

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

HEARING CHARTER

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

**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 Firefighters of the International Association of Firefighters (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.

**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-related 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 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<sup>1</sup>. 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.

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<sup>1</sup> 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>).

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. NFA also develops and delivers educational and training programs that supplement and support state and local fire service training. At the campus in Emmitsburg, 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. NFA shares the Emmitsburg Campus with FEMA's Emergency Management Institute (EMI). Together these two entities form the National Emergency Training Center. In FY2007, USFA funded training activities at \$10.7 million, which was about \$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 very 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. 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 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 reflect 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 has been proactive in engaging in these areas already. They include:

- **Fire fighting in the Wildland-Urban Interface (WUI):** WUI areas are development sites that are adjacent to wildland areas. This proximity to forests, grasslands and other undeveloped areas increases the fire risk to these homes in a unique way. 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<sup>2</sup> and according to the *Second Needs Assessment of the U.S. Fire Service* completed by 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 a different type of fire.
- **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 and fire departments. Because of the fire service's large role in EMS activities, the fire service community would like to ensure that 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. NFA currently offers classes to train fire and emergency service providers, as well as other local officials, on issues related to mitigation,

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

prevention and response to the incidents involving hazardous materials that are either accidental or terrorist in nature.

In addition to ensuring that 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 FY1999, USFA's funding for research was \$500,000. Re-budgeting by USFA in FY2000, and increased Congressional emphasis in the FY2001 and FY2002 reauthorization more than doubled this funding. In FY2000, USFA funded research activities at \$2 million, and for the next two fiscal years, the research funding matched the authorization levels of \$3 million (FY2001) and \$3.25 million (FY2002). In that authorization (PL 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.

#### *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 largest contingent of first responders, who are often dispatched to the scene of any disaster, not just fires, that the fire service should maintain a highly visible role in DHS and FEMA and 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 losses 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 FY2009, FY2010, and FY2011 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 \_\_\_\_\_.]