since 1988 and has been in the fire service since 1972. He has been a member of the IAFC since 1987 and prior to serving as President, he served as the International Director for the Missouri Valley Division. He has also served on the IAFC's NFPA 1710 Implementation Guide Task Force, chaired the National Policy Centers Task Force and currently serves on the Labor Management Initiative committee. He has served as President of both the Heart of America Kansas City Metro Fire Chiefs Council and the Missouri Association of Fire Chiefs. Westermann has a Master's in Public Administration from the University of Missouri-Kansas City, is an EFO graduate and a graduate of the Senior Executives in State and Local Government program at Harvard University.

Chairman WU. Thank you very much, Chief Westermann. Captain Livingston, please proceed.

STATEMENT OF CAPTAIN ROBERT LIVINGSTON, LEGISLATIVE DIRECTOR OF THE OREGON STATE COUNCIL OF FIRE FIGHTERS, INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS

Mr. LIVINGSTON. Chairman Wu, Ranking Member Gingrey, and Members of the Committee, my name is Bob Livingston. I'm a Captain in the Salem, Oregon Fire Department and a proud member of the International Association of Fire Fighters. I am pleased to appear before you today on behalf of IAFF General President Harold Schaitberger and the more than a quarter-million full-time emergency response personnel who comprise our organization.

Whether responding to everyday emergencies or major disasters, America's professional firefighters and emergency medical personnel are on the front lines every day working tirelessly to save lives and to protect public safety.

Today's professional firefighter is an all-purpose emergency responder, trained in such specialized disciplines as emergency medical care, hazardous/WMD materials response and technical rescue. It is from this perspective, as America's frontline domestic defenders, that we view the mission and programs of the United States Fire Administration.

As the role of firefighters has expanded to meet the needs of their communities and their citizens, so too must the role of the USFA evolve to meet the needs of the 21st century fire service.

The USFA of the 21st century must evolve to fully embrace and support the fire service's role in emergency medical services, hazmat, and WMD response.

Pre-hospital 9–1–1 emergency response has become a principal duty of the fire service such that today's fire service provides first medical response for virtually every community in America. Similarly, the growing number and dangerous nature of incidents involving hazardous materials has elevated the importance of hazmat training and preparedness within the fire service. USFA must fully integrate EMS and hazmat/WMD training and preparedness into its missions and programs. While confident that USFA appreciates the importance of expanding its work in these arenas, we remain concerned that these efforts are not widely recognized.

Within the Federal Government, for example, dozens of federal agencies administer programs and provide funding that impacts the fire service. Yet, too often these agencies have little knowledge about who we are and what we do. USFA should therefore bolster its efforts to educate others including agencies within the Federal Government about the duties of the modern fire service, especially the crucial role firefighters play in providing emergency medical services, hazmat, and WMD preparedness.

USFA has successfully furthered the professional development of the fire service through the Fire Academy. To expand the Academy's reach, USFA should expand its remote training and education programs. Federally funded training programs currently offered by the IAFF provide an excellent model for the sort of delivery system USFA could utilize toward this end.

By partnering with entities that have effective local delivery systems such as the IAFF, USFA could offer Academy courses to those for whom traveling to Emmitsburg is impractical. In addition to enhancing its many ongoing worthwhile projects, we believe there is one significant new initiative that USFA should undertake. Since its inception, USFA has helped reduce both the number of fires, as well as the number of civilian deaths from fire. Unfortunately, far less progress has been made reducing line-of-duty deaths among firefighters.

While it will never be possible to eliminate line-of-duty deaths, we must commit to significantly reducing the number of firefighter fatalities. We understand much of what must be done to protect firefighters: providing adequate training and equipment, using safe operating procedures and staffing levels and ensuring the physical and mental health of firefighters. Yet, despite the advocacy of USFA and non-profit organizations, the fire service has been slow to adopt practices that would save lives. Although some departments have embraced safe practices and procedures, the traditional approach to institute change within the fire service from the bottom up has largely failed. In my home town of Salem, Oregon, for example, communications between police and fire personnel via portable radio are currently impossible. While Salem is working expeditiously to implement a plan to overcome its communication challenges, many communities have yet to address the need for public safety interoperability. It doesn't have to be this way. The time has come for the Federal Government to take a bold and proactive role to reduce the number of firefighter fatalities through the adoption of national standards for safe firefighter operations, training, staffing, and fitness. We needn't recreate the wheel; the National Fire Protection Association has developed widely respected fire safety codes and standards using an open consensus-based development process. Similarly, Project 25 provides for common system standards to achieve interoperability. USFA should make it part of its core mission to ensure every fire department in America complies with national fire safety standards, and we should use the programs and resources of the Federal Government to help achieve this goal.

In closing, on behalf of the IAFF, I appreciate the opportunity to testify on the future of the U.S. Fire Administration. As you continue working to reauthorize USFA, we urge you to consider enhancing its programs and services to meet the needs of the modern fire service, including an increased emphasis on EMS, hazmat, WMD response. Furthermore, we hope the Committee will give serious consideration to novel ways by which USFA may help reduce the number of firefighter deaths, including advocating for the adoption of and compliance with national standards for safe firefighting. I thank the Committee and look forward to your questions.

[The prepared statement of Mr. Livingston follows:]

PREPARED STATEMENT OF ROBERT LIVINGSTON

Thank you Chairman Wu, Ranking Member Gingrey, and distinguished Members of the Committee for the opportunity to testify before you today. My name is Bob Livingston. I serve as a Captain in the Salem, Oregon Fire Department, and I am also a proud member of the International Association of Fire Fighters (IAFF). I am pleased to appear before you today on behalf of IAFF General President Harold

Schaitberger and the more than quarter million full-time emergency response personnel who comprise our organization.

Protecting over 85 percent of the Nation's population, America's professional firefighters and emergency medical personnel are on the front lines every day working tirelessly to save lives and protect the public safety. Whether responding to everyday emergencies or large-scale disasters, be it massive flooding in the Gulf Coast, a terrorist attack in New York, a vehicle crash in Cleveland, a hazardous chemical release in North Carolina, or a residential fire in Salem, the men and women of the IAFF are first to arrive on the scene and the last to leave.

Our members' dedication is matched only by the technical expertise they bring to their mission. Today's professional firefighter is an all-purpose emergency responder trained in such specialized disciplines as emergency medical care, hazardous/WMD materials response and high-angle, confined space and water rescue.

The days of firefighters whose primary function was to "put the wet stuff on the red stuff" are long gone. The men and women of the 21st Century fire service have evolved into highly-trained, highly skilled all-purpose emergency responders with broad responsibilities.

It is from this unique perspective as America's frontline domestic defenders that we view the mission, activities and services of the United States Fire Administration (USFA).

Originally created to ensure a federal focus on the national fire problem described in the original *America Burning* report, Congress tasked the USFA with reducing the incidence of death, injury and property loss from fire through public education, data collection, research and training. But as firefighters have expanded their duties, responsibilities, and capabilities to meet the needs of their communities and their citizens, so too must USFA evolve to meet the needs of the 21st Century fire service.

New Roles, New Responsibilities

Traditionally focused on the fire control and fire prevention duties inherent to firefighting, the USFA of the 21st Century must evolve to embrace and support the fire service's role in EMS and hazmat response.

Pre-hospital 9–1–1 emergency response has, in recent years, become a principal duty of the fire service such that today, the fire service has become the first medical responder for critical illness and injury in virtually every community in America. According to a recent survey of the 200 largest cities in the United States, 97 percent of such cities deliver pre-hospital 9–1–1 emergency medical response through the fire service. Additionally, the fire service provides advanced life support response and care in 90 percent of the thirty most populous U.S. jurisdictions.

The prevalence of fire-based EMS throughout the United States requires that the Fire Administration fully integrate EMS training and preparedness into its mission. USFA must continue to offer advanced EMS training to emergency responders as well as working to assist responders in preparing for a mass casualty event, such as pandemics and other disasters.

While we are confident that USFA appreciates the importance of expanding its work in the EMS arena, we remain concerned that these efforts are not widely recognized. Organizations and policy-makers concerned about EMS issues have long bemoaned the absence of a "home" in the Federal Government for EMS, and they have advocated creation of a new entity modeled on the USFA but devoted to EMS issues. While we believe any such entity would be duplicative and counterproductive, we nevertheless acknowledge that there is a perception that USFA is not adequately focused on EMS. We therefore recommend that USFA increase its efforts to educate the EMS community about its work in this important area. And we further call on USFA to educate others in the Federal Government of the critical importance and merit of fire-based EMS.

Similarly, while America's firefighters had always been the de-facto first responders to hazardous materials incidents, the skyrocketing number and increasingly dangerous nature of such incidents in recent years has elevated the importance of hazmat training and preparedness within the fire service. According to the National Fire Protection Association, each year, fire departments receive 354,000 calls related to hazardous materials emergency response. Furthermore, as more and more chemicals become part of our daily lives and as the transport of hazardous materials continues to grow, the complexity and dangers of hazmat emergency response have multiplied.

Not only has the presence of hazardous materials in our communities increased dramatically, but the current and ominous threat of terrorism looms large for our nation's firefighters. The possibility that terrorists will target shipments of hazardous materials or seek to use other weapons of mass destruction on U.S. soil, such

as biological or chemical weapons, is very real. Faced with this reality, it is more important than ever that USFA work to ensure that our nation's emergency responders are properly trained and fully prepared to respond to incidents involving hazardous materials, including weapons of mass destruction.

Enhanced Education Delivery

The United States Fire Administration and the U.S. Fire Academy have successfully and effectively helped to further the professional development of the fire service through current training and educational programs. As many firefighters and emergency medical personnel are unable to attend on-campus programs, the Academy has rightly moved to offer distance learning and locally sponsored delivery through the various State fire training programs.

To expand the Academy's reach and help achieve the goal of professional development among America's firefighters, the USFA should expand their remote training and education programs. The federally-funded training programs currently offered by the IAFF provide an excellent model for the sort of delivery system USFA could utilize towards this end. Using a cadre of instructors who are both certified fire service instructors and certified hazmat responders, the IAFF offers real-world training in hazardous materials response that few institutions can match. We are able to take the training into communities and tailor the presentations to address the unique concerns of each fire department. Furthermore, a recent analysis by the National Institute of Environmental Health Sciences found that the IAFF program was the most cost-effective method of live training.

By partnering with organizations and institutions that have established effective local delivery systems, such as the IAFF, to offer National Fire Academy courses to those firefighters for whom traveling to Emmitsburg is impractical or impossible, USFA could easily and efficiently increase the number of firefighters to benefit from its training programs.

An Advocate for the Fire Services

In addition to strengthening its own work in support of the fire service, we believe USFA has a role to play in promoting the fire service throughout the Federal Government. There are literally dozens of federally agencies that administer programs and provide funding that impact the fire service, but too often these agencies have little background or knowledge about who we are and what we do. We therefore urge USFA to enhance its role as an advocate for the fire service with its sister federal agencies, especially within DHS.

USFA already has an excellent relationship with the Office of Grants and Training. The two agencies work cooperatively administering FIRE and SAFER grants to local fire departments. USFA should build upon these kinds of established relationships and establish new relationships to continue acting as an advocate for the fire service and the expertise we can bring to bear within DHS and throughout the Federal Government.

Protecting Fire Fighter Safety and Health

In addition to enhancing its many ongoing worthwhile projects, we believe there is one significant new initiative that USFA should undertake. Since its inception in 1974, the U.S. Fire Administration has helped reduce both the number of fires as well as the number of civilian deaths and injuries from fire. Unfortunately, far less progress has been made reducing the number of line-of-duty deaths and injuries among firefighters. The annual number of deaths has hovered between 100 and 120 for many years. Given the advances in firefighting science and technology, including advances in personal protective equipment as well as a better understanding of the importance of safe firefighting operations and firefighter fitness, these numbers remain far too high and are completely unacceptable.

The problem of avoidable firefighter fatalities has been recognized for over thirty years, yet we as a nation continue struggling to keep the men and women who put their lives on the line every day safe. While it will never be possible to eliminate all line-of-duty deaths, we must, both as first responders and policy-makers, commit to significantly reducing the number of firefighter fatalities each year.

We understand much of what must be done to prevent many firefighter deaths. Providing adequate training and proper equipment, establishing safe staffing levels, following safe operating procedures, ensuring the physical and mental health of firefighters—all of these can help reduce avoidable fatalities. Unfortunately, and despite the advocacy of USFA and government-funded nonprofit organizations, the fire service has been slow to adopt the many practices that would save lives and prevent injury. Although some firefighters and some fire departments have fully embraced many changes to ensure firefighter safety, the traditional approach to institute change within the fire service from the "bottom-up" has, to a large degree, failed.

In my home town of Salem, Oregon, for example, we experience the same problems with communications inter-operability as do many communities across America. Simply put, radios belonging to the Salem Fire Department are incompatible with those belonging to the Salem Police Department. It is currently impossible for a police officer and a firefighter to communicate via portable radio. Obviously, this disconnect can create a very dangerous scenario for both first responders and the public when timely communications is of the essence. Fortunately, Salem has a plan to overcome its communications challenges, which it is working expeditiously to implement, but for many communities, the significant challenge of public safety communications remains.

It doesn't have to be this way. The time has come for the Federal Government to take a bold and proactive role in reducing the number of firefighter fatalities and injuries. The number one recommendation I can make to achieve this goal is the adoption of national standards for safe firefighter operations, training, staffing and fitness.

The good news is we needn't recreate the wheel to accomplish this goal. The National Fire Protection Association, represented here today by Doctor Hall, has developed over three hundred consensus codes and standards relating to fire safety, including but not limited to standards for safe firefighter staffing, training, and operations. Using an open, consensus-based development process, the NFPA and NFPA standards are widely respected throughout the fire service, as well as the Federal Government and private sector. Similarly, via Project 25, organizations representing public safety and the communications industry have established common system standards for public safety radio communications, compliance with which would go a long way towards addressing many of our nation's inter-operability problems.

USFA should make it part of its core mission to ensure every fire department in America complies with fire safety standards. We call on USFA to examine how the Federal Government can use its programs and resources to promote adherence to such standards throughout the Nation. Some of the ways this might be accomplished include requiring fire departments to commit to national consensus standards in order to participate in federal programs or receive federal assistance. The Federal Government has vast resources at its disposal to encourage change, and we believe the full force of these resources must be brought to bear on the goal of reducing firefighter deaths and injuries.

In addition to promoting compliance with national fire safety standards, more dollars must be invested in fire research and technology. The advances achieved from federal research sponsored by USFA, NIOSH, and other agencies have resulted in dramatically improved equipment and technology that no doubt will have a positive impact on firefighter safety.

And, current efforts within USFA and the Congress to improve the accuracy of data collected by the National Fire Information Recording System (NFIRS) will help assure a more complete picture of equipment and technology needs. The IAFF strongly supports full funding of the NFIRS enhancement project. By providing more accurate, real-time information, the improved data collected as a result of the NFIRS reform project will better inform USFA-sponsored research efforts as well as identify additional fire and fire safety trends.

Conclusion

On behalf of the IAFF, I appreciate the opportunity to offer our perspective on the future of the U.S. Fire Administration. As you continue working to reauthorize the U.S. Fire Administration, we urge you to consider enhancing the Administration's programs and services to meet the 21st Century needs of the modern fire service, including an increased emphasis on EMS and hazmat/WMD response. Furthermore, we hope the Committee will give serious consideration to novel ways by which the Administration may help reduce the number of firefighter deaths and injuries, including advocating for the adoption of and compliance with national standards for safe firefighting at all levels of government. I welcome the opportunity to work with the Committee to this end.

Again, I would like to thank the Committee for its attention and I would be happy to answer any questions you may have.

BIOGRAPHY FOR ROBERT LIVINGSTON

Bob Livingston is working on his 15th year with the Salem Fire Department having served in the capacity as firefighter/paramedic and apparatus operator. He is currently a Captain assigned to Station 1 serving the downtown area of Salem—Oregon's Capital city.

Captain Livingston has an Associate's degree in emergency medical services and a Bachelor's degree in Public Administration from San Diego State University (1990) where he also played four years of intercollegiate baseball for the Aztecs. While employed with the Salem Fire Department, Captain Livingston also earned a Master's degree in Public Administration from Portland State University (2001) with an emphasis in labor management relations.

Along with his higher education degrees, Mr. Livingston is certified as an Oregon paramedic, has received instruction as an Incident Safety Officer, NIMS, technical rescue disciplines such as rope and confined space rescue, hazardous materials at the operations level, and has also served as an instructor and speaker at the annual IAFF EMS conference on the handling of public/private partnerships for ambulance transport.

Bob has served on Oregon's Board on Public Safety Standards and Training (BPSST) which oversees the training and standardization of Oregon's public safety officers including police, corrections, and firefighters in the State of Oregon. During his tenure on the board, Bob also served as the Chair of the Fire Policy Committee and was also a member of the Executive Board of BPSST.

For the past 12 years Bob has served as the Legislative Director for the Oregon State Fire Fighters Council (OSFFC) advocating for the frontline professional firefighters of Oregon at the State and federal level. The OSFFC is the State affiliate to the IAFF and its 281,000 members represented by General President Harold Schaitberger.

Bob has been married for 17 years to his wife Suzette and has two children—Kaitlin, 14 and a freshman at South Salem High School, and a son Nick, a 7th grader at Leslie Middle School in Salem. A native of Oregon, prior to being employed by the Salem Fire Department, Bob grew up in a Southern Oregon logging town and worked both in the lumber industry and a working cattle ranch.

Chairman WU. Thank you very much, Captain Livingston. Chief Henderson, please proceed.

STATEMENT OF MR. GORDON HENDERSON, DEPUTY CHIEF OF OPERATIONS, ROME–FLOYD COUNTY FIRE DEPARTMENT; PAST PRESIDENT OF THE GEORGIA STATE FIREFIGHTERS ASSOCIATION, NATIONAL VOLUNTEER FIRE COUNCIL

Mr. HENDERSON. Chairman Wu, Dr. Gingrey, and Members of the Subcommittee, the National Volunteer Fire Council (NVFC) appreciates the opportunity to be here today to express our views and experiences regarding the United States Fire Administration (USFA) and the National Fire Academy (NFA).

As Dr. Gingrey mentioned earlier, I am a Past President of the Georgia Firefighters' Association. The Georgia State Firefighters' Association is a member of the National Volunteer Fire Council which represents the interests of the Nation's approximately one million volunteer firefighters and emergency medical personnel who staff more than 30,000 fire and EMS agencies nationwide.

Over the years, the roles associated with fire and emergency services have greatly expanded. Gone are the days when our primary responsibilities were putting wet stuff on the red stuff to make black stuff, in other words, putting out fires or transporting patients to the hospital. Fire and emergency services personnel now routinely deal with hazardous materials, provide emergency medical care, and perform search and rescue in a wide range of situations. We are the first responders to dumpster fires, automobile accidents, structure fires, wildland fires, medical emergencies, natural disasters, and yes, even terrorist attacks, and much more.

The USFA and NFA play a critical role in educating and training fire, rescue and emergency personnel throughout the United States. As fire and emergency services have been asked to do and the USFA has expanded its course offerings, the USFA currently

offers courses in arson, communications, critical infrastructure protection, emergency medical services and rescue, fire prevention and planning, fire service administration, firefighter health and safety, hazardous materials, incident management, operations and tactics, professional development, terrorism, wildfire and youth/juvenile firesetter intervention.

In recognition of the wide range of activities that the fire and emergency services perform, as well as the extensive course offerings that the USFA already provides, the National Volunteer Fire Council is pleased to see that the draft reauthorizing language would expand the types of activities that the USFA is explicitly authorized to train fire service personnel in to include dealing with fires occurring in the wildland/urban interface, incidents involving hazardous materials, and advanced EMS. These are each core aspects of fire and emergency service provision and deserve the recognition as such.

With today's requirements for emergency personnel to perform such a wide range of duties, they are also required to spend more time training. For volunteers who work a full-time job and train on nights and weekends, increases in training times are particularly burdensome. The most visible and direct benefit that the USFA provides to the volunteer fire service is the hosting of the Volunteer Incentive Program at the National Fire Academy, which combines two weeks' worth of course work into an intensive six-day session. The compressed course schedule is essential for many volunteers who cannot take two weeks off to attend classes and the course topics are geared specifically toward addressing challenges faced in many volunteer agencies. I have listed those in the testimony. I won't read those because of time.

