

**H.R. 2692, UNITED STATES FIRE  
ADMINISTRATION AUTHORIZATION  
ACT OF 2003**

---

---

**HEARING**  
BEFORE THE  
SUBCOMMITTEE ON RESEARCH  
COMMITTEE ON SCIENCE  
HOUSE OF REPRESENTATIVES  
ONE HUNDRED EIGHTH CONGRESS

FIRST SESSION

—————  
JULY 17, 2003  
—————

**Serial No. 108-22**

---

Printed for the use of the Committee on Science



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

—————  
U.S. GOVERNMENT PRINTING OFFICE

88-232PS

WASHINGTON : 2003

---

For sale by the Superintendent of Documents, U.S. Government Printing Office  
Internet: [bookstore.gpo.gov](http://bookstore.gpo.gov) Phone: toll free (866) 512-1800; DC area (202) 512-1800  
Fax: (202) 512-2250 Mail: Stop SSOP, Washington, DC 20402-0001

## COMMITTEE ON SCIENCE

HON. SHERWOOD L. BOEHLERT, New York, *Chairman*

LAMAR S. SMITH, Texas	RALPH M. HALL, Texas
CURT WELDON, Pennsylvania	BART GORDON, Tennessee
DANA ROHRABACHER, California	JERRY F. COSTELLO, Illinois
JOE BARTON, Texas	EDDIE BERNICE JOHNSON, Texas
KEN CALVERT, California	LYNN C. WOOLSEY, California
NICK SMITH, Michigan	NICK LAMPSON, Texas
ROSCOE G. BARTLETT, Maryland	JOHN B. LARSON, Connecticut
VERNON J. EHLERS, Michigan	MARK UDALL, Colorado
GIL GUTKNECHT, Minnesota	DAVID WU, Oregon
GEORGE R. NETHERCUTT, JR., Washington	MICHAEL M. HONDA, California
FRANK D. LUCAS, Oklahoma	CHRIS BELL, Texas
JUDY BIGGERT, Illinois	BRAD MILLER, North Carolina
WAYNE T. GILCHREST, Maryland	LINCOLN DAVIS, Tennessee
W. TODD AKIN, Missouri	SHEILA JACKSON LEE, Texas
TIMOTHY V. JOHNSON, Illinois	ZOE LOFGREN, California
MELISSA A. HART, Pennsylvania	BRAD SHERMAN, California
JOHN SULLIVAN, Oklahoma	BRIAN BAIRD, Washington
J. RANDY FORBES, Virginia	DENNIS MOORE, Kansas
PHIL GINGREY, Georgia	ANTHONY D. WEINER, New York
ROB BISHOP, Utah	JIM MATHESON, Utah
MICHAEL C. BURGESS, Texas	DENNIS A. CARDOZA, California
JO BONNER, Alabama	VACANCY
TOM FEENEY, Florida	
RANDY NEUGEBAUER, Texas	

---

## SUBCOMMITTEE ON RESEARCH

NICK SMITH, Michigan, *Chairman*

LAMAR S. SMITH, Texas	EDDIE BERNICE JOHNSON, Texas
DANA ROHRABACHER, California	MICHAEL M. HONDA, California
GIL GUTKNECHT, Minnesota	ZOE LOFGREN, California
FRANK D. LUCAS, Oklahoma	DENNIS A. CARDOZA, California
W. TODD AKIN, Missouri	BRAD SHERMAN, California
TIMOTHY V. JOHNSON, Illinois	DENNIS MOORE, Kansas
MELISSA A. HART, Pennsylvania	JIM MATHESON, Utah
JOHN SULLIVAN, Oklahoma	SHEILA JACKSON LEE, Texas
PHIL GINGREY, Georgia	RALPH M. HALL, Texas
SHERWOOD L. BOEHLERT, New York	

PETER ROONEY *Subcommittee Staff Director*  
DAN BYERS *Professional Staff Member/Designee*  
JIM WILSON *Democratic Professional Staff Member*  
ELIZABETH GROSSMAN, KARA HAAS *Professional Staff Members*  
JAMES HAGUE *Staff Assistant*

# CONTENTS

July 17, 2003

Witness List .....	Page 2
Hearing Charter .....	3

## Opening Statements

Statement by Representative Nick Smith, Chairman, Subcommittee on Research, Committee on Science, U.S. House of Representatives .....	12
Written Statement .....	13
Statement by Representative Eddie Bernice Johnson, Ranking Minority Member, Subcommittee on Research, Committee on Science, U.S. House of Representatives .....	15
Written Statement .....	16
Prepared Statement by Representative John Sullivan, Member, Subcommittee on Research, Committee on Science, U.S. House of Representatives .....	16
Statement by Representative Sherwood L. Boehlert, Chairman, Committee on Science, U.S. House of Representatives .....	17