In addition to the training provided on-site at NFA, the USFA delivers training directly to local jurisdictions, either through online tutorials or by providing states with NFA-developed training and educational materials to make available to local emergency responders. This allows USFA to reach a greater number of firefighters at a relatively low cost. The National Volunteer Fire Council is pleased to see that the draft authorizing language would specifically allow USFA to implement a train the trainer program, which goes beyond simply training first responders but teaches them to deliver the training to others.

The USFA collects, analyzes and disseminates data and information on fires and other emergency incidents to stakeholders and members of the public. Using this information, decision-makers can make better-informed decisions on policies and strategies to pursue with the end result being reduced fire-related loss of life and property.

One of the data collection programs maintained by the USFA is the National Fire Incident Reporting System, NFIRS. This is the standard national reporting system used by U.S. fire departments to report information on fires and other incidents to which they respond. NFIRS is supposed to allow the USFA to maintain records of incidents in a uniform manner and develop statistics from that data.

While NFIRS is useful in its current capacity, it needs to be updated so that reporting can be done online as well as in written

form. Currently, data reported using NFIRS software can take more than a year to reach the USFA if it reaches at all. Some fire departments purchase their own software to keep track of and record incident data to USFA rather than using NFIRS. USFA should develop a web-based reporting system that would allow information to flow more quickly, to the states and the USFA. The National Volunteer Fire Council is pleased that the authorizing bill addresses this issue.

The National Volunteer Fire Council would also like to see the authorizing bill establish some type of link between NFIRS and the National Emergency Medical Services Information System which is maintained by the National Highway Transportation Safety Administration, and it collects data about incidents that occur during EMS responses. Because the fire service handles so many EMS calls, the National Volunteer Fire Council believes that the USFA and NTSA should cooperate to make sure that their respective systems are capturing data that is as accurate and useful as possible.

In closing, the National Volunteer Fire Council respectfully requests that the USFA be reauthorized and that funding be placed at a level that will allow the USFA to continue, improve, and increase the programs offered to the fire service and other emergency services. We support the funding level as specified in the draft authorizing language and hope that they will not only be passed into law but fully funded in future appropriations legislation. Thank you.

[The prepared statement of Mr. Henderson follows:]

PREPARED STATEMENT OF GORDON HENDERSON

Mr. Chairman and Members of the Subcommittee, the National Volunteer Fire Council (NVFC) appreciates the opportunity to be here today to express our views and experiences regarding the United States Fire Administration (USFA) and the National Fire Academy (NFA).

My name is Gordon Henderson and it is an honor and a pleasure to appear before you today. I have been in the fire service for 32 years. Currently, I am the Deputy Chief of Operations in the Rome-Floyd County Fire Department in the State of Georgia. I serve as the Chairperson of the Georgia Firefighters and Fire Chiefs Joint Legislative Committee. I am a principle member of the National Fire Protection Association (NFPA) 1001 National Professional Qualifications for Firefighters Committee and also serve as the secretary. I am a Past President of the Georgia State Firefighters Association (GSFA) and the GSFA is a member of the NVFC, which represents the interests of the Nation's approximately 1,000,000 volunteer fire and emergency medical personnel who staff more than 30,000 fire and EMS agencies nationwide.

Over the years, the roles associated with the fire and emergency services have greatly expanded. Gone are the days when our primary responsibilities were "putting the wet stuff on the red stuff to make black stuff" in other words putting out fires or transporting patients to the hospital. Fire and emergency services personnel now routinely deal with hazardous materials spills, provide emergency medical care, and perform search and rescue in a wide range of situations. We are the first responders to dumpster fires, automobile accidents, structure fires, wildland fires, medical emergencies, natural disasters, and yes—even terrorist attacks and much more.

The USFA and NFA play a critical role in educating and training fire, rescue and emergency personnel throughout the United States. As the fire and emergency services have been asked to do more, the USFA has expanded its course offerings. The USFA currently offers courses in arson, communications, critical infrastructure protection, emergency medical services/rescue, fire prevention and planning, fire service administration, firefighter health and safety, hazardous materials, incident management, operations and tactics, professional development, terrorism, wildfire and youth/juvenile firesetter intervention.

In recognition of the wide range of activities that the fire and emergency services perform, as well as the extensive course offerings that the USFA already provides, the NVFC is pleased to see that the draft reauthorizing language would expand the types of activities that the USFA is explicitly authorized to train fire service personnel in to include dealing with fires occurring in the wildland/urban interface, incidents involving hazardous materials and advanced EMS. These are each core aspects of fire and emergency service provision and deserve to be recognized as such.

With today's requirements for emergency personnel to perform such a wide range of duties, they are also required to spend more time training. For volunteers who work a full-time job and train on nights and weekends, increases in training times are particularly burdensome. The most visible and direct benefit that the USFA provides to the volunteer fire service is the hosting of the Volunteer Incentive Program (VIP) at the NFA, which combines two weeks' worth of course work into an intensive six-day session. The compressed course schedule is essential for many volunteers who cannot take two weeks off to attend classes and the course topics are geared specifically toward addressing challenges faced in many volunteer agencies. Topics of the course include:

- Command and Control of Fire Department Operations at Target Hazards
- Challenges for Local Training Officers
- Command and Control of Incident Operations
- Community Education Leadership
- Fire Cause Determination for Company Officers
- Fire Protection Systems for Incident Commanders
- Leadership and Administration
- Advanced Safety Operations and Management
- Leading Community Fire Prevention
- Management Strategies for Success
- Presenting Effective Public Education Programs
- Command and General Staff Functions in the Incident Command System
- Juvenile Firesetter Intervention Specialist I & II Leadership

In addition to the training provided on-site at NFA, the USFA delivers training directly to local jurisdictions, either through online tutorials or by providing states with NFA-developed training and educational materials to be made available to local emergency responders. This allows USFA to reach a greater number of firefighters at a relatively low cost. The NVFC is pleased to see that the draft authorizing language would specifically allow USFA to implement a "train the trainer" program, which goes beyond simply training first responders but teaches them to deliver that training to others.

The USFA collects, analyzes and disseminates data and information on fires and other emergency incidents to stakeholders and members of the public. Using this information, decision-makers can make better-informed decisions on policies and strategies to pursue with the end result being reduced fire-related loss of life and property.

One of the data collection programs maintained by the USFA is the National Fire Incident Reporting System (NFIRS), this is the standard national reporting system used by U.S. fire departments to report information on fires and other incidents to which they respond. NFIRS is supposed to allow the USFA to maintain records of incidents in a uniform manner and develop statistics from that data.

While NFIRS is useful in its current capacity, it needs to be updated so that reporting can be done online as well as in written form. Currently, data that is reported using NFIRS software can take more than a year to reach the USFA if it reaches at all. Some fire departments purchase their own software to keep track of and report incident data to USFA rather than using NFIRS. USFA should develop a web-based reporting system that would allow information to flow more quickly—to states and the USFA. The NVFC is pleased that the authorizing bill addresses this issue.

The NVFC would also like to see the authorizing bill establish some type of link between NFIRS and the National Emergency Medical Services Information System (NEMSIS). NEMSIS, which is maintained by the National Highway Transportation Safety Administration (NHTSA), collects data about incidents that occur during EMS responses. Because the fire service handles so many EMS calls, the NVFC believes that the USFA and NHTSA should cooperate to make sure that their respective systems are capturing data that is as accurate and useful as possible.

A major area of concern for the NVFC is that the number of volunteer firefighters in the U.S. is decreasing. According to a National Fire Protection Association (NFPA) study, between 1983 and 1988, the number of volunteer firefighters in the country has gone from close to 900,000 to approximately 800,000. Since 1988, the number of volunteers has fluctuated up and down but remained close to 800,000. Over that same period of time, the number of volunteer firefighters per person in this country has declined by 26.7 percent.

In addition to the declining numbers, the average age of volunteer firefighters is increasing. In 1987, 63.2 percent of the firefighters serving in communities of less than 2,500—almost all volunteers—were under the age of 39. In 2005, the percentage was down to 51.7 percent under the age of 39. The ages of firefighters serving communities with populations of 24,999 or less, which are also mostly volunteers, have shifted in a similar fashion.

To improve staffing at volunteer public safety agencies, the USFA recently partnered with the NVFC to develop *"Recruitment and Retention for the Volunteer Emergency Services,"* a 237-page guide that identifies more than 30 specific challenges to recruiting and retaining volunteers and offers multiple suggestions on how to overcome each of them. The USFA has sponsored recruitment and retention workshops around the country based on the information contained in the guide. The NVFC and the USFA recently agreed to work together to create a video companion to the guide that will be made available to the public.

Mr. Chairman, in my invitation to testify here today you specifically requested information about the challenges facing rural volunteer fire departments in reaching out to their communities to teach fire prevention and fire safety education. Teaching fire prevention and fire safety education is one of many non-emergency functions that volunteer fire departments perform. Each of these functions requires additional volunteer hours, which places stress on the membership of a volunteer fire department. One strategy for combating this is using retired volunteer firefighters who no longer respond to emergencies, or community members who are not trained as firefighters, to perform these tasks.

A great example of this is the Johnson County Rural Fire District #1 in Clarksville, Arkansas, partnering with students from the local University of the Ozarks' Phi Beta Lambda organization. The partnership was established in 2005 and today over 100 students assist this small rural department with their fire safety education programs. With the help of the department's firefighters and non-operational volunteers, the Johnson County RFD #1 increased the hours of its fire safety education programs from approximately 100 hours per year before 2005 to 8,600 hours in 2006. Since the inception of its Fire Corps program, the group's efforts have reached nearly one million people on the local, State, and national levels with their important fire safety messages. Through these efforts, this small department has affected a dramatic 34 percent decrease in fire-related property loss. . .all at little to no cost to the department.

The Johnson County RFD #1 program was actually established through a program called Fire Corps, which is part of the Department of Homeland Security's Citizen Corps program and is administered jointly by the NVFC and the International Association of Fire Chiefs. Fire Corps provides career, combination and volunteer fire departments with resources to help attract community members to serve the fire department in nonoperational roles. The USFA participates in meetings of the Fire Corps National Advisory Committee, made up of 15 non-governmental organizations representing different constituencies within the fire service. The USFA also helps promote Fire Corps at fire service trade shows and at NFA.

In closing, the NVFC respectfully requests that USFA be reauthorized and that funding be placed at a level that will allow the USFA to continue, improve, and increase the programs offered to the fire service and other emergency services. We support the funding levels specified in the draft authorizing language and hopes that they will not only be passed into law but fully funded in future appropriations legislation.

Once again, thank you again for the opportunity to speak to you today. If there are questions from the Committee, I will be glad to respond to them at this time.

BIOGRAPHY FOR GORDON HENDERSON

Deputy Chief of Operations, Rome Fire Department, Rome, Georgia

Married—Dawn, two children, two grandchildren

Memberships:

International Association of Fire Chiefs
Southeastern Association of Fire Chiefs
Georgia Association of Fire Chiefs
District Vice President of the Georgia Association of Fire Chief
Georgia State Firefighters Association
Past President of the Georgia State Firefighters Association
Chair of the Georgia State Firefighters Association/Georgia Fire Chiefs Association Joint Legislative Committee
Member and secretary of the NFPA 1001 National Professional Qualifications for Firefighters Committee

BS in Business Administration with HRM concentration

Candidate for MBA with concentration in Public Administration

Chairman WU. Thank you very much, Chief. Dr. Hall, please proceed.

STATEMENT OF DR. JOHN R. HALL, JR., ASSISTANT VICE PRESIDENT, FIRE ANALYSIS AND RESEARCH, NATIONAL FIRE PROTECTION ASSOCIATION

Dr. HALL. Chairman Wu, Dr. Gingrey, and other Subcommittee Members, the National Fire Protection Association and I greatly appreciate the opportunity to speak to you in support of reauthorization of the U.S. Fire Administration.

The USFA has funded and conducted over the years defining research projects on a full range of fire prevention and mitigation technologies. They have also partnered on research to improve the technologies that first responders use to do their jobs safely and effectively. For example, the USFA has worked closely with NIST on computer analysis of fires where firefighters die leading to new training tools and changes in firefighting tactics and procedures.

NFPA is America's principal source for national voluntary consensus codes and standards related to both fire safety and the fire service. Our standards use a true consensus approach with a balance of interests to address a broad range of topics such as professional qualifications and performance testing, maintenance, and operation standards for protective and firefighting equipment. Over 400 Federal Government staff including USFA and NIST, participate in the NFPA standards development process, and our documents have benefited greatly from USFA and NIST expertise. NFPA agrees with the legislation that development and enhancement of national voluntary consensus standards is important to the USFA mission. We welcome this recognition of the importance of standards in translating the latest scientific research into practice.

NFPA conducts some research itself, and we established the Fire Protection Research Foundation as an independent entity to partner funders with researchers on projects relevant to our mission. NIST has provided researchers and the USFA has provided funding for Research Foundation projects. Research has brought us closer to understanding some of the technical controversies surrounding home smoke alarms, fire sprinklers, sensors for detection of incipient fire conditions, innovative high performance materials, and the list goes on and on. But despite these controversies, decisions must still be made. At any given time, best judgments must be used when definitive technical answers might be no more than

one well-designed project away. Best practices must be based on existing technology because promising new technologies lack independent testing and evaluation.

In 2006, the USFA and NFPA partnered on a Second Fire Service Needs Assessment, and it found improvement on some measures of aggregate and national need. For example, the percentage of departments with portable radios to equip everyone on a shift rose from 23 percent to 36 percent. The percentage of departments with self-contained breathing apparatus for all emergency responders rose from 30 percent to 40 percent. The percentage of departments with personal alert safety system devices for all emergency responders on a shift rose from 38 percent to 52 percent, and the percentage of departments with written agreements to coordinate use of outside personnel and equipment rose from 19 percent to 26 percent for a building collapse and from 21 percent to 30 percent for a biological chemical agent scenario.

Some were surprised that the improvements were not more dramatic and did not extend to more types of resources. We were not because we knew that a grant program funded at about $500 million a year could not expect to rapidly transform a set of fire service needs collectively estimated to cost many tens of billions of dollars. We suggest that Congress use our needs assessment as a tool for priority setting.

In my real job back home, I am head of the group that produces and analyzes fire statistics; so the one database that is most important to make my work at NFPA more effective and planning for the USFA more strategic is NFIRS. For three decades, NFIRS has been essential in defining our national fire problem. Despite its great value, NFIRS has been subject to criticism—this year on timeliness. I believe web-based reporting can be a valuable enhancement, but we need to understand what it can and cannot do. NFIRS is a sample of fires responded to by fire department. Valid analysis depends on use of a representative sample of sufficient size. Currently the full NFIRS sample is large enough that representativeness is usually not a problem. However, if data were analyzed year to date, there would be less data and less representative data because of differences in speed of reporting by community, size, and region. Also, NFIRS' quality depends on editing at the local, State, and national levels. Requiring web-based, real-time reporting could discourage or eliminate some or all of this editing. I urge the Subcommittee to give the USFA professionals the funding to expand the system but also the flexibility to fill in the details.

I think I speak not only for NFPA but for all the fire safety community in saying we need a strong USFA, a USFA that does the things it does better than anyone else and makes it easy for everyone else to do what they do best. We agree that the reauthorization bill should reinforce the range of technologies that are appropriate to the USFA mission but resist the temptation to direct the application of resources among these technologies.

We trust the new leader of the USFA, Chief Gregory Cade, and the USFA professionals to make the best choices; and on that basis, the NFPA strongly and enthusiastically supports the reauthorization of the U.S. Fire Administration. Thank you, sir.

[The prepared statement of Dr. Hall follows:]

PREPARED STATEMENT OF JOHN R. HALL, JR.

Good morning. I am Dr. John Hall, Assistant Vice President for Fire Analysis and Research at the National Fire Protection Association (NFPA). Mr. Chairman, fellow Subcommittee Members, NFPA and I greatly appreciate the opportunity to speak to you today in support of the reauthorization of the U.S. Fire Administration (USFA).

Before I address the main questions in this hearing, I would like to look at the record of the USFA over its more than three decades. Year in and year out, the USFA demonstrates high professional skill, strategic vision, the ability to set priorities, and a sustained dedication to its unique dual role of the leader of Federal Government fire safety and fire service programs and leader/supporter of America's fire and emergency services, in all the great work they do. NFPA looks forward to continuing our long and productive partnership with the USFA and in particular to working closely with the newest U.S. Fire Administrator, Chief Gregory Cade.

1. NFPA's Current Priorities for and Perspective on USFA and Fire Technology Related Research and Development

NFPA is America's principal private non-profit fire safety advocacy organization. As such, our interests in research and development are driven by the needs of programs that will maintain or improve safety from unwanted fire and other hazards and that will help America's first responders to safely and effectively perform their roles of protecting the rest of us.

Fire safety programs may operate principally through innovative technology, supported by consensus codes and standards, or through behavior change, achieved by education of ordinary people and training of professionals.

In terms of technologies for greater fire safety, NFPA is a strong advocate of the proven value and future potential of smoke alarms and fire sprinklers, as well as design changes to powered equipment and other heat sources, changes in the fire performance of materials and products, and changes in the knowledge and behaviors of people.

In its first decade, the USFA provided strong leadership in funding, defining and applying research to create a form of fire sprinkler protection that made engineering and economic sense for individual housing units. More recently, the USFA has continued to look for additional innovations and approaches that will bring this life-saving technology to more homes.

In the early years of America's interest in smoke alarms, the USFA provided leadership in measuring the beliefs and values of American heads of households, and in so doing, helped to accelerate the process of placing smoke alarms in nearly every home. More recently, the USFA and many other agencies and organizations have focused on taking smoke alarms to the millions of mostly high-risk homes that still do not have this protection.

The USFA has also funded research by NFPA to help identify innovative solutions to

- smoker behaviors that influence cigarette fires, still the #1 cause of *fire deaths* in the U.S.;
- cooking equipment and cooking behaviors, still the #1 cause of *home fires and related injuries* in the U.S.;
- and the variety of circumstances that make the fire problem of rural America distinctive, where rural communities still have the highest fire death rates relative to population in the U.S.

On the fire service research side, the USFA has worked closely with the National Institute for Standards and Technology (NIST) to support advanced computer analysis of fires where firefighters are fatally injured. These studies have led to sophisticated new simulation and training tools, as well as an understanding of rare but unusually dangerous fire phenomena and changes in firefighting tactics and procedures.

The USFA has also partnered on research on most of the technologies that firefighters and other first responders use to do their job safely and effectively, such as:

- portable radios, where inter-operability continues to handicap firefighting in the largest incidents;
- personal alert safety systems, where questions have arisen recently about equipment performance in severe fire conditions;

- self-contained breathing apparatus and personal protective clothing, where protection from the many threats associated with fire must be balanced with the needs of the body to take in oxygen and get rid of heat.

These are only examples of technologies that deserve high priority because they offer especially great promise of significant improvement in fire prevention, fire mitigation, firefighting effectiveness, or firefighter health and safety. In every instance, the USFA has shown leadership in setting priorities, putting high-quality projects in motion, and partnering with many agencies and organizations to accomplish shared goals.

Your draft reauthorization bill addresses the subjects of applied research and technology in what I believe is the most appropriate manner for an agency with a proven track record of good judgment and important results. You have reinforced the range of technologies, including detection, prevention, suppression, and department operations, that are appropriate to the USFA mission, but you have resisted the temptation to substitute the judgment of Congress for the judgment of the USFA professionals in allocating resources among these technologies. You have underscored the importance of coordination and partnership with other national entities and listed many of the federal agencies best equipped to serve as partners.

But you have resisted the temptation to steer the USFA toward any particular agency or to favor governmental partners over private partners. You have shown an awareness of the major elements of the problem and its solutions, while also showing your trust and confidence in the USFA professionals to make the best choices.

2. Please describe NFPA's role in setting standards and codes for firefighting technology. How does NFPA engage with USFA and NIST in the standards setting process? Does the current statute make adequate provisions for this process?