## Panel 1:

Honorable Dave Camp, Member, U.S. House of Representatives from the State of Michigan	
Oral Statement .....	17
Written Statement .....	19
Discussion .....	20

## Panel 2:

Mr. David Paulison, U.S. Fire Administrator and Director, Preparedness Division of the Emergency Preparedness & Response Directorate/FEMA, Department of Homeland Security	
Oral Statement .....	21
Written Statement .....	23
Biography .....	28
Dr. Arden L. Bement, Jr., Director, National Institute of Standards and Technology	
Oral Statement .....	28
Written Statement .....	30
Biography .....	33
Discussion .....	33

## Panel 3:

Mr. Dennis Compton, Immediate Past Chair, Board for the International Fire Service Training Association	
Oral Statement .....	45
Written Statement .....	46
Biography .....	50
Financial Disclosure .....	53

IV

	Page
Dr. John R. Hall, Jr., Assistant Vice President, Fire Analysis and Research, National Fire Protection Association	
Oral Statement .....	54
Written Statement .....	55
Biography .....	58
Financial Disclosure .....	60
Discussion .....	63

**Appendix 1: Additional Material for the Record**

H.R. 2692, United States Administration Authorization Act of 2003 .....	70
H.R. 545, Firefighting Research and Coordination Act .....	74

**H.R. 2692, UNITED STATES FIRE ADMINISTRATION AUTHORIZATION ACT OF 2003**

---

**THURSDAY, JULY 17, 2003**

HOUSE OF REPRESENTATIVES,  
SUBCOMMITTEE ON RESEARCH,  
COMMITTEE ON SCIENCE,  
*Washington, DC.*

The Subcommittee met, pursuant to call, at 9:35 a.m., in Room 2318 of the Rayburn House Office Building, Hon. Nick Smith [Chairman of the Subcommittee] presiding.

**SUBCOMMITTEE ON RESEARCH  
COMMITTEE ON SCIENCE  
U.S. HOUSE OF REPRESENTATIVES**

***H.R. 2692, the U.S. Fire Administration Authorization Act of 2003***

Thursday, July 17, 2003  
9:30 a.m. - 12:00 p.m.  
2318 Rayburn House Office Building

**Witness List**

Panel 1:

**Honorable Dave Camp**  
Member  
U.S. House of Representatives

Panel 2:

**Mr. David Paulison**  
U.S. Fire Administrator and Director, Preparedness Division of the Emergency Preparedness &  
Response Directorate/FEMA  
Department of Homeland Security

**Dr. Arden Bement**

Director  
National Institute of Standards and Technology

Panel 3:

**Mr. Dennis Compton**  
Immediate Past Chair  
Board for the International Fire Service Training Association

**Dr. John Hall**

Assistant Vice-President, Fire Analysis and Research  
National Fire Protection Association (NFPA)

Section 210 of the Congressional Accountability Act of 1995 applies the rights and protections covered under the Americans with Disabilities Act of 1990 to the United States Congress. Accordingly, the Committee on Science strives to accommodate/meet the needs of those requiring special assistance. If you need special accommodation, please contact the Committee on Science in advance of the scheduled event (3 days requested) at (202) 225-6371 or FAX (202) 225-0891.  
Should you need Committee materials in alternative formats, please contact the Committee as noted above.

HEARING CHARTER

**SUBCOMMITTEE ON RESEARCH  
COMMITTEE ON SCIENCE  
U.S. HOUSE OF REPRESENTATIVES**

**H.R. 2692, United States Fire  
Administration Authorization  
Act of 2003**

THURSDAY, JULY 17, 2003  
9:30 A.M.—12:00 P.M.

2318 RAYBURN HOUSE OFFICE BUILDING

**1. PURPOSE**

On Thursday, July 17th, 2003, the Research Subcommittee of the House Science Committee will hold a hearing to examine U.S. Fire Administration (USFA) programs and activities and H.R. 2692, the *U.S. Fire Administration Authorization Act of 2003*. The USFA, housed within the Federal Emergency Management Agency (FEMA) and located in Emmitsburg, Maryland, is charged with helping to prevent and limit fire-related losses. Its activities revolve around four primary areas: training, public education, research, and data collection and analysis. On March 1, 2003, USFA and FEMA officially became part of the Emergency Preparedness and Response Directorate of the Department of Homeland Security (DHS).