NFPA is America's principal source for national voluntary consensus codes and standards related to fire safety and the fire service. Our standards and codes address such topics as:

- professional qualifications for firefighters, fire officers, fire inspectors, fire and life safety educators, and many other specialized positions and assignments within the fire service;
- performance, testing, maintenance, and operation standards for firefighter protective clothing and equipment and for firefighting apparatus and equipment; and
- requirements for programs, such as training, disaster/emergency management, business continuity, and fire service occupational safety and health maintenance.

The NFPA codes and standards development process uses a "true consensus" approach, in which technical committees are composed of a balance of interests, with no one interest having a majority of votes. For fire service related standards, we have extensive representation from organizations representing fire chiefs, fire marshals, fire investigators, firefighters, fire and life safety educators, and city and community managers. We value all our volunteers, including the over 400 staff from the USFA, NIST and other federal agencies who participate in the NFPA process. Many of our standards have been greatly improved due to the special expertise brought to the committees by USFA and NIST staff.

Once NFPA standards are issued, they still need to be adopted and enforced. Adoption decisions are made separately by individual states and municipalities. Some federal agencies also adopt NFPA codes and standards for applications under their jurisdiction.

The USFA cannot act directly to achieve adoption of standards by other federal agencies, let alone by non-federal entities, but the USFA can improve the climate in which decisions about adoption are made by forcefully and visibly supporting the voluntary consensus codes and standards process and by putting the considerable weight of its own reputation and leadership in support of compliance with national fire service standards. The same can be said of NIST in those areas where its expertise is universally acknowledged.

NFPA agrees with the draft legislation that "development and enhancement of national voluntary consensus standards" is an important part of the USFA mission. NFPA welcomes this recognition of the importance of such standards in translating the latest scientific research into practice.

3. Please discuss NFPA's work in fire prevention and firefighting technology research. How does NFPA engage with USFA and NIST in re-

search activities? What funding opportunities exist for extra-mural fire research, and are they adequate? Are there areas of particular importance that are currently neglected due to lack of resources?

NFPA plays a fairly limited direct role in fire prevention and firefighting technology research. Most hands-on research done by NFPA staff is conducted within my division, and we concentrate primarily on statistical analysis and literature reviews, plus related research in areas such as human behavior and fire risk assessment. In that capacity, NFPA has conducted funded research projects for the USFA and NIST from the beginning.

The Fire Protection Research Foundation is an independent entity at NFPA that brings together funders and researchers on projects to answer questions affecting NFPA codes, standards, and other programs and activities aimed at increasing program effectiveness or cost-effectiveness in areas of fire safety or firefighter health and safety. NIST has provided lead researchers for Research Foundation projects and the USFA has provided funding for Research Foundation projects, including current projects on firefighter respiratory exposure and fire code inspection and compliance programs.

Both the USFA and NIST do an excellent job of sorting through potential projects and supporting the ones with greatest potential. But research funding for fire safety science and engineering and for firefighter effectiveness, safety and health has been shrinking for many years, not only in the U.S. but around the world. This is true for governmental research, university research, and private-sector research.

There are many technical controversies surrounding home smoke alarms, fire sprinklers, sensors for detection of incipient fire conditions involving different types of equipment, non-traditional detection and suppression systems, innovative high-performance materials, implications of energy conservation programs, implications for fire safety of differing international approaches to toxicity and environmental protection, and the list goes on. In every instance, the developers of codes and standards have to make decisions based in part on best judgments when definitive technical answers might be no more than one well-designed project away. In every instance, the leaders in fire safety and firefighter health and safety have to establish requirements based on the known capabilities of existing technology because promising new technologies lack the kind of independent testing and evaluation that would allow them to be widely adopted if they prove out and avoided if they do not.

This nation is nowhere near the point where additional research dollars stop paying for themselves. More funds will yield results and will improve people's lives. The USFA professionals have shown their ability to use the funds available to them effectively and wisely.

4. Please provide an overview of the findings in the 2006 FEMA/NFPA study, "Four Years Later—A Second Needs Assessment of the U.S. Fire Service." How can Congress use the results of this study to strengthen the pending reauthorization legislation?

I personally led the NFPA analysis team that conducted both fire service needs assessments. NFPA President Jim Shannon described the first needs assessment as a "call to action." The needs for essential resources were widespread, covering every role the fire service plays and every type of resource, from personnel to training to equipment to planning.

Because the first needs assessment took place around the 9/11 attacks on America, particular attention was given to the findings on preparedness for dealing with unusually challenging events, including two types of terrorist attacks we had included in the survey. We conducted a cost analysis on our findings as input to the study of terrorism preparedness by the Council on Foreign Relations, and we found that meeting those needs alone would require tens of billions of dollars.

A separate cost analysis of needs for career firefighters identified additional tens of billions of dollars of unmet needs to meet standards and guidelines related to firefighter staffing and coverage. That analysis was provided as support for the so-called SAFER bill.

Our second needs assessment included a matching analysis of Assistance to Firefighter grants against the reported needs of the departments that had received those grants. We found a very high match rate, indicating that fire departments were requesting resources that they really needed, in order to safely and effectively perform the tasks their communities were asking them to perform.

We also found some improvement on some of the measures of aggregate national need. For example:

- the percentage of departments that had enough portable radios to equip everyone on a shift rose from 23 percent to 36 percent;

- the percentage of departments with enough self-contained breathing apparatus to equip all emergency responders rose from 30 percent to 40 percent;
- the percentage of departments with enough personal alert safety system (PASS) devices to equip all emergency responders on a shift rose from 38 percent to 52 percent; and
- the percentage of departments with written agreements to coordinate the use of outside personnel and equipment in a response rose from 19% to 26% for a reference building collapse scenario, from 21 percent to 30 percent for a reference biological/chemical agent scenario, and from 33 percent to 40 percent for a reference wildland/urban interface fire scenario.

Some were surprised that the improvements were not more dramatic and did not extend to more types of resources. (For example, staffing and training measures of need showed no dramatic improvements.) We were not surprised because we knew that a program funded at about a half-billion dollars a year could not expect to rapidly transform a set of fire service needs estimated collectively to cost many tens of billions of dollars.

We suggest that Congress use our needs assessments as tools for priority-setting. Priorities can be set by type of program or resource, where unfunded federal mandates and responsibilities that inherently cross jurisdictional lines would receive first priority, and priorities can be set by some measure of vulnerability, where larger communities more central to the national economy or more exposed in terms of iconic structures might receive first priority. But the key word here is "priority." All of the needs identified are real needs, and our safety will suffer—and the safety of our first responders will suffer—for as long as we continue with these needs unmet. But we have to start somewhere, and it makes good sense to look for additional ways to apply funds first where they will have the greatest impact.

That having been said, it is impossible to read the needs assessments without concluding that the grant program needs to be increased in size, from a fraction of a billion dollars annually to some multiple of a billion dollars annually. With their strong track record of distributing grant funds for best effect in the early years of the program and with additional guidance of another look at priority-setting rules for even greater effect, the USFA professionals can be counted on to deliver high value as well as greater safety and effectiveness to America in any expanded program.

5. NFIRS.

The National Fire Incident Reporting System (NFIRS) is not the subject of one of the questions issued by the Subcommittee, but it is the subject of considerable detailed attention in the draft legislation. Because NFIRS is the one database that is most important to make my work at NFPA effective, I would be remiss if I did not offer some observations on the proposed plans for NFIRS.

First, let me underscore how important NFIRS has been in defining our national fire problem in the three decades since its inception. Through its annual stratified random-sample survey of U.S. fire departments, NFPA has been able to define the overall size and trends of the fire problem, but we had not been able to say much about the details until the advent of NFIRS. Since then, NFIRS has been central to the design of every fire prevention program and debate in the U.S., helping to support or knock down claims of urgency for a particular fire problem or of effectiveness or promise for a particular solution.

Despite its great value, NFIRS has been subject to criticism from the beginning. Some of the criticism has been directed at the level of detail. This has always been a balancing act between the reporting burden on firefighters and the amount of detail sought by decision-makers. Neither side has ever been fully satisfied with the place where that balance has been struck, and both sides have often been vocal about their dissatisfactions. All too often, they have greatly overstated the sizes of problems and undercut the support for the NFIRS system itself. By trying to make it better, as they defined better, they risked making it go away.

This year, the focus is on NFIRS timeliness and on the promise of web-based reporting. I believe web-based reporting, properly integrated with the existing NFIRS system, can be a valuable enhancement, but it is important to recognize what such reporting can and cannot do.

Web-based reporting makes it easier to report fires. That is both its advantage and its disadvantage. NFIRS quality depends on editing at the local, State and national levels. Many missing entries, conflicts and errors are caught during these edits so that the final database is more accurate. Direct web-based reporting in real time may discourage or eliminate some or all of this editing or discourage the addi-

tion or revision of details based on late-emerging information, such as delayed deaths, full fire investigations, and insurance assessments.

Whatever the effect of changes in reporting, the analysis of NFIRS cannot be done validly in real time. NFIRS is a sample of fires reported to fire departments. It is not a census or anything close to a census. The fact that NFIRS is a sample means that its validity depends on its representativeness. NFIRS is a large enough sample that issues of representation by region or size of community can usually be ignored, although recent declines in participation of the largest cities have severely affected our ability to track and project trends in high-rise building fires.

Analysis of NFIRS data based on what has been reported to date in a given year means a much smaller sample and reduced representativeness, reflecting the fact that different sizes of communities and different regions are likely to differ in their speed of reporting and in their participation in the web-based reporting. To get valid estimates from NFIRS, you need to wait until a sufficient and representative group of participants have fully reported.

Since 1980, most of my work has been centered around NFIRS analyses, and I have had the privilege of being involved in nearly every major national policy debate on fire safety and fire service effectiveness and safety in that period. In all that time, I have rarely seen a debate that even benefited from, let alone required, very current data. Management makes decisions when it needs to with the benefit of the information available at that time. Some information may not be completely current; some information may lack useful details. A real-time NFIRS would inject more current data with serious questions of quality and accuracy. That is not a prescription for improved decision-making.

In those rare instances where we really could use current data, we usually need more detailed data than NFIRS can provide. This means we need a special data collection protocol, which we would need for the detail anyway and so might as well use to achieve the greater timeliness. But in so doing, we need to be constantly aware that most policy discussions are far better served by large quantities of valid data than by the latest anecdotal-quality data.

What this means for the current draft legislation is that I urge the subcommittee to maintain the kind of broad and flexible guidance it has used in the rest of the legislation when it talks about NFIRS. By all means, add funds to support expanding the existing web-based reporting if you wish to do so, but leave the USFA professionals with the flexibility they need to fill in the details.

Closing Thoughts

The USFA needs and deserves your support. The USFA needs to know that Congress believes in their mission and wants them to succeed. The USFA needs to know what you expect but not detailed requirements on how those expectations should be met. The USFA needs to hear that Congress encourages their leadership and their partnerships, but they need to know that Congress realizes that the USFA is already doing a great job on this score. Most of all, the USFA needs to hear that you recognize what it costs to do what you want the agency to do and that you will seek to align the agency's budget with its mandates.

I think I speak not only for NFPA but for all the fire safety community in saying that we need a strong USFA on our team. We need a USFA that does the things it does better than anyone else and that makes it easy for everyone else to do what they do best.

For all those reasons, the NFPA strongly and enthusiastically supports the reauthorization of the U.S. Fire Administration.

BIOGRAPHY FOR JOHN R. HALL, JR.

Education

B.A. (Mathematics), Brown University, Providence, RI, Cum Laude, 1967

Ph.D. (Operations Research), University of Pennsylvania, Philadelphia, PA, 1972

Experience

1984– *National Fire Protection Association,* Quincy, MA
Assistant Vice President (formerly Director)
Fire Analysis and Research Division

The Division is responsible for measuring the fire problem and communicating the results as a basis for fire safety decision-making and priority-setting. In research, the Division supports the Association initia-

tive toward performance-based codes and standards, and conducts research in such areas as evacuation modeling and fire risk analysis.

1982–1984 *Center for Fire Research, National Bureau of Standards,* Gaithersburg, MD
Operations Research Analyst

Led development of a modeling framework for fire risk analysis. Worked on risk analyses of home sprinklers, fire-blocking of seats on passenger airlines and nuclear facilities.

1979–1982 *Federal Emergency Management Agency, U.S. Fire Administration,* Washington, DC
Operations Research Analyst

1973–1979 *Urban Institute,* Washington, DC
Senior Research Associate (previously Research Associate)

1972–1973 *Resource Management Corporation,* Bethesda, MD
Research Analyst

DISCUSSION

Chairman WU. Thank you, Dr. Hall, and now we will turn to Member questions, and the Chairman recognizes himself for five minutes.

Several of the representatives of the fire services in their written or oral testimony referred to the fact that USFA does not have sufficient resources to fully meet the needs of the local fire service communities; and Chief Westermann, I believe you referred to that specifically in your oral testimony. In your opinions, what are the financial and other costs to local governments, to the fire departments, private citizens, and businesses as a result of this underinvestment in the USFA. And if we may, could we start with Chief Westermann and move to my right, your left, and then we will finish up with Administrator Cade.

Mr. WESTERMANN. I think it is just an expansion of a lot of the current programs that are there, beginning with the Fire Academy. We have 8,000 people that have been on campus, only 76,000 through off-site, distance learning, but we have 1.2 million firefighters in the country, so there are a lot of firefighters who are still not receiving some of the benefits of those programs.

Probably the other respect to an expansion of programs is the education of our public to reduce not only the fire losses and life losses, particularly in residential sprinklers, the smoke detectors, things of that nature. So it is just an expansion I think of a lot of the current programs.

Chairman WU. Captain Livingston.

Mr. LIVINGSTON. Mr. Chair, Committee Members, while I can't quantify a dollar number for you on the cost and where we are with respect to the programs, certainly clearly in my testimony and others', we need to make some improvements with respect to firefighter fatalities and make sure that we do a good job of not only educating about safe operations but iterating clearly that we strongly feel that it is time to have some national standards and look at those and not only provide for some streamlining of the fire service but also if you are going to collect data with respect to NFIRS, one of those components, and I think Dr. Hall mentioned it, is that I was shocked and surprised to hear some of the numbers, like with radios, I think we went from 21 percent up to 36

percent. To me, that tells me that there is 64 percent of the firefighters out there that still don't have mobile radios available for them to use in an emergency situation. So while I appreciate the efforts and certainly this is an important topic, the USFA has done a great job, we live in a new world now, the 21st century; and so I think we need to make some strides in some of these area, and I think the USFA can be the sounding board for the fire service to promote this, not only in the Federal Government but at the local level as well.

Chairman WU. Thank you, Captain Livingston. Chief Henderson.

Mr. HENDERSON. In the State of Georgia, we use handoff courses from the National Fire Academy that go out to a lot of local firefighters, and I think those handoff courses are very valuable and I think they need to continue. I think they need to be encouraged. We have also started in the State of Georgia going through the votech schools to put out part of the training. That also needs to be encouraged, and when you look at those for the training to go out to the people who make it easier for the volunteers to come in to their local communities to get training. And also again, I would echo what everybody else has said about residential sprinklers now. Cobb County and Marietta where Dr. Gingery is from, actually have a residential sprinkler ordinance; and I think it has saved a lot of lives in Cobb County and Marietta. And it is something I think that is needed nationwide. A dollar amount? I would have no idea of what it would be, but I would say it would be expensive to the states.

Chairman WU. Thank you very much, Chief. Administrator Cade and then if either Dr. Sunder or Dr. Hall have anything to add to this.

Mr. CADE. Thank you, Mr. Chairman. Certainly within the United States Fire Administration, what we believe right now is that we are currently funded for the mission that we are expected to accomplish; and obviously if Congress decides to increase the mission for the United States Fire Administration, then hopefully there will be some additional funding that would go along with that increase in the mission. I think what you have heard certainly from some of the individuals is the hunger for education and training at the local level, and that is something that I look at as not only the head of the United States Fire Administration but also as a fire chief—trying to figure out how do you provide the best possible training at the local level which is truly where it needs to be. The United States Fire Administration has been trying and working very diligently with our State training directors at figuring out how we push out the training to the local level. It would be nice to say that all of the firefighters are going to have an opportunity to come through the National Fire Academy. That is just not realistic. So we need to figure out better ways of continuing to use distance learning capabilities to push out those classes. We are making some modification in the training classes that we provide. We are pilot testing some of them right now to go from a two-week training program down to a six-day training program so there would be some up-front work done before the individual came there. Time is something that none of us can increase unfortunately, so we are trying to make sure that the offerings that we

provide through the United States Fire Administration acknowledge that that time is critical for individuals, whether they are studying at home or studying at the Fire Academy; and we certainly are trying to make some things and make it more cost-effective to be able to use. We have just moved back obviously in once again to FEMA, and part of that is to look at how, as we fit in there, all of the other programs that are being done across FEMA to look for the operational efficiencies and streamlining in that process. So hopefully as we do that, we can redirect some of the resources that we have back into other programs.

Chairman WU. Thank you, Mr. Cade. My time has expired, but if Dr. Sunder or Dr. Hall have anything. Dr. Hall.

Dr. HALL. Thank you, Mr. Chairman. In the beginning of my remarks, I mentioned that the Fire Administration over the years has funded a number of research projects on fire prevention and mitigation as well as on the safety and effectiveness of the fire service. So the question you posed I think is a question of how much loss are we sustaining because we didn't do more of what they have always done well? This means we have had fires we didn't need to have, we have had fires that were more serious than they needed to be, we have paid more for fire protection than we had to pay, we have had firefighters who showed up who were not able to stop fires as quickly as they would have been able to, and we have had firefighters who paid a serious price of death or injury because of a lack of equipment or training.

Quantifying how much of that we could have done how quickly is better done on a case-by-case basis, but I will tell you that we estimate the total cost of fire losses, plus what we spend to try to not have more losses, at over $100 billion a year. And if you imagine, as I would imagine, that with and accelerated translation of research into practice that we could make a serious inroad into that number, then you are talking about potentially tens of billions of dollars a year that you might be able to reduce for prices a small fraction of that in the form of well-designed research projects.

Chairman WU. Thank you very much. Dr. Sunder? Thank you very much, Dr. Hall.

Dr. SUNDER. If I may just add just a couple of comments, I think the issues of firefighter fatalities and residential sprinklers are certainly worth noting. There is work currently under way on those issues, particularly with regard to PASS devices and positive pressure ventilation techniques and structural collapse prediction technologies and firefighter locator and training technologies. So all of those are being addressed. There is obviously more that could be done, and it is a valid point, I think, that we need to look at.

With regard to residential sprinklers, we have just finished a cost-benefit analysis of residential sprinklers, and this came out last month and this is going to be widely disseminated. So the building code community will have better information as they consider proposals to require residential sprinklers

Chairman WU. Thank you, Dr. Sunder. And with that, Dr. Gingrey is recognized for five minutes.

Mr. GINGREY. Mr. Chairman, thank you. First of all, let me thank all of our witnesses today, and this is very, very impressive. I think we really got the experts here, both in the policy and at

the ground level; and it is great to hear from all of you. Your written testimonies, of course, your complete testimonies are part of our permanent record; and I haven't read the full testimony of each and every one of you, but I intend to try to do that. Sometimes we will have hearings when I don't really have much interest in reading the full text because of what the witnesses had to say; but what the witnesses have had to say today, Mr. Chairman, I fully intend to read it because this is very important.

I want to ask one question. I think most of you know I am a medical doctor and Member of the United States House of Representatives and so the question I want to ask is in regard to emergency medical response. You know, all of us go to or by the scene of an accident or to by the scene of a fire. Sometimes you see what I would say is a duplicative response, so obviously you need emergency medical personnel there. But you know, what can we do to better coordinate so that people are not standing around? And I want any one of the six of you to respond to this or all of you. You have got so many responsibilities as you pointed that out in regard to hazmat and weapons of mass destruction and protecting structure, evacuating personnel, making sure the fire doesn't spread to adjoining buildings, et cetera. If your people are tied up trying to do CPR and administer emergency medical services and yet there are three ambulances at the scene as well with people that are very well-trained, Chief Westermann and Captain Livingston, maybe the two of you can start because you addressed that more in your oral testimony.

Mr. WESTERMANN. To start with, we firmly believe, and I believe my colleague, Captain Livingston, will agree with this, we firmly believe in fire-based EMS, and that simply is because our stations are already spread out with the fire apparatus, and to put an ambulance with an engine or the ladder truck is simply logical sense for the distribution and to reduce the response times to the incidents as low as possible.

As far as the number of people responding to the calls, and it kind of depends on the call, but if an MVA, or motor vehicle accident, is occurring, you should have an engine and an ambulance, at least one ambulance, on the scene depending how many patients there are, not only for patient care and extrication of that patient from the car but you also have a hazmat incident, you also have a fire hazard where some of the other people will be checking into. And as the number of patients increases, there goes the number of ambulances needed on the scene. If we are talking about a heart attack or something of that nature, you still end up with an engine and an ambulance on many scenes.

Med units or ambulances are busy. Our ambulances in my organization are on the road almost 24 hours a day. The engine also has paramedics, EMTs on them across the country; and they are being used again in order to reduce the response time. Get the engine responding. The patient still gets the premium care as possible, and at that point, once the engine or the ladder truck gets on the scene, paramedic is providing care, the ambulance, and I don't want to belittle their role, but essentially becomes the taxicab. The patient is already getting care. The ambulance comes in from the other call or——

Mr. GINGREY. That is my concern. I am running out of time, and maybe I can address it in a second round because there are not as many people to ask questions. But that is my concern. I don't think the ambulance should be a taxicab, a very expensive taxicab. So again, Captain Livingston, if you want to comment in the few seconds I have left.

Mr. LIVINGSTON. Very briefly, Chairman Wu, Ranking Member Gingrey, just simply, we are in the life safety business, and it is a great fit for us to be able to provide emergency medical care in the pre-hospital setting. As a paramedic myself, I can tell you, and I will echo some of the same comments that Chief Westermann said, our first and foremost priority and what we are there for is to protect the public safety, and life safety is important. Your illustration of a motor vehicle accident, not only can we start to do initial stabilization of the patient if we need to, particularly in my organization and many throughout the fire service, we have advanced life support capability; and as you know, airway management and all those things are very important. At the same time, that engine not only provides advanced life support, it also provides for a safer scene with respect to if there is a car fire involved, hazardous materials. So it is a great fit from the standpoint of having the fire service be involved in EMS and partnering with the then ambulance transport. Certainly we believe fire-based transport is the way to streamline things.

Mr. GINGREY. Thank you, Chief, and Captain. Mr. Chairman, I know my time has expired. I am going to come back to this in a second round.

Chairman WU. We will come back to you fairly shortly. Mr. Mitchell, you are recognized for five minutes.

Mr. MITCHELL. Thank you. I don't really have a question but kind of a response to Dr. Gingrey. In my area, in fact every fire service in my district, the ambulance is contracted out. It is not part of the fire service. So therefore there is not an ambulance at every station. In fact, what happens is the firefighters are the ones that are there fastest and the first responders, and the ambulance pretty much does more than a taxi—but they don't necessarily all have paramedics on them as well. They have EMTs, but the fire service is the one that has all the paramedics. So they are the first responders, they are there first, and then the ambulance comes; and that way, it has been cheaper because there is not an ambulance at every station. They are spread out much thinner and don't respond as fast. And that is just a comment. That is how it is in my particular district. I yield back my time.

Chairman WU. Thank you, Mr. Mitchell. Dr. Gingrey, since you are the Republican on that side and you seem to have some questions on this, we will come back to you; and then we will go to Ms. Richardson.

Mr. GINGREY. Mr. Chairman, thank you, and I think some of the other witnesses may want to comment on this. Mr. Mitchell, thank you for your comments. It is a lot like that I think in my district as well, and I haven't thought about this in a while, so this is certainly a very timely week coming up and reauthorization and a timely hearing. Here again, I want to make sure that on the scene that there is a protocol. As Representative Mitchell pointed out, the

firemen respond first, they get there first; but of course, in every community, the ambulance whose services are contracted with the community, whether county, city, or region, have to respond in a certain period of time, and pretty darn quickly I might add. And let us say the fire department is there and they are fighting that fire but somebody with the great training that Captain Livingston talked about is trying to save a life but all of a sudden then he looks around and there is a paramedic in an ambulance service, is there handoff protocol? The paramedic on the ambulance certainly is not going to be able to go in there and fight that fire, he is not trained to do that. Is there a protocol so that we don't waste our talent, so to speak, at the scene?

Mr. WESTERMANN. I guess that is one of the niceties, the benefits, of having fire-based EMS in that both your ambulance personnel and the people fighting the fire are typically cross-trained in the fire department, so they could trade off and have the distinct protocols on handoffs such as what you mentioned.

Mr. LIVINGSTON. And I would just say, Chairman Wu, Ranking Member Gingrey, yes, there are protocols, particularly in the example that you give. That is one of the things, and I think it was Administrator Cade that mentioned it. Since we are so good at the incident management system, it is the overall incident commander that sets the goals and the priorities. And so in your illustration, once again, life safety is always the number one priority for the fire service, but they would also go through the incident command system so that not only are we using those resources efficiently but we are maximizing the effectiveness of them. And so we do do that. While there may be differences, it is the incident command system which we utilize on a day-to-day basis that provides for that efficiency on that emergency scene.

Mr. GINGREY. I just want to make this comment, and then if others want to weigh in, you are there, you have that training, you are trying to offer life support to someone that you pull from the fire, but you may have six or eight or ten like in the South Carolina situation, or other situations, where your brothers at arms and your firefighting partners are in there fighting a building, and of course, their lives are at stake, too. So it is a matter of trying to make sure as I point out. Would others like to comment on that?

Dr. HALL. First, a couple of facts. There is something like 20 million emergency responses by fire departments each year, and only seven percent of them are fires. Something like 60 percent or more are medical responses, and the percent, as well as the numbers, keep going up every year. The Fire Service Needs Assessment that I mentioned has a fairly recent reading on what fraction of fire departments offer EMS service, and the other witnesses are correct that it is now the norm rather than the exception; and also information on what fraction of them have formal training for the people who are involved and what levels of certification they have, and it varies all over the place. But as Captain Livingston has stated, it all comes down in the end to incident management. You have got to have a department which is the central manager of the event, knowing the resources from other departments and its own that it has to put into place, has protocols in place to sequence the tasks and have things done in parallel and sequence as appropriate. So

I think most departments do that, and the trick is whether a group like the U.S. Fire Administration through their training can make sure that all departments do that.

Mr. GINGREY. Thank you, Mr. Chairman. I think my time is expired, and Ms. Richardson has been very patient.

Chairman WU. Thank you, Dr. Gingrey, and with that, the gentlelady from California, Ms. Richardson.

Ms. RICHARDSON. Thank you, Mr. Chairman Wu, for having this very helpful hearing that we have before us today. I am going to start off first with a comment, and then I do have two questions. Number one, I was a little surprised in all the testimony today that there was very little reference to fire facilities, and I will tell you that in my hometown, almost every fire facility that I have been at, the fire stations themselves have been highly inadequate. First in regard to gender: you have situations where firefighters are forced to put a little bell on the door or some little sign that says that there is a woman firefighter who is using the restroom or taking a shower; and clearly, we are going to have to deal with the inadequate facilities that we have.

Second of all, I would like to speak to the poor infrastructure. When you talk about crumbling bridges and so on, many of our fire facilities have only been able to survive due to the innovative abilities of our firefighters to really fix them and keep them up to speed. But I am extremely concerned for example that in my area, the size of the bay doors, many of the new technology, the newer and larger size trucks, that the equipment is not able to get in, not able to get out. The location of the fire facilities in my area, we have fire facilities that were originally put in there in the '40s and '50s. Now we are talking about very highly urban communities. So physically to get out, to get onto these smaller streets and to get onto the main highways to be able to get to people and care for them is in high jeopardy. So I would like to see, before we come forward with this reauthorization, more information of what we are doing with the facilities. Specifically, what is your plan, what funding is going to be needed, and what funding are we talking about in this budget that is going to address those issues? My second point, Dr. Sunder, I was watching the news this morning as I was getting ready for a 7:30 meeting, and they were talking about a fire that occurred here in D.C. and something to the effect that the pipes didn't have enough water flow. So I would also like to see come back to this committee additional information of what we plan on doing to have adequate inspections of fire hydrants, pipes, et cetera, so we are not waiting until there is a fire and we find out we don't have adequate flow. That should be something we know ahead of time, and we should have a priority set of how we are going to improve these various key pieces of infrastructure so when we have a fire, we are going to be able to respond. And then my final point is a question to Captain Livingston, and I am going to run to a Transportation Committee meeting, so that is why if the other two pieces of information could be supplied to this committee in writing.

Captain Livingston, I think to the core, we can talk about the toys and all these wonderful things that we want to do, but I just found it extremely alarming to hear you say that we need national

standards in order to reduce line-of-duty deaths; and I would like to know from you specifically what are the obstacles precluding us from establishing these standards, to your knowledge? That was a mouthful from your youngest Member of Congress. Not youngest, newest, I should say.

Mr. LIVINGSTON. Chairman Wu, Congresswoman Richardson, I think what we need to do, like I mentioned in my testimony, is we do not need to reinvent the wheel. We do have standards, and concensus-based standards at that, that we largely go with. Unfortunately, not every state follows NFPA guidelines. You have a mishmash of standards that are based at the local level. While I believe law enforcement has minimum standards for law enforcement officers, here in the United States it is really at the local level and the State level with respect to national standards. We strongly believe that consensus standards, not reinventing the wheel, using NFPA, whether it is firefighter one standards, company officer standards, staffing standards, those kind of things will have a direct impact on the amount of lives we save in the fire service. We think it is long overdue now in the 21st century that the fire service needs the Federal Government to take a lead role with respect to that. The bottom-up role has not worked.

Ms. RICHARDSON. So then I think that would be leading to our Administrator. Why have we failed to establish these standards?

Mr. CADE. Well, at the United States Fire Administration level, we have been asked very recently to participate in the next generation of upgrades that the Occupational Safety and Health Administration is putting out. The OSHA standards, 1910156, are currently out for updating, and part of the conversation that we are having right now with OSHA from the USFA standpoint is the incorporation of the latest standards. The OSHA standards, as they are today, were written 31 years ago, I believe. So they haven't been updated since then. Obviously there has been a lot of consensus standards developed around firefighter safety, minimum standards and certification that have been done. So OSHA has opened it back up. Actually, September 11 was when it was published in the *Federal Register*. We have not submitted our comments yet, but we are putting them together and will submit them for consideration by OSHA. Hopefully what they are going to do is bring in the rest of the national standards. That will at least give states and localities something to specifically look at when they are trying to develop standards; but even with that, there is still the opportunity at the State level for them to either modify the OSHA standards or accept them in whole, and it varies state by state and how that is done.

Ms. RICHARDSON. So could you provide to this committee your timeline or how you would anticipate we would be able to address this situation?

Mr. CADE. Yes, I will.

Ms. RICHARDSON. Thank you. Thank you, Mr. Chairman.

Chairman WU. I thank the gentlelady. And we go to a second round of questions. The chair recognizes himself. Captain Livingston, I wanted to give you an opportunity to expand on your previous answer. It is my understanding that the number of fatalities for firefighters this year has already reached the annual average, and we have three more months to go. What are some of the things

we can do to reduce the fatality rate and what kind of leadership role can USFA or any of the other agencies who are present can they play to reduce this high fatality rate?

Mr. LIVINGSTON. Chairman Wu, I think what we need, and what we do have, is an advocate in the USFA. They can be the point agency within the Federal Government to not only start us on the road of national standards but also to address some of the needs that we have. I think Dr. Hall would reinforce this, I think if you were to look over the last 30 years at the firefighter fatalities, three common issues come to play. One, it was a lack of communication on the fire ground that occurred that led in some form or fashion to that death. Two, there was a breakdown in the command and control of the incident. And then three, simply staffing issues. We try to do too much with too few personnel. And so I think those three areas that I have discussed, as well as my written and oral testimony going down the lines of some uniformity towards national standards, will certainly help with that. Along with the standards, though, we need to emphasize training. You ask a lot of the fire service, our nation asks a lot of the fire service. We need to be able to be properly trained, and it is a challenge right now. We need to find ways to have our people continue to be well-trained.

Chairman WU. Thank you. Dr. Hall.

Dr. HALL. The majority of firefighter on-duty deaths each year don't occur at the fire ground, and so if you were thinking of steps that you particularly want to take, the common theme in well over half of the firefighter deaths each year is either a heart attack or some kind of vehicle handling error. Now, you can address both of these through standards, through training, through a variety of measures; but they aren't the usual kind of we should have a new type of equipment, we should have training in this kind of technical task. So what we have run into, as Captain Livingston has said several times, is a lack of people adopting and complying with the standards that already exist. In this country we don't have nationally binding standards for the most part. We have gotten more involved in this through OSHA as Chief Cade just said, and that gives us certain opportunities; but for many other things, what we have to do is persuade and recruit the fire departments, persuade them of the importance, recruit them to following the standards, and that is a much more painstaking task.

Chairman WU. Thank you very much. And Mr. Cade, what capabilities would your agency like to add to NFIRS and also in your testimony you noted that the current system only captures about half of the incidents that occur annually. What makes the reporting system limited in this fashion and could you also address the complaints about timeliness that have been brought up today?

Mr. CADE. Thank you, Mr. Chairman. I think fundamentally, one of the issues with the National Incident Reporting System has just been the time that it takes and the process going from a paper process at some point. Someone has to enter that data into a computer system and doing that whole editing iteration. The data belongs to the local fire service and it also belongs to the state, so it takes a little while for it to come through to us at the USFA and the data center. As Congressman Gingrey directly points out, part

of the dilemma with making any of the changes that we are looking at is trying to ensure that we don't get caught up in the technology end of things and that we forget the goal of what we are trying to accomplish. And the goal for us is to be able to have the information available to the fire service to be able to make the decisions that they need to make at the local level. Right now we do, I think, a very good job of providing the long-term capability of doing the data analysis for the studies. We do some very important work with a lot of our partners. It is not just the national fire data that we are using, we are using information from the Consumer Product Safety Commission, the NFPA, there are a bunch of different arenas that are providing that information to us. We are trying to look at making it a web-based system not so much so that we can get that information to us alone faster, but also to be able to allow people to get in and search the data base and use it in an easier manner than what it is today. It is not user-friendly, and one of my goals is to try to make it user-friendly for a fire chief.

Chairman WU. My time has expired, but Dr. Hall, I would expect that you would have some comment on this also?

Dr. HALL. From the very beginning of NFIRS, we have never been in a position where all the states were participating in NFIRS, and the USFA really has no legal authority or strong measures that it can use to compel states to participate. Few states have all of their communities participating when the State participates, and some communities in some states go in and out of participation. So we are not in a position to be able to jump to a 100 percent census system, and I think it is helpful to compare us to other systems out there. There are really only two countries in the world that have anything remotely close to what we have in our ability to track accurately and with some detail the fire experience, and those are the United Kingdom and Japan. Canada used to, but their system, which was about like ours, fell apart because of the lack of close coordination at the national level.

Over at the FBI where they track crimes and participation is mandatory, they still don't get everything in and they don't necessarily have a well-defined procedure for projecting from what they do get to what they record. But the best example is probably the death certificate database where it is completely mandatory, everything comes in, and yet if you go in and find out what is the latest data you have got available, you will quite often find that it is older than the NFIRS data that is out. So a certain degree of realism about what is achievable and also an awareness of what the system is trying to do to get a representative but detailed sample that is a valid sample and to analyze it in valid ways and then go on from those multiple objectives to what you can and what you can't accomplish with certain kinds of technology upgrades; that I think is the way to go. And I know and deeply respect the professionals at the USFA who were in charge of NFIRS. I know that if you give them a mandate to do the best job they can with the funds available, you will get the best job that anyone can do.

Chairman WU. Thank you very much, Dr. Hall. The gentleman from Georgia.

Mr. GINGREY. Mr. Chairman, thank you. With all of my Republican colleagues tied up at other hearings and markups, I am get-

ting this opportunity to be in a catbird seat. At the end of this hearing, I am probably going to be the resident Republican expert on fire issues now that Curt Weldon, my friend from Pennsylvania, is no longer with us. So this is indeed, Mr. Chairman, a unique opportunity for me.

I want to go to what Chief Henderson in regard to the issue of the residential sprinklers. And Chief, you mentioned my own county of Cobb's requirement. And of course, Dr. Sunder, addressed just a little bit about a recent study of the cost analysis of requiring residential sprinkler systems. It is sort of like isn't it the thinking of the requirement of having seatbelts in our public school buses in every seat, and we don't have that by any stretch of the imagination. So I would like Chief Henderson for you to start, maybe Dr. Sunder to weigh in, and the others if there is time remaining to discuss this issue a little bit further, in regard to cost-effectiveness.

Mr. HENDERSON. With regards to cost per household of installing a residential sprinkler system, and it would vary depending on the state and depending on the labor cost and things. But I think in Cobb County the cost is somewhere around, in a new structure around $1 a square foot. And then to go back and retrofit it is somewhere up to $5 a square foot, just to put those sprinkler systems in.

Mr. GINGREY. That would equate, Chief, to a $10,000 expense on a 2,000 square foot home for retrofitting?

Mr. HENDERSON. For retrofitting.

Mr. GINGREY. A pretty expensive item for——

Mr. HENDERSON. Yes, sir. That is one problem that you always have when you start talking about residential sprinklers is simply because the mortgage lenders, contractors, insurance companies, and people of another nature are the people that actually fight those kind of laws. But when you look on the other hand, the lives that are saved, I think nationwide and Dr. Sunder might be able to give me a little help with the statistics, but I think nationwide there is something like 80 percent fewer deaths in sprinkler areas. Scottsdale, Arizona, I think, has one of the longest communities that has had sprinkler systems. They have been in place for 20, 25 years, something like that. It would save the lives of the people in the community, it would save lives of the firefighters, and there is another problem with that, the rule of eminent domain. Just like smoke detectors now, in the State of Georgia, we have a law that requires everybody to have a smoke detector. You can actually fine them $25 if they don't have a smoke detector. The only problem is no one can go in the house unless they have an emergency or unless they are invited in to check to see if they have got them. It would be the same thing with residential sprinklers.

Mr. GINGREY. And a $25 fine is not taking much——

Mr. HENDERSON. No, not much. But, you know, that is a problem when you pass those kinds of laws without looking at the rule of eminent domain because that is that person's house and you have to be invited in or brought in in an emergency situation.

Mr. GINGREY. That is a great point. Dr. Sunder.

Dr. SUNDER. I would just like to make two separate points, one regarding the benefit cost analysis with what we have done. We have looked at three kinds of homes, colonial, townhouse, and

ranch homes, and we have looked at the installation of a minimum kind of sprinkler system, bare bones with existing plumbing in new construction. It is anywhere from about $1,000 to $2,000 roughly speaking. The colonial is a little bit more expensive than let us say a ranch. The benefits when you think about the fatalities averted, the injuries averted, the uninsured property loss averted, indirect costs averted and so forth, insurance credit, the benefits are about $5,000 a piece for all of those kinds of houses. So the benefit-to-cost in that situation is somewhere between $2,000 and $5,000, somewhere in that order.

The other point of course is when you start putting more fancy systems in place, the costs go up; and of course, retrofit is a whole different proposition. That is always the biggest issue in anything we do with building codes. Now, having said that, the question is how do we get these changes into building codes? We have in our country a system where it is a voluntary consensus system, and we have a system where different interested parties weigh in on the building code process, particularly at the national level you have the International Code Council and NPFA that are model codes. For this discussion, I will use ICC, the International Code Council as an example. It is used in a number of the states nationwide, and the democratic process you have there gets the private sector involved, the insurance involved, the home builders involved, and then the fire service. It is always an issue of convincing, having enough votes to get your proposal passed; and in the last cycle, in fact I was there that time, they didn't make it. There was a proposal to include residential fire sprinklers in, and they didn't make it. My guess is with these new studies and more conviction on the cost issue, it might come to pass in the future.

Mr. GINGREY. Thank you, Mr. Chairman.

Chairman WU. Thank you, Dr. Gingrey, and there being no further questions from the panel present, before I bring the hearing to a close, I would like to thank our witnesses for coming, in many instances, long distances to testify in your very thoughtful testimony before the Subcommittee today. The record will remain open for additional statements from the Members and for questions and answers and any follow-up questions the Committee may ask of the witnesses. The witnesses are now excused, and the hearing is adjourned.

[Whereupon, at 11:45 a.m., the Subcommittee was adjourned.]