**2. WITNESSES***Panel 1*

**The Honorable Dave Camp** is the Representative of the 4th Congressional District of Michigan. First elected to Congress in 1990, Mr. Camp sits on the Ways and Means Committee and the Homeland Security Committee, where he chairs the Subcommittee of Infrastructure and Border Security.

*Panel 2*

**Mr. David Paulison** is the U.S. Fire Administrator and Director of the Preparedness Division of the Emergency Preparedness & Response Directorate/FEMA in the Department of Homeland Security. Prior to his appointment as U.S. Fire Administrator in December 2001, he was chief of the Miami-Dade Fire Rescue Department. Administrator Paulison has 30 years of fire rescue experience and was selected as Florida's fire chief of the year in 1993.

**Dr. Arden Bement** is Director of the National Institute of Standards and Technology, a position he has held since December 2001. Before receiving this appointment, Bement served as the David A. Ross Distinguished Professor of Nuclear Engineering and head of the School of Nuclear Engineering at Purdue University. From 1989 to 1995, Dr. Bement was a member of the U.S. National Science Board, the governing board for the National Science Foundation. He is also a member of the U.S. National Academy of Engineering.

*Panel 3*

**Mr. Dennis Compton** is the immediate past Chair of the Board for the International Fire Service Training Association. Chief Compton has served for over 32 years in the fire service—27 years with the Phoenix Fire Department and five years as the Mesa Chief. He was selected as a charter member of the Arizona Fire Service Hall of Fame and recently received the Congressional Fire Services Institute (CFSI) 2003 Mason Lankford National Fire Service Leadership Award.

**Dr. John Hall** is Assistant Vice President for Fire Analysis and Research at the National Fire Protection Association (NFPA). This division at NFPA is responsible for the measurement of the national fire problem and the communication of the results as a statistical basis for fire protection strategies. Dr. Hall was formerly an Operations Research Analyst with the U.S. Fire Administration. He holds a B.A. in

Mathematics from Brown University and a Ph.D. in Operations Research from the University of Pennsylvania.

### 3. OVERARCHING QUESTIONS

The hearing will address the following overarching questions:

1. What is the status of traditional USFA activities, such as public education and outreach, fire research and data analysis, and emergency responder training programs? Does H.R. 2692 adequately address issues relevant to these programs?
2. What is the status of the USFA Assistance to Firefighters Grant Program, and should Congress modify the program in H.R. 2692?
3. What is the need for development of testing methodologies and standards for new firefighting technologies, and what are the pros and cons of H.R. 545, the *Firefighting Research and Coordination Act*?
4. What is the status of USFA-supported fire research programs? How is USFA's relatively small research budget being leveraged and coordinated with related efforts at the National Institute of Standards and Technology and the Department of Homeland Security's Science and Technology Directorate?

### 4. BACKGROUND

- In the early 1970's, a report by the President's National Commission on Fire Prevention and Control entitled *America Burning* presented a dismal assessment of fire safety in the United States. The report found that nearly 12,000 citizens and 250 firefighters were lost to fire annually, in addition to approximately 300,000 injuries.
- In response to the report, Congress created the USFA and the National Fire Academy. The USFA, housed within the Federal Emergency Management Agency (FEMA) and located in Emmitsburg, Maryland, is charged with helping to prevent and control fire-related losses. Its activities revolve around four primary areas: training, public education, research, and data collection and analysis.
- When the USFA was established in 1974, its goal was to reduce by half the number of fire-related fatalities in the Nation—bringing the number to approximately 6,000 or less per year within a generation. The agency met this goal, and by 1998 civilian fire deaths were at their lowest level. Additionally, using nearly any measure—number of fires, deaths, injuries, or property losses—the statistics also reflect a declining trend.
- Despite this significant progress, the United States still has one of the worst fire safety records in the industrialized world. The per capita death rate remains two to three times that of several European nations and at least 20 percent higher than most developed countries. Fire remains the cause of approximately 3,700 deaths and \$11 billion in economic damages each year, and every 18 seconds a fire department responds to a call somewhere in the United States.

#### *USFA Organization and Programs*

USFA's mission is to provide leadership, coordination, and support for the Nation's fire prevention and control, fire training and education, and emergency medical services activities, particularly for America's 26,350 fire departments. USFA's five-year operational objectives, established in 2000, aim to reduce the loss of life from fire in the United States by 15 percent, through targeted reductions of 25 percent for high-risk populations: children 14 years and below, adults 65 years and above, and firefighters.

USFA programs include the following:

*Assistance to Firefighters Grant Program*—Established in FY 2001, this program awards grants directly to fire departments to supplement basic needs (described in more detail below).