Appendix 1:

Answers to Post-Hearing Questions

ANSWERS TO POST-HEARING QUESTIONS

Responses by Gregory B. Cade, Assistant Administrator, Federal Emergency Management Agency; U.S. Fire Administrator, United States Fire Administration, Department of Homeland Security

Questions submitted by Chairman David Wu

Q1. In your testimony you report that nearly all U.S. Fire Administration (USFA) research activity happens through partnerships. How much funding comes directly from USFA for research? How many of those partnerships are formalized, and through what means (i.e., with memorandums of understanding)? You also mention in your testimony that nearly $17 million since FY 2005 has gone from the Assistance to Firefighters grants program to research and development grants. Who serves on the peer-review board of these applications?

A1. The United States Fire Administration (USFA) does not receive specific funding dedicated solely to research activities. In recent years, however, approximately $500,000 has been used on a variety of projects and studies designed to advance applied research and technology development.

The USFA establishes partnerships via Memorandums of Understanding and Interagency Agreements with agencies such as the National Institute of Standards and Technology (NIST) and the US Department of Justice's (DOJ) National Institute of Justice (NIJ). Currently the partnership with NIST focuses on firefighting, fire suppression, and fire life safety technology. With DOJ/NIJ, emergency responder emergency vehicle and roadway safety programs to benefit both firefighter and law enforcement officer safety are the focus. Also, the USFA works with the Consumer Product Safety Commission (CPSC) on issues of citizen fire safety.

Other research partnerships with national level fire service organizations such as the National Fire Protection Association (NFPA), International Association of Fire Chiefs (IAFC), International Association of Fire Fighters (IAFF), National Volunteer Fire Council (NVFC), and the International Fire Service Training Association (IFSTA) are accomplished through Cooperative Agreements.

The Assistance to Firefighters Grants (AFG) program adheres to the requirements that have been placed into the grants' governing statute. The AFG program is administered through FEMA's Grants Program Directorate, not through the USFA. While USFA does not administer the program it does provide the space for peer reviews to be conducted at the National Emergency Training Center in Emmitsburg, Maryland. With respect to the peer reviews, the program seeks to obtain panelists who are knowledgeable, experienced, and a part of the fire service. A list of recommended panelists is obtained from National fire service organizations as well as from institutions that carry out fire service related research and development. In this manner the program is able to establish peer review panels—from the 20 individuals selected—that not only have expertise in research but also have an understanding of the needs of the fire service.

Q2. For the research activities USFA carries out through partnerships with the Department of Homeland Security's Science and Technology Directorate (DHS S&T), how does USFA communicate research priorities to the S&T Directorate? Does the funding for these projects come from USFA or from DHS S&T?

A2. Both the United States Fire Administration (USFA) and the S&T Directorate provide funding to programs identified through their participation in the S&T Directorate's customer led Capstone Integrated Product Teams (IPTs). The IPTs are charged with identifying functional capability requirements across the Department. The products of these IPTs are used to identify components' highest priority science and technology needs and to allocate resources to those programs that support the components' and DHS' priorities.

Q3. In your testimony you mention that USFA is working closely with Federal Emergency Management Association's (FEMA) National Preparedness Directorate to coordinate training to make sure NFA courses are in-line with the new National Preparedness Guidelines and address elements of the Universal Task List and the Target Capabilities List.

Q3a. Do these lists adequately address the needs of the fire service?

A3a. The United States Fire Administration (USFA) developed a crosswalk on how classes taught at the National Fire Academy (NFA) address each of the various Target Capabilities, and we will assimilate other identified capabilities into new curricula as appropriate. The cross-walking of existing USFA programs and NFA

courses to the National Preparedness Guidelines (Guidelines) including the Universal Task List (UTL) and the Target Capability List (TCL), demonstrates a commitment to ensuring a culture of preparedness. The lists are broad enough to allow for the needs of the fire service as it continues to evolve and adapt to emergent issues. USFA continues to work close with FEMA's National Preparedness Directorate, which currently manages the implementation of UTL and TCL. Both the UTL and TCL adequately address the core competencies of today's fire service and the tenets of these documents are reflected in NFA courses.

Q3b. Will this collaboration detract from curriculum needs that are unique to the fire service?

A3b. Adequate preparation for meeting the fire service's day-to-day demands is also the foundation for meeting the demands of an emergency related to terrorism. Training to meet chemical/biological/radiological/nuclear threats is already part of many fire departments' skill set; responders may not know whether their incident is terrorist-related until well into the response operations. Additional training requirements can strain fire department resources.

The collaboration and continued commitment to the Guidelines will not detract from the unique curriculum needs of the fire service but instead allow USFA to frame curriculum needs within the Guidelines and ensure an all hazards approach to preparedness and response training, education, data collection and analysis, research involving civilian and fire service losses. Working with the Guidelines will continue to benefit USFA in tailoring classes which will conform to the overarching goals of the department and the needs of the fire service.

Q3c. What is the current balance at NFA between training related to typical structure and wild fires versus fires and emergencies related to terrorism or chemical/biological/radiological/nuclear threats?

A3c. Chemical/biological/radiological/nuclear threats have been part of fire departments' response plans for decades; only the criminal or political element sets a terrorist incident apart. Since 1997, the NFA has added the terrorism element to its training by weaving it into existing curricula where appropriate. Free-standing terrorism training courses were conducted in cooperation with our State partners and have reached in excess of 270,000 emergency responders including firefighter, emergency medical, law enforcement, community leadership and public works personnel.

The current balance of structural firefighting operations versus wildfire versus terrorism and fires involving hazardous materials events is NFA courses are predominately structural firefighting related. However, NFA has several wildfire courses intended to educate structural firefighters and interface communities with the unique conditions and decision process of wildland firefighting.

The USFA has a Hazardous Materials Program that has integrated terrorism (CBRNE) response into the hazardous materials curriculum at all levels. By integrating the terrorism and hazardous materials training allows USFA to maintain proper perspective while at the same time acknowledging the unique issues associated with incident initiation methodologies such as accidental, intentional, criminal, and terrorism.

Courses at the NFA are reviewed regularly to assure they align with the National Preparedness Guidelines and the needs of students.

Q4. In your testimony you state that "USFA strongly advocates for local fire departments to be the center of preparedness within their jurisdictions." What types of guidance does USFA offer to help them assume this role?

A4. Nationwide, citizens recognize their local fire departments will be among the first responders to any significant incident. The public looks to its fire service for guidance about preparedness for local community risks. Programs in which the fire service already works as a center for preparedness include: fire prevention, hazardous materials awareness, child safety seat awareness and injury prevention programs. The United States Fire Administration (USFA), through the National Fire Academy (National Fire Academy), delivers courses in community health risk management, risk management from an operational safety perspective, creating community risk-management partnerships, risk management through code enforcement and strategic community risk reduction. To help reach the general public with preparedness messages, NFA offers nine resident and four handoff courses to those who will be conducting public outreach. These handoff courses are courses which have been developed by NFA for delivery from State Fire Training Offices across the country to students who the NFA cannot service due to either space constraints at NFA, or time constraints of the students. USFA also advocates for fire departments to train other local emergency services organizations and hospitals on the use of the

National Incident Management System (NIMS). USFA is working with the National Preparedness Directorate within FEMA to provide training and course material on the NIMS to local fire departments to assist with training.

The USFA also develops and distributes a wide range of publications designed to assist departments in the implementation of public education programs promoting the fire prevention and preparedness message. In the future USFA will be working with the Citizen Corps program, including the Community Emergency Response Team (CERT) program. The CERT program deals heavily in citizen and community preparedness as well as being an extension of response capabilities for fire departments. Currently there are many fire departments who provide the CERT training to their citizens and serve as repositories of preparedness activities within their community.

Q5a. How does USFA evaluate its public education and awareness programs?

A5a. The United States Fire Administration (USFA) uses a variety of ways to evaluate its public education and awareness programs. They include tracking the reach of campaign efforts through monitoring and reporting on the use of press releases, spokesperson interviews, public service ads, and USFA references in the news. We monitor and track the materials distributed to fire departments and partners through a contract and track both "hits" on the USFA website as well as orders sent through the USFA publications center.

USFA is always open to suggestions regarding messaging and materials whether it comes from a citizen or a professional fire organization. Often changes or the development of new approaches come from these valuable comments and suggestions.

USFA currently contracts with a Washington, DC-based firm to develop a pilot qualitative evaluation tool to be used in the future to gain more insight into the value of USFA public education and awareness activities. This contract is in place for a one-year startup and results should be available by the summer of 2008.

When the goal of a message is to motivate a behavior change in a target group, how does USFA work to develop that message and evaluate its impact?

Q5b. When the goal of a message is to motivate a behavior change in a target group, how does USFA work to develop that message and evaluate its impact?

A5b. **Engaging Partners**

At the start of the process, USFA engages partners and Fire Service leaders in the content development, design and packaging of materials. Their participation, especially in the early stages of campaign or material development process, ensures that we:

- Gain insight from Fire Service leaders and other partners to clarify the target audience and behaviors we are seeking to promote through the educational materials.
- Include relevant questions in any primary research—quantitative or qualitative—that might be undertaken.
- Inform partners, potential partners and allies of plans for fire safety and prevention education materials and gain their insight into the target audience.
- Include educational materials in plans for distribution through channels that are credible to the target audience.
- Identify images, colors and phrases that capture the attention of the target audience(s).

Target Audience Testing

Testing campaign concepts and materials with the intended audience(s) is necessary to ensure that the campaign will actually reach at-risk audiences with messages that motivate a change in behavior. This testing can include focus group research, structured one-on-one interviews with individuals that represent the target audience or have experience in reaching the audiences, and formal technical and advisory panels.

Critical testing questions include:

- Are the campaign concept and message(s) believable?
- Are they relevant to the audience? What would make them relevant?
- Are they credible? What would make them credible?
- Does the message motivate the audience to overcome barriers to action?
- Are the proposed communication channels effective in reaching the audience?

- Are the draft educational materials effective? Will the target audience use them?

Through a contract with a DC-based firm, USFA conducts readability tests to make certain that the literacy levels of the materials are appropriate to the audience.

Q5c. What types of partnerships does USFA draw on to develop it public education material?

A5c. USFA works through a variety of means to develop and draw on other organizations in the development of its public education materials. Types of partnerships include Memorandums of Understanding, Interagency Agreements, Contracts, Grants and so forth. These partnerships range from formal contracts to informal discussions with other safety organizations such as the American Red Cross, the National Fire Protection Association (NFPA), the Home Safety Council, American Academy of Pediatrics, SAFE KIDS Worldwide, ZERO to THREE, the National Volunteer Fire Council, Indian Health Service, Department of Housing and Urban Development, International Fire Chiefs Association, Residential Fire Sprinkler Institute, and local fire departments. USFA utilizes research results obtained from work with the National Institute of Standards and Technology (NIST) for some of the content in the public education materials from these organizations.

Q5d. To what extent has USFA engaged with social scientists to research, develop, and implement effective fire prevention and safety messages?

A5d. The firm currently under contract with USFA specializes in "social marketing" in the areas of health and safety. With their able assistance, USFA frequently consults with social scientists that specialize in the areas of psychology, psychiatry, and sociology. These experts are consulted for the purpose of advice on targeting messages to particular at-risk audiences in order to develop materials that are more effective when working with specific high risk groups such as children, older adults and others. In addition, we request advice on methodologies and outreach activities in order to best deliver the educational information at the local level to the particular audiences targeted.

In the past, USFA delivered several grants to colleges/universities to conduct research with targeted population groups. The results of these grants were incorporated into decision-making where appropriate.

For the past seven years, USFA has been working in conjunction with the Centers for Disease Control and Prevention (CDC). Through this partnership, work has been conducted on the National Fire Risk Survey and Behavioral Risk Factor Survey to gain insight into human behavior during a home fire. To date, the results have not been reported, but should be available within the coming year.

The *National Fire Risk Survey* is an on-going surveillance of fire-related behavior and risk/protective factors. A telephone survey will be designed and conducted to collect national-level population-based data on:

- Knowledge, attitudes, and behaviors
- Population-based numbers of fires, the number put out by sprinklers, the number put out by homeowners in response to smoke alarms, and the number of fires responded to by fire departments
- Placement, number, and functionality of smoke alarms and frequency of testing
- Presence of sprinklers
- Fire-related injuries that are not seen in Emergency Departments or hospitals
- Primary prevention risk and protective factors (e.g., inappropriate use of space heaters, use of childproof lighters)
- Fire-related injuries and deaths linked to disabilities

Behavioral Risk Factor Survey (state-based risk/protective factor surveillance) (CDC). Additional questions were added to CDC's Behavioral Risk Factor Surveillance System (BRFSS) 2003 survey to collect State-level data on the following variables. Two questions were added to the emerging core and five questions were included in an optional module.

- Placement, number, and functionality of smoke alarms in the home
- Type of smoke alarms (e.g., lithium battery-powered, nine-volt battery, hardwired)
- Frequency of testing of smoke alarms
- Escape planning and practice

In addition, USFA is a member of the National Fire Safety Public Private Council which is a cooperative effort between several federal agencies including the CDC, Consumer Product Safety Council, the National Fire Protection Association and approximately 15 other federal agencies and private national organizations that are concerned with fire safety. This organization manages the web site, *http://www.firesafety.gov.*

Q6. In addition to working with federal agencies like the Bureau of Land Management (BLM) to create curricula to train local firefighters to fight fires in the wildland-urban interface, is USFA engaged in fostering the working relationship between local fire department and the federal agencies that handle wildland fires?

A6. The United States Fire Administration (USFA) has a strong working relationship with the wildland fire community to coordinate with various federal, State, and local agencies on a wide variety of public education, training, mitigation, and response initiatives as well as policy issues that contribute to the reduction of wildland fires and their impact on the American public. Programs are designed, developed, and implemented to provide education and awareness to the general public and local officials with a basic understanding of appropriate wildland urban interface fire prevention and mitigation initiatives for the home and the community at large. Firefighting objectives, strategies, tactics and tasks in the wildland environment differ from those in the structural fire protection community, so cross training these entities is an important part of community preparedness.

USFA is represented on the Wildland Fire Leadership Council (WFLC) which is a senior-level body that provides policy-level coordination between the Department of Interior, Department of Agriculture Forest Service, State Foresters, Fish and Wildlife Service, National Park Service, Bureau of Indian Affairs, National Weather Service and USFA. These agencies work together to coordinate and support wildland fire and disaster operations. USFA is a member of the newly constituted Fire Executive Council, a senior executive level body comprised of members from the Department of Interior Bureau's with wildland fire responsibility. USFA has a full-time staff member assigned at the National Interagency Fire Center (NIFC). USFA is a permanent member on the National Multi-Agency Coordination Group (NMAC) which provides geographic area priorities, coordination for national shared resources, shortage area resource needs, incident operations coordination and preparation for fire season operations. USFA serves as the link to local government fire service issues and resolution at NIFC. USFA serves on several National Wildfire Coordinating Groups (NWCG) Parent Group and Working Teams including Training, Fire Investigation, and Wildland/Urban Interface.

USFA has underway a Training Equivalency/Crosswalk initiative with the consolidation of specific NWCG course units. The purpose is to identify gaps in standard structural fire training programs to help firefighters become competent in wildland fire operations. The goal of the project is to improve training options available to firefighters by recommending a standardized crosswalk of equivalency training or potential reciprocity between existing training provided to structural and wildland firefighters.

Through a partnership with USFA and the Forest Service, a Wildland/Urban Interface 3D Simulation tool has been developed. It is being delivered to support simulation training for the Wildland/Urban interface problem as evidenced by the recent Southern California Fire Siege. This training simulation provides a physically realistic fire propagation model based on fuel types, various environmental conditions, and topography. Participants have the ability to request resources and simulate building fire lines to hinder and stop the propagation of the fire. Instructors have the ability to alter the environmental conditions that in turn affect the behavior of the fire.

The overall goal of the USFA All-Hazard Incident Management Team (Type 3) (AHIMT) Technical Assistance program is to develop all-hazard state, metropolitan and regional Incident Management Teams (IMTs) to better prepare local communities with the capability to manage large scale and complex emergency incidents, including local incidents with national implications. The AHIMT can support either an existing Incident Command System (ICS) structure or can assume command of an incident if requested and so delegated. A component of the program includes field training opportunities. The knowledge disseminated through the training has been applied successfully at several events including Hurricanes Katrina, Rita, and Wilma; floods, wildland fires, and law enforcement incidents.

In the wildland fire community, the Forest Service and the NWCG recognize five "Types," or levels, of IMTs. USFA has stayed with this model for the all-hazards emergency response community. The IMT types are:

Type 5—Local command and general staff formed at a major/complex incident.

Type 4—Regional or local, single or multi-agency team for expanded incidents

Type 3—State or Regional multi-agency/multi-jurisdiction team for extended incidents

Type 2—National or State team for incidents of regional significance

Type 1—National or State team for incidents of national significance

Several USFA AHIMT Type 3 teams have had opportunities to work directly with the National Type 1 and 2 teams on various incidents of national significance. Based on real world experience gained through application, the training has been revised to ensure that it will continue to provide the necessary tools for individuals to perform as members of a Type 3 IMT.

Q7. Captain Livingston, representing the International Association of Fire Fighters, testified that USFA should be encouraging local fire departments to adopt national safety standards. What is USFA doing to facilitate and encourage State and local fire agencies to adopt voluntary consensus standards like NFPA 1500? What other measures is USFA taking to decrease the number of line of duty deaths in the fire service?

A7. The United States Fire Administration (USFA) participates on the DHS Science and Technology Standards Council and has worked with the Council to adopt twenty-five NFPA standards including NFPA 1500. The Assistance to Firefighters Grant Program (AFG), administered by FEMA's Grants Program Directorate, uses the adopted standards to set targets and goals for recipients of AFG grants. Grant applicants are asked to articulate how an award will get them closer to meeting a standard relevant to the type of grant they are requesting.

USFA has initiated a multitude of studies and project efforts to reduce firefighter on-duty deaths including those in health and wellness, dealing with the leading cause of on duty fatalities—heart attack and stress; in emergency vehicle safety aimed to reduce the second leading cause of such fatalities—crashes. Further, USFA has projects dealing with firefighting technology to enhance firefighter operational safety on the fireground, including Thermal Imaging Cameras, Firefighter Simulation Training, and other areas. Finally, USFA's firefighter health and safety studies encourage fire service compliance with relevant NFPA health and safety standards, such as NFPA 1500.

In cooperation with the National Fallen Firefighters Foundation, the International Association of Fire Chiefs, the International Association of Fire Fighters, the National Volunteer Fire Council and many others, the USFA has championed the national "Everybody Goes Home" campaign for firefighter safety and health (which is built from the NFPA 1500 standards). Every student who attends a NFA course receives a copy of these 16 initiatives on a CD for use when they return home. Across the National Fire Academy's curricula, where appropriate, consensus standards are referenced and discussed. Since 1988 (with periodic updates) the NFA has been conducting courses specifically focusing on reducing line of duty deaths.

Q8. What process does USFA use to develop new curriculum for the National Fire Academy? After major events, like Hurricane Katrina, how does USFA incorporate "lessons learned" into new courses?

A8. The United States Fire Administration (USFA) employs a formal "Curriculum Management System" that relies on constituent input into curriculum planning and development. USFA maintains strong State and local partnerships to assist these organizations in their training by identifying programs that complement and supplement State and local training, and not replicate their efforts. This partnership with State and local organizations through the years has produced programs such as State Delivery, Train-the-Trainer, In-Service Training, State Weekend Programs, Volunteer Incentive Program (VIP), Training Resources and Data Exchange (TRADE), Regional Delivery, and Degrees at a Distance Program (DDP).

USFA uses the TRADE network to identify training needs regionally; USFA also meets periodically with national organizations such as the North American Fire Training Directors (NAFTD), International Association of Fire Chiefs (IAFC) Professional Development Committee, the National Volunteer Fire Council (NVFC), and other organizations to plan delivery and development needs. In addition, USFA has developed one of the Federal Emergency Management Agency's (FEMA's) most comprehensive formal training evaluation systems. Information, feedback, and cues from a variety of internal and external sources are used in curriculum planning and in fine-tuning courses. Sources include post-course and long-term evaluations, information from Superintendent's luncheons, the Superintendent's annual input/ex-

change at the IAFC conference, contract instructor debriefings, reports from curriculum meetings, and written and verbal input from thousands of users, supporters, and partners.

Key to USFA's curriculum management approach is staff expertise and responsibility. USFA uses a team approach to needs assessment, curriculum planning, course development, course delivery, and course handoff. Training Specialists, the Instructional Systems Specialists, the Program Specialists, the Field Managers, the Program Managers, Program Support Assistants and Secretaries, and all members of the management team contribute their skills and expertise to the management of the curriculum. An essential part of their daily responsibilities is to "scan the environment" for important issues and lessons learned that will be incorporated into course work.

Q9. Please describe how USFA's planned update for the National Fire Incident Reporting System (NFIRS) will facilitate faster reporting, increased participation, and increased accessibility. What measures will be taken to ensure that the quality of the database is not compromised? Since fire losses in the U.S. are still the highest in the developed world, is the information drawn from the data being effectively applied? What more can be done to ensure that the data drawn from these past incidents is put into practice?

A9. Fire departments that choose to use a NFIRS Web browser based reporting tool will no longer need to download, install, and configure client software. The anticipated result will be a faster and easier initial reporting experience. Small departments without technically experienced personnel that may have found it daunting to participate in NFIRS due to technical or financial barriers can begin reporting immediately as long as they have access to a PC, Internet connection and standard browser.

USFA currently collects NFIRS data on-line via the Internet using a client-based data collection software tool. All data that is currently reported on-line directly into the national NFIRS server is first validated before entry into the database using a tool that tests against the standard NFIRS 5.0 data edits and validation rules. These same data validation routines will be run on data reported through the new Web based application.

Fire losses in the U.S. are no longer the highest in the industrialized world. According to 2007 World Fire Statistics Center statistics, among industrialized nations, the U.S. ranks 18th in direct fire losses as a percentage of national GDP and 7th in fire death rate. Trends in fires, civilian fire deaths, and civilian fire injuries have been steadily declining over the past three decades, thus indicating the data are being effectively applied to the fire problem to reduce losses. The data compiled from NFIRS will continue to be used to inform fire prevention programs so as to ensure trend audiences are being attended to (such as the elderly and young). By combining the fire prevention and fire data responsibilities, USFA will be better able to respond to the needs of those at risk.

USFA and other organizations such as the Consumer Product Safety Commission (CPSC) and the National Fire Protection Association (NFPA) continuously analyze the collected NFIRS data to identify emerging fire trends. Additionally, USFA, states, local governments and others uses these data to target prevention and mitigation programs toward high risk groups to aid in reducing the fire problem.

Q10. Is USFA involved in activities to aid local communities in evaluating optimal fire and emergency services asset management and distribution to achieve the greatest level of community protection, especially in disaster situations that strain resources?

A10. The United States Fire Administration (USFA) prepares local departments to prioritize and establish their own level of community protection. USFA efforts include publications, projects, classes, training, conferences, seminars, symposia and other events.

The USFA provides a series of training classes to the fire and emergency services that support and provide information for community protection. Almost all of the 64 plus residential courses USFA, through the National Fire Academy (NFA), provide support to planning for every day events as well as natural and man made disasters. The NFA also conducts courses in community risk management, long-term planning and emergency command and control that focus on extremely large and complex incidents involving multiple agencies.

Questions submitted by Representative Phil Gingrey

Q1. In Captain Livingston's testimony, he calls on USFA to be more proactive in supporting inter-operable standards from Project 25 and training and operations standards from NFPA. What activities has USFA undertaken to support wider availability and adoption of inter-operable communications technology? What ability does USFA have to influence the adoption of both sets of standards?

A1. The United States Fire Administration (USFA), supported by S&T Directorate SAFECOM[1] funding, initiated a fire service communications study that is still underway and will be used to update an aged USFA Fire Department Communications manual. When complete, the updated document will provide information to the fire service educating and encouraging them on the use of inter-operable communications. USFA was also supported by SAFECOM for educational programs on communications operability at a national fire service conference. Through these efforts, additional fire service members would be better informed about adoption of inter-operable communications technology.

The USFA does not have any legislative or legal authority to influence the adoption of any standards.

Q2. USFA trains significantly more people through State and local partnerships than through the facilities at Emmitsburg. How does NFA design courses for presentation outside of Emmitsburg? What requirements does USFA place on groups seeking to provide NFA-approved courses?

A2. The Unites States Fire Administration (USFA), through the National Fire Academy (NFA) offers two-day courses are well suited for weekend delivery to the Nation's volunteer firefighters. When any new course is being developed, the NFA considers the possibility of assembling some modules into another coherent (but shorter) course. Modules (depending upon the course) are a few hours in length, convenient to evening hours training.

Unless they require special facilities such as laboratories, burn buildings or graphics equipment, well-designed courses can be presented anywhere. NFA has conducted many of the resident courses at host facilities around the Nation.

Groups seeking to deliver a NFA course must coordinate delivery through the appropriate State fire service training agency to ensure quality is maintained, the students are properly registered and they receive credit whatever qualifications successful completion of the course provides. In some cases, the delivery is funded by the State or the host agency.

Questions submitted by Representative Judy Biggert

Q1. Why have many local fire departments not adopted national standards that would reduce the number of firefighter line of duty deaths? Are their specific barriers that hinder the adoption of these standards?

A1. The major specific barrier to adoption of such standards is cost. There are numerous fire departments in the United States that do not have adequate resources to do adapt and implement such standards. The United States Fire Administrations (USFA's) *A Second Needs Assessment of the Fire Service* illustrates numerous examples of fire departments having inadequate protective equipment and not possessing required training to meet such standards and, in some cases, fire departments having no protective equipment at all. The Assistance to Firefighter Grants (AFG) program which is run by FEMA's Grants Program Directorate has been assisting in getting money to departments to meet baseline needs. This program only assists in providing the baseline amount of equipment to departments and is not a sustainment program, which means eventually, departments will have to secure funding to replace or repair items bought under the AFG.

Another hindrance is the time requirements for firefighters to complete training and meet the standards. In the volunteer fire service the challenge may be a regular

[1] The Department of Homeland Security Appropriations Act, 2007 gave the Office of Emergency Communications (OEC) the responsibility to administer certain elements of the SAFECOM program. SAFECOM's authorities related to research, development, testing, evaluation, and standards will remain in the Office for Inter-operability and Compatibility (OIC) within the Science and Technology Directorate. Under its authorities, OIC is working with the National Institute of Standards and Technology (NIST) to support the efforts of the emergency response community and industry to accelerate the development of the Project 25 (P25) suite of standards.

paying job and family demands; while in the career fire service, it may be the inability to place companies out of service while firefighters participate in training or the cost of overtime to conduct training outside regular hours.

Q2. Does USFA provide any guidance with regard to maintenance and upgrade of the infrastructure of local fire facilities to ensure that they remain adequate as firefighting technology and personnel change over time?

A2. United States Fire Administration (USFA) staff serve as liaisons to National Fire Protection Association (NFPA) Occupational Safety and Health technical committees responsible for the development of consensus standards relating to fire station facilities design and personnel safety. These standards have identified specific areas regarding personal training areas, decontamination capabilities, sanitation and air quality, fire resistant design and alerting, sleeping quarters, and apparatus size and design. In addition, the standards also address care, maintenance, and storage of personal protective clothing and equipment. As firefighting technologies evolve, the standards are revised to address these areas that are primary to firefighter health and safety. Additionally, USFA tracks and identifies firefighter occupational health and injury statistics that are utilized in the committee process for standard revision. USFA staff also uses that information for curriculum updates and revisions.

USFA works closely with the DHS National Operations Center (NOC), National Infrastructure Coordination Center (NICC), Office of Intelligence & Analysis (IA), Office of Infrastructure Protection (IP), Infrastructure Partnerships Division (IPD), Chemical & Nuclear Preparedness & Protection Division (CNPPD), and USFA's own Emergency Management and Response—Information Sharing and Analysis Center (EMR–ISAC) to provide timely information directly to the Nation's fire and emergency services in order to protect the personnel, facilities, and communications resources of each agency from natural, manmade and technological disasters. In keeping with its role in information sharing, the USFA EMR–ISAC is a key participant in the Homeland Security Information Network (HSIN) working group that was convened to establish an Emergency Services Sector (ESS) portal. This portal will serve as another mechanism in which critical information may be shared, chronicled, and warehoused for the ESS.

USFA is an approved member serving on the InterAgency Board for Equipment Standardization and Inter-operability (IAB). The mission of the IAB is to establish and coordinate local, State, and federal standardization, inter-operability, compatibility, and responder health and safety to prepare for, train and respond to, mitigate, and recover from any incident by identifying requirements for an all-hazards incident response with a special emphasis on Chemical, Biological, Radiological, Nuclear or Explosive (CBRNE) issues.

The Assistance to Firefighters Grant (AFG) Program, managed by FEMA's Grants Program Directorate awards grants to fire departments to enhance their ability to protect the public and fire service personnel from fire and related hazards. There are three types of grants available: Assistance to Firefighters Grants (AFG), Fire Prevention and Safety (FP&S), and Staffing for Adequate Fire and Emergency Response (SAFER). Additional information is available at *www.firegrantssupport.com.* Each of these grant programs assists local fire departments in meeting their preparedness goals.

In training, these topics are included in the budget, planning, risk management and command courses. "Best practices" are also highlighted and discussed.

USFA has developed a document *Safety and Health Considerations for the Design of Fire and Emergency Medical Services Stations* that provides guidance on the design or remodeling of fire and emergency medical services stations and other facilities in terms of safety and health concerns of personnel who must work and live in those facilities.

ANSWERS TO POST-HEARING QUESTIONS

Responses by Sivaraj Shyam Sunder, Director, Building and Fire Research Laboratory, National Institute of Standards and Technology, Department of Commerce

Questions submitted by Chairman David Wu

Q1. How does NIST facilitate technology transfer of successful research results into products and practices for the fire service community? Do any R&D efforts relate to lowering the cost of equipment for fire departments? How does NIST measure impact of its fire R&D efforts on fire prevention, firefighting, and fire recovery?

A1. There are multiple means that NIST uses to facilitate technology transfer of our R&D results to the fire service community:

- presentations of research results at national conferences on firefighting technologies, including:
  - the National Fire Protection Association (NFPA) Annual World Safety Conference and Expo,
  - the International Association of Fire Fighters (IAFF) Redmond Symposium,
  - the annual conference of the International Association of Fire Chiefs (IAFC),
  - the annual Conference of Fire Safety Instructors, and
  - conferences of the International Association of Arson Investigators (IAAI);
- organizing workshops and special seminars with the fire service community aimed at planning research and disseminating the results;
- serving on fire standards committees of NFPA, Underwriters laboratory (UL), and ASTM;
- serving on the Science Advisory Committee of the National Association of State Fire Marshals;
- having a NIST staff member from Gaithersburg spend one day a week in Emmitsburg at the National Fire Academy (NFA) to help plan and coordinate research programs;
- working with the NFA to incorporate the results of the research into the curriculum, and participating in the actual instruction;
- publishing an on-line newsletter, *FIRE.GOV,* in partnership with the United States Fire Administration (USFA) that contains easy to read articles specifically aimed at the fire services and describes ongoing research activities around the world;
- issuing reports, CDs, DVDs, and publishing articles in the archived literature, and making these available through our web site.
- supporting pre-competitive SBIR research on promising new fire service technologies.

Our research affects the cost of firefighting equipment in two ways. First, by advancing measurement and predictive methods for the way fires spread, we are able to better determine the impact of a fire mitigating strategy, and to work with standards developing organizations to incorporate standards that are based upon meaningful performance metrics and provide a uniform playing field for competing technologies and manufacturers. By promoting performance-based standards for firefighting equipment, NIST enables the private sector to innovate and compete, often at reduced costs, while ensuring a satisfactory level of safety. Science-based performance metrics for these technologies also serve to protect the investment of local communities. Recent examples of standards improved by or based upon NIST research include thermal imaging cameras, turn-out gear, and positive pressure ventilation systems.

The second way that NIST research affects equipment costs is through the Building and Fire Research Laboratory's Office of Applied Economics, which conducts economic analyses and develops decision tools to assist local communities in deciding among multiple strategies or technologies in which to invest.

NIST R&D is geared toward fire prevention and firefighting technologies; no research is currently underway in fire recovery. The impact of the NIST fire R&D effort is demonstrated in several ways:

- improvements to standards for fire detection, fire suppression, and flammability of materials (for example, the newly adopted test methods for mattress flammability and for reduced ignition-prone cigarettes.)
- improvements to computer simulation tools for predicting how fires spread within a building, from building to building, and the wildland-urban interface from wildlands to buildings.
- fire service standards developed or modified, and technologies marketed by the private sector that were enabled by NIST research.
- improved practices adopted by the fire services.
- requests for NIST information by the fire services (CDs, videos, reports) and invitations to speak at local, national and international meetings with substantial fire service involvement.
- new/modified courses taught by the National Fire Academy based upon NIST R&D.

Q2. How has NIST's work on fires at the wildland-urban interface been transferred to either policy or technology to mitigate structures in these areas?

A2. NIST, with funds provided by Congress in FY 2007 as part of the American Competitiveness Initiative, has recently ramped up its research into fires at the wildland-urban interface, with the objective of developing tools for reducing community losses in wildland-urban interface fires. These tools will assist communities in their fire risk assessment and choice of economically balanced mitigation strategies that limit the ignition of residences and improve firefighter and community safety. In past work supported by the Pacific Southwest Research Station (PSW) of the Forest Service under the interagency National Fire Plan, NIST provided the heat transfer model to ecoSmart-FIRE which is the fire component of ecoSmart. ecoSmart is a web based tool for helping homeowners choose landscaping options that are more fire safe and evaluates the economic trade of the options. Funding from NIST to the University of Florida and the Southern Research Station of the Forest Service supported flammability measurements of commonly used ornamental vegetation. Ratings of the vegetation have been made publicly available. Another economic tool is currently being developed that will be spatially-explicit, allowing communities to tailor and target cost-effective wildfire mitigation solutions to their geographic area of concern.

NIST research is beginning to fill in the major scientific gaps necessary to allow a transformation to performance-based codes and standards for building and protecting communities at the edge of wildlands. We are making progress in our understanding of the role of fire brands, *produced by both burning vegetation and structures,* in spreading the fire. *A wildland-urban interface fire behavior computer model is under development. Unlike wildland fire models this model will include the structural fuels which differ significantly from wildland fuels in their ignition and burning characteristics.* We are following the standards work being done in California regarding the proper design of roof and eave vents to prevent entrance by fire brands, and are currently on the ground in southern California to better understand the fire behavior and the influence of the housing and community layout on the extent of damage encountered.

NIST is actively participating with organizations that influence policy and building codes. NIST staff serves on:

- the National Blue Ribbon Panel on the Wildland-Urban Interface for the International Code Council (ICC);
- the Subcommittee on Disaster Reduction of Wildland Fires to the Committee on Environment and Natural Resources of the President's National Science and Technology Council, as co-chairs;
- the ArcView Review Technical Panel for National Fire Protection Association's FIREWISE Program,
- the U.S. Forest Service Fuel Characteristic Classification System National Review Panel, and
- the NFPA Forest and Rural Fire Protection Standards Committee.

Q3. In fiscal year 2007, how much funding did the USFA contribute to NIST fire-related research activities? How has this amount changed since FY 2004?

A3. Because of recent and multiple reorganizations of USFA within the Department of Homeland Security, an accounting of the exact source of fire research funding from the USFA is not easily collected. With that caveat, in FY 2007 NIST received $494K directly traceable to the FEMA/NETC Acquisition Section, Emmitsburg, MD.

This compares to $450K in FY 2004. Please note that the National Emergency Training Center was under USFA in FY 2004, but currently is under FEMA.

Question submitted by Representative Jim Matheson

Q1. In Dr. Sunder's testimony, there was reference to tools that NIST has created to help communities assess fire risk and make economically-balanced choices in fighting fires in the wildland-urban interface. What are some of these tools and what strategies are communities using to protect themselves from this type of fire?

A1. NIST, with funds provided by Congress in FY 2007 as part of the American Competitiveness Initiative, has recently ramped up its research into fires at the wildland-urban interface, with the objective of developing tools for reducing community losses in wildland-urban interface fires. These tools will assist communities in their fire risk assessment and choice of economically balanced mitigation strategies that limit the ignition of residences and improve firefighter and community safety. In past work supported by the Pacific Southwest Research Station (PSW) of the Forest Service under the interagency National Fire Plan, NIST provided the heat transfer model to ecoSmart-FIRE which is the fire component of ecoSmart. ecoSmart is a web based tool for helping homeowners choose landscaping options that are more fire safe and evaluates the economic trade of the options. Funding from NIST to the University of Florida and the Southern Research Station of the Forest Service supported flammability measurements of commonly used ornamental vegetation. Ratings of the vegetation have been made publicly available Another economic tool is currently being developed that will be spatially-explicit, allowing communities to tailor and target cost-effective wildfire mitigation solutions to their geographic area of concern.

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- the ArcView Review Technical Panel for National Fire Protection Association's FIREWISE Program,
- the U.S. Forest Service Fuel Characteristic Classification System National Review Panel, and the NFPA Forest and Rural Fire Protection Standards Committee.

Question submitted by Representative Laura Richardson

Q1. Is there a need for standards to ensure that all fire hydrants operate when they are needed in an emergency? Please provide whatever information NIST can related to this subject.

A1. The maintenance and inspection of fire hydrants is a State and local issue. The National Fire Protection Association (NFPA) provides standards and guidance which State and local jurisdictions may choose to adopt to ensure the proper operation of the fire hydrant and the adequacy of the water supply.

NFPA 1, *Uniform Fire Code*™ (section 18.3) describes the general requirements for water supplies and hydrants. "An approved water supply capable of supplying the required fire flow for fire protection shall be provided to all premises upon which facilities, buildings, or portions of buildings are hereafter constructed or moved into

the jurisdiction. . .. The number and type of fire hydrants and connections to other approved water supplies shall be capable of delivering the required fire flow and shall be provided at approved locations." Annex H of NFPA 1 provides guidance for determining the required fire flow, and Annex I of NFPA 1 provides guidance for determining the number and location of fire hydrants.

NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems,* generally applies more to private fire protection systems but has requirements related to inspecting, maintaining, and testing hydrants. Section 7.3.2 of NFPA 25 states that hydrants shall be tested annually to ensure proper functioning, that each hydrant shall be opened fully and water flowed until all foreign material has cleared, and that the flow shall be maintained for not less than one minute.

NFPA 291, *Recommended Practice for Fire Flow Testing and Marking of Hydrants,* is used for guidance in the testing of hydrants to determine how much fire flow is actually available.

There are numerous techniques for monitoring water pressure going to a fire hydrant, and sensors are available to indicate the amount of water flowing when the hydrant is opened. However, monitoring devices are only as good as their maintenance. If the current NFPA standards and guidance for installing and testing fire hydrants are followed in a community, and any deficiencies uncovered during inspection and testing are remedied, then the community should not be experiencing fire hydrant failures. The addition of remote sensing devices for monitoring water pressure and/or flow, and the development of standards for their operation, would not appreciably increase the level of protection for the community over the current level provided by NFPA 1, NFPA 25 and NFPA 291. It is NIST's opinion that the cited NFPA codes, standards and guidance are adequate to address.

ANSWERS TO POST-HEARING QUESTIONS

Responses by Steven P. Westermann, President and Chief Fire Officer, International Association of Fire Chiefs

Questions submitted by Chairman David Wu

Q1. You mentioned in your testimony that over a million firefighters nationwide have not had the benefit of U.S. Fire Administration training. To what extent, due to a lack of resources, is USFA failing to meet the demand for emergency personnel training and public education opportunities?

A1. The National Fire Academy (NFA) is America's premier fire training institution. According to the October 2, 2007, testimony of Chief Gregory B. Cade, the U.S. Fire Administrator, the NFA trained 8,278 students on-campus and 76,918 students through off-campus/distance learning training courses. In addition, the NFA partners with accredited State fire training programs, which trained over 750,000 firefighters last year.

Increased funding would allow the NFA to enhance both its course development and outreach efforts. The NFA uses course work distributed over the Internet to shorten the length of time that a student needs to spend taking classes at the Emmitsburg campus. With an increase in funding, the USFA could make more classes available over the Internet and consider other new technologies for distributing educational content.

The "train-the-trainer" programs, which focus on training fire chiefs and the fire departments' training officers, are especially helpful for volunteer departments. Many volunteer departments do not have the funding to send their volunteer firefighters to multi-week classes at Emmitsburg, and the volunteer firefighters may not be able to make the time commitment. A "train-the-trainer" class allows the training officer to travel to Emmitsburg for classes and then pass this information to the other firefighters in the fire department. Increased funding for the USFA would allow the NFA to develop additional "train the trainer" programs.

The NFA also benefits from close cooperation with State and local training organizations. When training can be supplied in the home state or locality, efficiencies are created by saving travel costs and allowing for more flexible training program delivery schedules. In addition, local instructors are able to adapt training programs to meet the unique needs of local communities. Currently, the NFA provides each state with $25,000 annually to cover the costs associated with the delivery of these programs. This amount may not be enough to offset the costs incurred by State training facilities. With increased funding, the USFA could provide an increased amount to State training programs to run these vital programs.

Q2. Do you believe that the National Fire Academy (NFA) training activities have an adequate balance between preparedness and response for terrorist events versus the myriad other emergency events and management issues fire departments must confront? Does USFA have a strong enough all-hazards approach? What about the Federal Emergency Management Association [sic] (FEMA)?

A2. In general, we believe that the NFA has an adequate balance of courses covering all hazards. The NFA classes cover a wide range of classes including hazardous materials response, arson investigation, tactical operations, leadership, and the response to terrorism. The NFA should review its curricula to ensure that its classes are up-to-date and include information about the new National Response Framework (NRF), the National Incident Management System (NIMS), and other new developments at the U.S. Department of Homeland Security (DHS). In addition, the DHS should leverage the USFA's and NFA's expertise at developing training materials to better educate first responders about the new NRF and its annexes, the NIMS, and other DHS initiatives. By collaborating with the NFA, the DHS can develop training courses and guides that can be easily understood and used by first responders during emergencies.

Regarding whether the USFA and the FEMA have achieved the appropriate balance of preparedness and response capabilities for both terrorism and natural hazards, the IAFC is pleased that the USFA and FEMA have adopted a more robust "all-hazards" approach. The *Fiscal Year 2007 Department of Homeland Security Appropriations Act of 2007* (P.L. 109–295) included legislation that implemented a number of reforms to focus the FEMA on using an "all-hazards" approach. The IAFC is encouraged by the FEMA's recent "all hazards" focus in the draft NRF, and other administrative changes. In addition, Chief Cade has made "all-hazards" preparedness a focus at the USFA.

Q3. Administrator Cade mentioned in his testimony that USFA strongly advocates for fire departments to be the centers for emergency preparedness in their jurisdictions. Is this message reaching local departments? Does USFA provide enough guidance to help departments assume this role?

A3. In most communities, fire departments are the lead agencies for emergency preparedness. They provide emergency preparedness education through "open houses;" presentations to schools and community organizations; residential fire sprinkler campaigns; smoke alarm distribution and training; and building code inspections. The USFA has a number of educational materials available on the web and through fire prevention training at the NFA to help local fire departments promote emergency preparedness in their communities. The DHS's Assistance to Firefighters Grant (AFG) program's Fire Prevention and Safety grants also fund initiatives to educate the public about emergency preparedness at the national and local levels. In addition, the Emergency Management Institute (EMI) plays a large role in this emergency preparedness outreach training. The EMI was transferred out of the USFA's jurisdiction as part of the *Fiscal Year 2007 Department of Homeland Security Appropriations Act* (P.L. 109–295).

Of special importance is the USFA's effort to advocate the increased use of residential fire sprinklers. Currently, only two percent of American homes have fire sprinklers, despite the important lifesaving role that they play. According to the National Fire Protection Association, "when sprinklers are present in structures. . ., the fire death rate per 1,000 reported structure fires is lower by at least 57 percent and the rate of property damage per reported structure fire is lower by one-third to two-thirds (34–68 percent)." Congress should continue to support the USFA's efforts to work with the fire service to inform the American public about the advantages of installing fire sprinklers in homes.

Q4. How would you characterize USFA's leadership role with respects to promoting the adoption of national standards and other measures to decrease firefighter line of duty deaths? What more could they be doing?

A4. The 16 Firefighter Life Safety Initiatives, developed under the auspices of the National Fallen Firefighters Foundation, encourage the development of national standards for emergency response policies and procedures, and firefighter training, certification, and qualifications. The IAFC believes that the USFA has been an effective advocate for the use of national voluntary consensus standards to improve firefighter health and safety. National voluntary consensus standards, such as those developed by the National Fire Protection Association, include input from a number of stakeholders, including fire chiefs; private industry; federal agencies, such as the USFA; career and volunteer firefighters; fire service organizations; and other interested parties. These voluntary consensus standards currently cover many aspects of firefighter training, equipment, incident operations, etc.

It is important to recognize that the cost of implementing these national voluntary consensus standards can be expensive for both major metropolitan departments and rural fire departments. Grant programs, such as the DHS's AFG (popularly known as the "FIRE" grant) program, play a critical role in helping fire departments fund training and exercises, and purchase equipment that is consistent with national voluntary consensus standards. The DHS' SAFER grant program helps fire departments hire career, or recruit and retain volunteer, firefighters to come into compliance with the staffing requirements of the NFPA 1710 "Standard on Fire Deployment and Operations."

Questions submitted by Representative Jim Matheson

Q1. Chief Westermann, in your testimony you referenced collaboration between the USFA and the Department of Agriculture and Department of Interior. This issue is particularly important in a state like mine where wildfires often require coordination between the U.S. Forest Service and local fire departments. How do these agencies interact with one another? Are there ways to improve communication and coordination so that these agencies are prepared to work together to fight fire?

A1. Background: In Utah, local fire departments often work directly with the U.S. Forest Service to fight fires that encroach in residential areas. Despite coordination, many fire departments and other first responders still face challenges in communicating with one another.

Good coordination between the U.S. Forest Service (USFS) and local fire departments can be an essential element to providing adequate wildland fire protection for our country. In some areas, the relationships between the USFS and the local

fire departments are very strong, while the relationships need work in other areas. The IAFC has been working for several years with the USFS and the U.S. Department of the Interior (DOI) in order to improve the relationship between the local fire service and the federal wildland fire agencies. We believe that in order to be most effective in the wildland and the wildland urban interface area, local, State and federal (local units) agencies must work together in a seamless and integrated manner.

However, we have discovered that it takes a significant amount of work at the local, State, and national levels in order to develop a truly seamless and integrated response to wildland fires, where local, State and federal (local units) agencies respond together as if they are one organization. In responding to a wildland fire, mutual aid can be quickly deployed from other states, and the different responding organizations must respect each other's training, qualifications, and organizational systems.

Grant programs such as the Volunteer Fire Assistance program (U.S. Department of Agriculture) and the Rural Fire Assistance (DOI) program provide critical support for the training and safety equipment that allows local governments to be effective in fighting wildland fires. These programs also help to improve the relationship between the federal agencies and the local governments.

In order to enhance communication and coordination between local and federal agencies, Congress also must address the issues surrounding wildland fire funding. The state of fuels in our forest, demographic changes and the changing climate will all have a significant impact on the wildland fire problem and the cost of fires in the future. The fire suppression budget for the USFS should be adequately funded and partitioned from their general budget.

As we move forward into the future, it is important to note that no one group—local, State, federal or tribal—can effectively or efficiently address the wildland fire problem alone; we must all work together and at all levels of government.

Again, I would like to thank you for your dedication to meeting the needs of America's fire service by moving to reauthorize the U.S. Fire Administration this year.

ANSWERS TO POST-HEARING QUESTIONS

Responses by Robert Livingston, Legislative Director of the Oregon State Council of Fire Fighters, International Association of Fire Fighters

Questions submitted by Chairman David Wu

Q1. Do you believe that the National Fire Academy (NFA) training activities have an adequate balance between preparedness and response for terrorist events versus the myriad other emergency events and management issues fire departments must confront? Does the U.S. Fire Administration (USFA) have a strong enough all-hazards approach? What about the Federal Emergency Management Agency (FEMA)?

A1. Having not had the opportunity to participate in the Academy's training, I cannot speak personally to whether its training activities are, in practice, adequately balanced. That said, the fire service has always utilized an all-hazards approach to preparedness and response. For a firefighter, it doesn't matter whether an emergency is natural or man-made, or the result of an accident or a terrorist attack. The firefighter's response is the same. As an experienced member of the fire service, Administrator Cade fully understands the importance of an all-hazards approach; the programs and activities of the U.S. Fire Administration appropriately reflect this understanding.

We have been concerned with the priority placed on terrorism preparedness and response within the Department of Homeland Security, and have been actively involved in efforts to refocus the department on all-hazards. In 2006, the IAFF worked closely with the Congress in crafting and passing legislation to reform FEMA. We were pleased that the final bill enacted into law applied an all-hazards approach to the Agency's emergency preparedness and response activities. Since that time, we believe the Agency has perceptibly moved in this direction—the recent positive federal response to the California wildfires is one illustration of FEMA's commitment to natural, as well as man-made, disasters.

Q2. You mention in your testimony that other federal agencies involved with firefighting activity do not necessarily engage with interest groups representing the fire service community. Do you have specific examples? What role should USFA take to encourage greater cooperation and coordination between federal agencies and the local fire service?

A2. Myriad federal agencies administer programs and provide funding that impact the fire service, but unlike USFA, these agencies often lack sufficient, accurate knowledge about the fire service and the work firefighters do. As a result, the activities and programs of federal agencies sometimes complicate the fire services' efforts to serve their communities and carry out their mission.

For example, the Department of Justice administers the Public Safety Officer Benefit (PSOB) program to provide death and disability benefits to the families of public safety officers killed or injured in the line-of-duty. Congress recently amended the program to award benefits to the families of officers who suffered a fatal heart attack or stroke while involved in a non-routine stressful or strenuous physical activity while in the line of duty. DOJ bureaucrats, however, denied benefits to certain applicants based on the assumption that the emergency activities the deceased officers were undertaking were "routine" for a firefighter. Although in clear violation of Congressional intent, DOJ's determinations resulted from a basic lack of knowledge about the physical and mental stress placed upon firefighters during even "routine" emergency activities.

USFA can help overcome this sort of disconnect by establishing relationships with other federal agencies, both within and beyond the Department of Homeland Security, to educate such agencies about the fire service, as well as act as an advocate for the expertise we can bring to bear throughout the Federal Government and its activities.

Q3. Do USFA public education and fire awareness programs adequately address the needs of the populations that career fire departments serve, especially those in major metropolitan areas?

A3. USFA does an admirable job of educating citizens about residential fire safety, and does pay particular attention to needs which may be unique to urban area populations, such as high-rise fire safety and arson awareness. USFA does an especially good job in school outreach and educating elementary school children about basic fire safety.

The frequent presence of immigrants and individuals who speak languages other than English present unique fire safety challenges to large urban areas. Cultural differences, language barriers, and a lack of familiarity with local emergency services provide unique challenges which may impede fire-safe practices within these communities. USFA's fire safety efforts should provide an increased emphasis on these unique populations.

Questions submitted by Representative Phil Gingrey

Q1. In your testimony you advocated for a greater emphasis on Emergency Medical Service needs by USFA and noted that fire departments provide EMS in nearly all major cities. What is the prevalence of fire-based EMS in smaller towns and rural communities? For those areas served by non-fire-based EMS, is USFA a credible and appropriate agency to provide training management and support?

A1. There is a correlation between community size and the prevalence of fire-based EMS. According to the National Fire Protection Association (NFPA), 100 percent of fire departments serving cities of 500,000 or more provide EMS, 98 percent and 95 percent of departments serve cities of 250,000 to 499,999, and 100,000 to 249,999, respectively. On the other end of the spectrum, 52 percent of fire departments serving communities with a population of 2,500 or less provide EMS.

As this data demonstrates, fire-based EMS is the prevalent delivery system for pre-hospital 911 emergency medical response in the majority of American communities. This fact alone requires that USFA fully integrate EMS training and preparedness into its mission. However, even for communities that officially designate some entity other than the fire service as the primary EMS provider, under most true emergency conditions, firefighters still deliver on-scene health care. In such communities, it is critically important that local firefighters be properly trained and equipped to provide on-scene patient care for the survivors of fires, accidents, and other incidents to which firefighters respond. By providing training and support to these communities, USFA can help ensure the delivery of timely and effective patient care in an emergency.

Q2. You also report in your testimony that hazardous materials incidents have skyrocketed in number and danger over the past few years. Can you put this into perspective for the Committee? What are the unique implications of hazmat incidents for training and equipping firefighters?

A2. According to the National Fire Protection Association, fire department calls related to hazardous materials emergency response have more than doubled in the past twenty years, from 171,500 hazmat calls in 1986 to 375,000 such calls in 2005. As the number of hazardous materials incidents have increased, so too has the complexity and dangerous nature of responding to such incidents multiplied. This is due to the increased transportation of hazardous materials, the growing prevalence of chemicals in our daily lives, and the very real threat posed by terrorism, whether chemical, biological, radiological, nuclear, or explosive.

These factors contribute to the threat of hazmat incidents in every geographical region and communities of all sizes. As a result, it is critically important that all firefighters, whether professional or volunteer, are adequately trained and equipped to respond to potential incidents.

Unfortunately, in too many communities responder training falls far short of what is necessary to ensure a safe and efficient response. In their Second Needs Assessment of the U.S. Fire Service, NFPA estimates that 38 percent of firefighters whose duties involve hazmat response lack formal training of any kind.

Furthermore, only 29 percent of fire departments report all personnel to be trained in hazmat response at some level. And for those firefighters who are trained, the level of training provided is often insufficient to their duties and responsibilities. The minimum level of training needed by first responders is "operations" level. Operations training is specifically designed for the initial emergency response which occurs within minutes of the incident being reported. These emergency responders stabilize the situation and prepare the emergency scene for the hazmat specialists who will undertake direct mitigation. They are trained to contain the release from a safe distance, keep it from spreading and prevent exposures.

All firefighters should also be required to undergo annual refresher training to provide responders an opportunity to brush up on perhaps seldom-used knowledge and skills, and familiarize responders with new technology which may be used or encountered during a response.

A lack of sufficient staff and appropriate equipment also poses a major challenge to most communities facing a hazmat incident. Some jurisdictions lack even the

most basic equipment for hazardous materials response, such as turn-out gear and self-contained breathing apparatus, much less the more advanced equipment required for radiological and nuclear emergency response. Furthermore, two-thirds of the Nation's fire departments lack sufficient personnel to carry out a safe and effective response to a structural fire, much less an incident involving hazardous materials. Meeting these basic needs of our nation's fire departments is necessary to protect the public from everyday incidents as well as incidents involving hazardous materials.

ANSWERS TO POST-HEARING QUESTIONS

Responses by Gordon Henderson, Deputy Chief of Operations, Rome-Floyd County Fire Department; Past President of the Georgia State Firefighters Association, National Volunteer Fire Council

Questions submitted by Chairman David Wu

Q1. Do you believe that the National Fire Academy (NFA) training activities have an adequate balance between preparedness and response for terrorist events versus the myriad other emergency events and management issues fire departments must confront? Does the U.S. Fire Administration (USFA) have a strong enough all-hazards approach? What about the Federal Emergency Management Agency (FEMA)?

A1. Although there has been more of an emphasis placed on preparedness and response to terrorist events in recent years, generally the National Fire Academy (NFA) does maintain a good balance of offering courses that address the broad range of issues that firefighters must be prepared to deal with. However, the NVFC is concerned that in recent years NFA has not been provided the resources to update course curriculum for many of their core non-terrorism specific courses.

The NVFC believes that the United States Fire Administration's (USFA's) focus is on all hazards. The NVFC believes that Congress could strengthen USFA's ability to focus on all hazards by passing a reauthorization that specifies that emergency medical services, wildland fire response, and hazardous materials response are core components of USFA's mission.

When the Federal Emergency Management Agency (FEMA) was merged into the Department of Homeland Security (DHS), the top priority within DHS was preparing for and responding to terrorist events. This focus filtered into FEMA even as pieces of FEMA were transferred to different directorates within DHS. Since Hurricane Katrina, there has been greater recognition of the importance of an all-hazards approach. With the appointment of R. David Paulison as FEMA Administrator and passage of legislation reorganizing FEMA in the 2006 *DHS Appropriations Act,* FEMA has improved dramatically in terms of its commitment to addressing all-hazards.

Q2. You mention in your testimony that USFA has worked to condense classes and shorten the amount of time a volunteer firefighter would have to spend in the classroom. You also mention that USFA recently partnered with the National Volunteer Fire Council (NVFC) to develop the "Recruitment and Retention Guide for the Volunteer Emergency Services." Have these efforts had an impact on recruitment and retention for the volunteer fire service? What else could USFA do to address the recruitment and retention problems faced by volunteer departments across the country?

A2. Through condensed courses, the Volunteer Incentive Program (VIP) courses make it possible for more volunteers to receive better training. Increased training demands are one of the major challenges facing communities in retaining and recruiting volunteer firefighters, so there is no doubt that VIP helps in this regard, but it is not a specific retention and recruitment tool.

The Retention and Recruitment Guide for the Volunteer Emergency Services identifies a wide range of recruitment and retention challenges facing communities and recommends strategies for dealing with each one. In the NVFC's last cooperative agreement with USFA there was funding to deliver recruitment and retention training based on the guide. Unfortunately, there was far more demand for training than funds to provide it. Additional funding to provide recruitment and retention training would be useful.

Question submitted by Representative Phil Gingrey

Q1. You made the suggestion in your testimony that USFA seek to link the NFIRS database with the National Emergency Medical Services Information System (NEMSIS), could you explain what the benefits of such a linkage would be?

A1. The fire service provides 60 percent of emergency medical service in this country. The National Fire Incident Reporting System (NFIRS) captures data from fire department responses, including fire service-based EMS responses. The National Emergency Medical Services Information System (NEMSIS) captures data from EMS responses, whether or not they are fire service-based. The NVFC is not suggesting that NFIRS and NEMSIS be combined into one single data collection sys-

tem. The NVFC does feel that it is important that USFA, which administers NFIRS, and the National Highway Transportation Safety Administration (NHTSA), which administers NEMSIS, should work together to ensure that the data that is being collected is as accurate and useful as possible, as well as to reduce potential duplication of activities.

ANSWERS TO POST-HEARING QUESTIONS

Responses by John R. Hall, Jr., Assistant Vice President, Fire Analysis and Research, National Fire Protection Association

Questions submitted by Chairman David Wu

Q1. Are the U.S. Fire Administration (USFA), the National Institute of Standards and Technology (NIST), and other fire research agencies, sufficiently engaged in technology transfer activities that accelerate the adoption of research development and findings into practice? Can more be done to lower the cost of many fire detection and suppression technologies?

A1. (a) The USFA and NIST pay considerable attention to effective, multi-channel approaches to technology transfer. In my personal, recent experience, I have observed or worked with both agencies as they (i) provide presentations to diverse audiences of potential users, with content tailored to the needs and interests of each audience; (ii) provide easy Internet access to both findings and supporting data, in a form that allows users to extend or review their analysis; (iii) participate in national and international standards development activities to convert new findings into standardized best practices; (iv) set up as vendors of new software and new research at conferences of kindred groups and potential users; (v) respond in detail to questions from the field, providing extensive 'service after the sale' for research results; and (vi) provide articles, ready-to-use presentations, training materials, and other user-friendly versions of new findings, all provided without copyright limitations on potential users. At the same time, both agencies are very aware of the limits of law and propriety regarding the extension of their own activities into the development of commercial products for sale.

(b) Most USFA and NIST research on fire detection and suppression technologies has focused on potentials for improvement in performance or reliability. I do not believe cost is considered a significant obstacle to the use of fire detection technologies. Rather, public expectations of very low cost has been an obstacle to the creation of public demand for new features that would improve performance or reliability. Cost has been perceived as an obstacle for use of fire suppression technologies, notably fire sprinklers. Both USFA and NIST have conducted research on low-cost alternatives, including single-sprinkler concepts for the kitchen that will use piped water already serving that room. I do not believe this approach can yet be considered proven; it seems to reduce benefits as much or more than it reduces costs, and it introduces potential modes of failure (i.e., fire spreading to unsprinklered areas before sprinkler activation) that raise concerns about its likely field effectiveness and reliability. Nevertheless, it illustrates that both USFA and NIST are aware of system cost as a barrier to wider use and have proven themselves willing to pursue research on any promising approach that might lower costs while preserving effectiveness.

Q2. You mention in your testimony that USFA has shown leadership in setting priorities for fire research and in putting high quality projects in motion. Given that USFA has limited funding for research, are there broad areas of research that are neglected due to lack of funding?

A2. In past years when funding levels were higher, the USFA was able to pursue a substantial research agenda in such areas as human behavior and fire safety educational methods, management methods and operational rules for the fire service. In a number of areas (e.g., fire code inspection effectiveness), we are still using results from USFA-funded projects that are decades old. Also, USFA funding restrictions have meant reduction, delay, or elimination of promising NIST projects on fire service health and safety equipment performance and on active fire protection systems. In all of these areas, the USFA—directly or indirectly through partners like NIST—has produced a steady flow of highly professional and highly useful work, but there is so much more they could do with funding more in line with past years.

Q3. You say in your testimony that USFA can "improve the climate in which decisions about adoption [of voluntary codes and standards] are made by forcefully and visibly supporting the voluntary consensus codes and standards process and by putting. . .the weight of its own reputation and leadership in support of compliance with national fire service standards." How can USFA take a more visible role in this process and what could they be doing specifically to encourage State and local fire agencies to adopt these standards?

A3. The context for my testimony was my frustration that so many otherwise knowledgeable members of the fire community believe that any standard or code not issued by government officials must be an industry standard and so must reflect the values and concerns of an affected industry. NFPA's consensus process is designed to produce a true consensus among all affected parties regarding desired levels of safety and preferred methods to achieve such safety. The USFA can help by (i) taking every opportunity to state its own belief in the value of true consensus and the quality of codes and standards produced in accordance with such principles, (ii) treating standards developing organizations as the first and best place to target for technology transfer, and (iii) recommending and if possible requiring compliance with applicable consensus standards as a condition for participation in programs of the USFA.

Q4. In your written testimony you note that rural populations have one of the highest fire fatality rates in the U.S. Why is this? Have USFA or other organizations developed programs to combat these high numbers?

A4. We have known of the unusually high fire fatality rates in U.S. rural areas for at least three decades. Past analyses have noted that rural communities and inner cities have the highest rates of poverty and of other high-risk characteristics, as well as having the highest fire fatality rates by size of community or neighborhood. NFPA recently completed a major study, under a grant from the USFA, to develop a more detailed understanding, not only of the overall rural fire problem, but also of the differences between the fire problems of such distinct areas as the rural Southeast, the Native American and migrant worker areas of the rural West, and the rural Northeast and Midwest regions. At this writing, NFPA and the USFA are completing the final edits to the results of that project, and it should be posted on the USFA website soon. It includes an identification of educational messaging tailored to rural communities, a guide for educators tailored to the needs of those working in rural communities, and an identification of potential organizational partners who have shown interest in reducing fire losses in rural communities or have demonstrated skill in delivering effective public programs in such settings. Note also that this is not the first study of the rural fire problem conducted by the USFA or under its auspices.

Q5. Is USFA involved in any research to evaluate optimal fire and emergency service asset management and distribution to achieve the greatest level of community protection, especially in disaster scenarios that strain resources?

A5. I believe this question is directed toward such program areas as the design and implementation of written agreements and related plans to permit large numbers of communities to pool their resources for major incidents, conduct integrated incident command at such incidents, and achieve smaller efficiencies through mutual aid and reciprocal response based on distance to appropriate resources rather than jurisdictional boundaries. The USFA has on occasion conducted research to identify best practices among fire departments and to facilitate the exchange of information on model programs or actual programs that have worked well. Much of the detailed work in written agreements and plans, though, is facilitated by the USFA's parent agency of FEMA or kindred agencies like the U.S. Forest Service. I do not believe the USFA—or any other entity—is attempting to define or identify optimal arrangements. In my experience, optimization analysis on these subjects tends to require so much simplification of the options and conditions that no one quite trusts the answers. However, the spirit of optimization can be and is achieved through the use of methods that identify, implement and build on continuous improvements.

Questions submitted by Representative Phil Gingrey

Q1. You state in your testimony that needs assessments have not documented a significant improvement in staffing or training needs, stating that the amounts spent are simply nowhere near those necessary to significantly impact these areas. Accepting this, has NFPA performed any research to try to quantify the impact of training programs when they are available?

A1. NFPA has concentrated on building quality and impact into the programs from the beginning, through its suite of professional qualifications standards. Most training programs fall under the umbrella of an educational institution such as a State fire academy with individual training results evaluated by a separate certification body. These are proven methods to assure quality in a training program. NFPA has not conducted longitudinal studies to determine how much skill and knowledge is

retained over the short- or long-term for different training programs. This might be a useful area for a multi-year USFA-funded project.

Q2. Has the NFPA needs assessment documented the use of advanced medical training by firefighters outside of fire-based EMS? How often are firefighters called on to perform medical interventions in the absence of or prior to the arrival of EMS technicians? Has the USFA assessed the degree of duplication between medical interventions by firefighters versus those of fully trained EMS personnel?

A2. As of 2005, local fire departments responded to 23.3 million emergency calls, and 14.4 million of those were for medical aid. The second needs assessment found that in the same year, 67 percent of U.S. fire departments provided emergency medical service, including all departments serving communities of at least 250,000 population. The percentage of departments offering the service has been steadily increasing for many years, and both the number of EMS calls and the EMS share of total calls have also been steadily increasing. For departments that provide EMS service, 47 percent reported that all their personnel providing the service had received formal training, while 27 percent reported most personnel trained, 26 percent reported some personnel trained, and zero percent reported no personnel trained. As for certification, 98 percent of departments report at least some personnel certified to at least the First Responder level, 87 percent report at least some personnel certified to at least the Basic Life Support level; 50 percent report at least some personnel certified to at least the Advanced Life Support level; and 18 percent report at least some personnel certified to at least the Paramedic level.

I am unaware of any database that would identify the involvement of other parties in medical aid at incidents where fire departments have provided service, let alone any data that would indicate the roles played by each party or the sequence in which each party became involved. I also am not aware of any data on how often more fully trained or certified personnel might have been available to assist on incidents in which fire departments provided service, how quickly those other personnel might have been able to respond, or any other incident characteristics that might indicate duplication. Any such data would also have to relate the roles played by EMS providers to the roles played by personnel in receiving hospitals or other medical facilities.

My sense, unsupported by any hard data, is that fire departments have increased their provision of EMS service because in most communities they are able to respond faster than anyone else, and my understanding is that time is the most critical factor in successful outcomes. I would not want to assume, especially in the absence of data, that any fire department is delivering EMS in a community where more trained or more certified personnel are available and able to respond as quickly. But the direct answer to your question is that I do not know of anyone, including the USFA, who has collected specific data on these points.

Appendix 2:

Additional Material for the Record

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Statements of support for the reauthorization of the United States Fire Administration
Submitted for the record by David Wu

The following statements of support for reauthorization for the United States Fire Administration were conveyed to me regarding the hearing held by the Technology and Innovation Subcommittee on October 2, 2007.

David Wu
Chairman
Technology and Innovation Subcommittee

1. The National Fire Academy is a phenomenal resource that not only serves the Fire Service well, but has made crucial advances in addressing our Nations Fire Problem. As outlined in studies from presidential and federal commissions, such as "America Burning," "America Burning, Revisited," and "America Burning Recommissioned" along with related reports and studies; the US Fire Service has been lacking substantial and uniform resources to address a needed shift to pro-active rather than reactive response to our nations fire problem. As the Fire Service continues to expand its role from firefighting and EMS into mitigation and response to "all-hazards," the need for progressive thinking and broader scopes of training are being addressed by the United States Fire Administration and the U.S. Fire Academy.

The USFA, and furthermore the National Fire Academy have played a critical and successful role in educating our Fire Service and moving us towards a pro-active profession. As with learning in most fields and professions, learning in our industry is a life-long process that is never complete. The U.S. Fire Administration and the National Fire Academy have made substantial strides towards advancing our fire service leaders to be educated professionals through internal and external programs. Their work on advancing and standardizing higher education in colleges and universities across the nation along with programs from the Fire Academy have become essential to the impacts we are having on our nations fire problem and firefighter safety. Unfortunately, while firefighter and civilian death rates have decreased substantially, they are still much higher than many other industrialized nations. More people die in structure fires in our county than in all natural disasters combined. Obviously, research shows that the work of the USFA has paid off, but there is still much more to be done.

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Personally, I am anxiously waiting to start the Executive Fire Office Program at the National Fire Academy that I have been accepted into this year. This 4-year program will give me effective leadership and management skills specific to the Fire Service along with opportunities for research that will allow me to directly and positively impact our services to our citizens. Programs like this are truly creating leaders that will continue to make progressive impacts on our industry, resulting in efficiency, safer communities and fewer deaths.

Please pass along my urging to continue, if not improve the Federal Support to the United States Fire Administration and the United States Fire Academy. The programs and resources made available through them are continuing to have substantial positive impacts on our fight to address the nation's fire problem and make our citizens safe.

Please feel to contact me with any questions or concerns you may have.

Mike Jackson
Fire Marshal
Astoria Fire Department
555 30th Street
Astoria, OR 97103
(503) 325-2345 x12
(503) 325-2346 fax
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2. I would like to express support for the reauthorization for funding for USFA and the NFA. Many members of my department have attended training on-site at the NFA as well as taken 'hand-off' courses created by the NFA. For a small department, this agency provides for an avenue of training that we would not be able to afford on our own. Participants have universally voiced appreciation for the level of training offered through NFA. It is an invaluable resource for the fire service. I appreciate your time in reading my e-mail.

Kindest regards,

Roy A. Emery
City of Corvallis, Fire Chief
400 NW Harrison Blvd.
Corvallis, OR 97330
1-541-766-6931
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3. I have had the pleasure of being able to go to the NFA for their training. I'm on a small Fire Dept with a very small budget; therefore, no money would be available for the kind of training that the USFA provides.
Please continue the funding for the Fire Service training. Thank You .

Hans Mulder
Elsie-Vinemaple, Fire Department
--

4. I understand the Congressman Wu is working on language for reauthorization for the National Fire Academy (NFA). I would like to tell you what the USFA and the NFA means to me.

These resources provide very important training resources for the fire service. I am currently enrolled in the Executive Fire Officer Program (EFO) at the NFA in Emmitsburg, Maryland. This is a unique opportunity. I have been able to learn a great deal about things that will help my organization and the citizens we serve. I also see hundreds of other students there at the same time who are enrolled in several other courses. The training is provided by top-notch instructors and the curriculum is excellent. One of the most important and valuable things you experience in Emmitsburg is the collaboration with other people in the fire service, FEMA, and other disciplines. Learning what your peers are doing to deal with the same issues I have is invaluable.

The USFA and NFA are needed by the fire service and must continue.

Kind Regards,

Chief Gary McQueen
Sandy Fire District
P.O. Box 518
Sandy, OR 97055
503-668-8093
--

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5. Dear Congressman Wu,

The USFA has provided our small fire district with training we could not have afforded otherwise. We have members interested in attending classes in the near future and planning their vacations accordingly. Please support the USFA and in turn support our firefighters. Thank you for your hard work for America!

Chief Gary Anderson
Colton, Oregon Fire District
503-824-2545
--

6. I have been asked by the State Fire Marshal to contact you on behalf of the Oregon fire service's use of USFA and the National Fire Academy. As Fire Chief for the City of Roseburg, Oregon, I am a very strong advocate of the value USFA and NFA resources and training they provide. I am an Executive Fire Officer graduate and have been back to the Fire Academy several times. For many of us in rural communities, the advanced training and free resources made available by USFA and NFA are the only affordable (high quality training) we will receive. I cannot say enough to the positive impact these agencies have made on the quality of fire service our community and State has received.

Yours Truly,

Jack Cooley
Fire Chief
Roseburg Fire Department
774 SE Rose St.
Roseburg, OR 97470
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7. Clackamas County Fire District #1 is the second largest fire district in the State of Oregon, serving five incorporated cities and a total of 193 square miles of Clackamas County. As an internationally accredited agency, we take great pride in the services we provide to the public and the professionalism of our staff. We have been a frequent user of the National Fire Academy training programs, particularly the Executive Fire Officer Program. It has proven to be the single greatest training and development opportunity for our Chief Officers. I encourage continued Congressional support and reauthorization of the US Fire Administration and the National Fire Academy.

Please feel free to call on me if you would like further information.

Ed Kirchhofer
Fire Chief
Clackamas County Fire District #1
503-742-2643
--

8. I am the volunteer fire chief for Upper McKenzie RFPD, located in McKenzie Bridge, OR. We have used the services of the USFA, particularly through taking classes that have been offered by USFA in Oregon. We are a small department, and do not have the resources to give advanced training to our volunteers. The ability to take advantage of opportunities offered by USFA is invaluable, allowing us to become better trained and therefore better prepared to protect lives and property in our district, and to be able to offer mutual aid to adjoining districts. It is imperative that USFA be reauthorized to continue training and other services that we depend on.
thank you.

Norm Michaels
Chief
Upper McKenzie RFPD
--

9. I'm always disappointed when hearing the funding being decreased for emergency services in our nation. Our "front line" defense to any incident, disaster or events from military preparedness/response still rests with our local responders. The event of 9-11 is an example of the success of our first responders and Katrina is an example of our failure in providing a federal emergency response.

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In 1972 President Nixon established the Commission on Fire Prevention and Control who reported on "America Burning". The Commission unanimously supported a National Fire Academy. The Academy would not only provide education to current and future leaders but would also "serve as the hub of an educational network" for our national first responders. In 1987, "America Burning Revisited" was convened to "reach a consensus about the status of, and trends in, America's fire problem and review/evaluate the progress toward the report's 90 recommendations." The conference concluded that some recommendations were completed but much more work was needed to impact America's trend in reducing life loss, injuries and suffering resulting from fires. Again in 1999, FEMA Director James Lee Witt recommissioned "America Burning" and established a Blue Ribbon Panel to access concerns and issues with ongoing work of the Fire Academy (USFA). Findings identified were:

- Implementation of Loss Prevention Strategies
- Application and use of fire sprinkler technology
- Loss prevention education for the public
- Acquisition and analysis of data
- Improvements through research
- Codes and standards for fire loss reduction in the built environment
- Public education and awareness
- National accrediting and certification
- Firefighter health and safety
- Emergency medical services
- Diversity

This list is exhaustive but each one of these recommendations needs to have the priority of the National Fire Academy (USFA) to drive changes in our attitudes and behaviors of both the citizenry and America's first responders. Our educational efforts of teaching fire service leaders has fallen short as we started reaping results in having the finest educated leaders in succumbing to early retirements. As local resources are down, we must also rely on the Federal government to help off-set costs of getting our personnel to the Academy. Career firefighter staff requires overtime and money for "back fill" or hiring people to take their place while they're gone to training. This wasn't such an issue ten or fifteen years ago before we reduced to minimum staffing levels. Our volunteers don't have the extra time to attend the Academy and we need to find ways to entice them to be gone from their families and love ones to attend training.

What do I see in our future is an aging population which is increasing our public service demands. These demands are not only fire related but also involve medical and

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planning for their survivability in weather or disaster events. These services are just starting to be provided by fire service organizations **but we haven't seen anything yet.**

In conclusion, the USFA is critical to the fire services. Educating our communities and firefighters is essential to establishing a quality of life but also one that is affordable to our jurisdictions. Emergency Responders is the heart of homeland security and should be the top priority for our government and therefore, legislators.

Lenard J. Hansen
Chief, Astoria Fire & Rescue
--

10. Office of Congressman Wu

It is my understanding that the reauthorization bill for the United States Fire Administration (USAF) which includes the National Fire Academy (NFA) will be coming to Congressman Woo's committee very soon. I wanted to share the importance of the USFA and the NFA to the Oregon fire service. Oregon, like many states, is served by both career and volunteer firefighters. Of the 11,000 firefighters who protect our state, approximately 80% are volunteers who receive no compensation for their efforts. The USFA serves a critical link in our nation's fire service system. Here are a few examples:

- The USFA is the primary data collection and research vehicle for the fire service.
  - This information is shared with the nation's fire service on an on-going basis and is vital to the reduction of firefighter injuries and deaths.
  - Data collection is also done by USFA/NFA on causes of fire and human and economic impacts of these events – this information is also shared with the nation's fire service and used by agencies on the local level for public education and awareness campaigns targeted to reduce these events.
- Assistance to Firefighter Grants (AFG) has been of great assistance to fire departments across the nation who can apply for much needed fire and life safety equipment and apparatus.
- The USFA is the only federal agency that provides information and maintains on-going communications with the fire service.
- The USFA develops and hands-off a variety of training and education programs that are used at the state and local level.

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- The USFA represents the needs and abilities of the fire service within the Department of Homeland Security and in fact is the only agency that is charged with this mission within the federal government structure.
- The USFA collaborates with federal wildland agencies such as the US Forest Service, the Bureau of Indian Affairs, and the Bureau of Land Management to coordinate the efforts of structural and wild land fire agencies.

Since our mission is to serve as the state fire training agency for Oregon I can tell you that of particular interest is full support, if not more funding, for the National Fire Academy. The National Fire Academy plays an integral role in the professional development of our fire service leaders (career and volunteer) through training and education programs offered at the Emmitsburg, Maryland campus, through outreach and hand-off classes delivered in Oregon, and through degree at a distance classes offered in partnership with the Academy and Western Oregon University. Dr. Denis Onieal who serves as the Superintendent of the Academy deserves a great deal of credit for his service to America's firefighters. Dr. Onieal understands the positive impact that partnerships with state and local agencies can have and exemplifies customer service, professionalism and excellence through not only his leadership abilities, but also by those exemplified by all of the employees under his command at the National Fire Academy. Here is an overview of the impact of the National Fire Academy in Oregon:

2005 federal fiscal year which illustrates the impact of the NFA programs in Oregon and how we compare with the rest of the nation

- Oregon ranks 1st out of 50 states for participation in the Volunteer Incentive Program at the National Fire Academy
- Oregon ranks 4th out of 50 states for participation in off-campus Direct Field Courses
- Oregon ranks 6th out of 50 states for participation in National Fire Academy endorsed (state sponsored) courses
- Oregon ranks 7th out of 50 states for participation in the one-week National Fire Academy Regional Delivery Program
- Oregon ranks 14th out of 50 states for attendance at two-week resident courses at the National Fire Academy
- Oregon ranks 15th out of 50 states for students attending National Fire Academy hand-off courses
- Oregon ranks 18th out of 50 states for participation in off-campus National Fire Academy courses
- Oregon ranks 19th out of 50 states in Overall participation in National Fire Academy programs

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There is one important thing I need to add. As I have mentioned the USFA/NFA has established a very good training delivery system that allows federal, state and local partners to work together. This system needs not just reauthorization but additional funds. You may ask where the additional funds would come from? You may want to look at the systems used by the United States Department of Homeland Security which poorly replicate the efforts of the USFA/NFA and in fact are a poor attempt to "re-invent the wheel." Funds from DHS should be reallocated to the USFA/NFA not just for course development but also for training delivery through the established USFA/NFA delivery system which works in partnership with state and local agencies rather then using the current DHS system that does not communicate with state and local systems, replicates training programs that are already available, ignores instructors who are ready and available on the local level, and uses contractors that create and deliver proprietary training programs at increased costs that cannot be handed-off to state and local agencies for additional deliveries.

Thank you for your time and consideration. If we provide any additional assistance, or if we can be of any further assistance please let me know.

Eriks Gabliks
Deputy Director
State of Oregon - Department of Public Safety Standards and Training
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11. Redmond Fire & Rescue (Redmond, Oregon) has benefited greatly from sending our members to the National Fire Academy. Through the years we have sent several members for multitude of classes and the results have been very measurable. The NFA not only provides outstanding classroom instruction but the networking and relationships that are established while attending the academy is priceless. I have personally attended the academy and it still remains a highlight of my career. Please feel free to contact me if you have questions or if I can be of further assistance.

Tim Moor
Fire Chief
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