*Data Collection*—USFA's National Fire Data Center (NFDC) administers a national system for collecting, analyzing and disseminating data and information on fire and other emergency incidents to State and local governments and the fire community. The NFDC provides a national analysis of the fire problem, identifying problem areas for which prevention and mitigation strategies are needed.

*Public Education and Awareness*—Through partnerships and special initiatives, USFA involves the fire service, the media, other federal agencies and safety interest

groups in the development and delivery of fire safety awareness and education programs. These programs are targeted at those groups most vulnerable to the hazards of fire, including the young, elderly, and disabled. For example, USFA recently announced the development of an aggressive plan to advocate increased use of residential fire sprinklers, which have become significantly more effective and less costly due to new technology, but remain utilized in only a very small percentage of homes.

*Training*—USFA’s National Fire Academy offers educational opportunities for the advanced professional development of mid-level and senior fire and emergency medical service officers and allied professionals involved in fire prevention and life safety activities. The Academy develops and delivers educational and training programs with a national focus that is aimed at supplementing and supporting State and local fire service training. In 2002, the Academy trained almost 8,000 firefighters in various courses at Academy headquarters in Emmitsburg, 86,000 firefighters through off-campus training programs (primarily administered through support of state training programs), and 195,000 through its distance-learning program. It is estimated that NFA has trained over 1.4 million students through on-campus and off-campus training programs since its establishment in 1975.

In 2003, an organizational change within FEMA as part of the agency’s transfer into the Department of Homeland Security resulted in the transfer of FEMA’s Emergency Management Institute (EMI) into USFA. Through a combination of on-campus, off-campus, and distance learning courses similar to those at NFA, EMI serves as the focal point for the development and delivery of emergency incident management training. Together, EMI and NFA now comprise USFA’s National Emergency Training Center (NETC), also headquartered in Emmitsburg, Maryland.

*Research*—Through research, testing and evaluation, USFA works with public and private entities to promote and improve fire and life safety. For fiscal year (FY) 2003, USFA research activities were authorized at \$3.5 million. These activities are administered in cooperation with the Building and Fire Research Laboratory (BFRL) at the National Institutes of Standards and Technology (NIST). For example, USFA–NIST cooperative research focusing on residential fire protection technologies successfully resulted in the development and enhancement of national consensus standards for sprinkler applications for residential occupancies where most of fire deaths occur.

The current USFA authorization legislation (P.L. 106–503) directed USFA to work with NIST, private organizations, and State and local government to develop a prioritized research agenda for the agency. The agenda, completed in 2001, identified as top priorities research projects that focus on improving the safety of high-risk populations such as children, senior citizens, and firefighters, reflecting USFA’s agency-wide fire safety goals.

*Budget*—The President’s FY 2004 budget request for USFA “base” activities (those except for the Assistance to Firefighters Grant Program, which is authorized through FY 2004), is \$61.0 million, a 49 percent increase above the FY 2003 request. This increase is in part due to the transfer of EMI into USFA as part of FEMA reorganization. USFA has not yet provided Congress written information detailing the FY 2004 request or FY 2003 current appropriations plan. Agency activities are currently authorized at \$50 million for FY 2003.

#### *Assistance to Firefighters Grant Program*

The Assistance to Firefighters Grant Program (Also known as the FIRE Act Grant Program) at USFA was established by Congress to provide, through competitively awarded matching grants, direct financial assistance to local fire departments for basic equipment and training needs. For the FY 2003 grant program, Congress appropriated, and President Bush signed into law, \$745 million for the grant program. To ensure USFA has adequate time to distribute the funding effectively, Congress allowed the agency until the end of FY 2004 to obligate all of the funds.

In FY 2003, fire departments were eligible to apply for grants in one of four program areas:

1. **Fire Operations and Firefighter Safety.** Eligible activities under this function are limited to training, wellness and fitness, firefighting equipment, personal protective equipment, and modifications to fire stations and facilities.
2. **Fire Prevention.** Eligible activities under this function include, but are not limited to, public education and awareness activities, fire codes enforcement activities, fire inspector certifications, purchase and installation of smoke

alarms and fire suppression systems, wildland mitigation, and arson prevention and detection activities.

3. **Emergency Medical Services.** Eligible activities under this function for fire-based EMS units are limited to equipment, training, and wellness and fitness initiatives. Vehicles, such as ambulances, are not eligible in this programmatic area.
4. **Firefighting Vehicles Acquisition.** Eligible apparatus under this program include, but are not limited to, pumpers, brush trucks, tankers, rescue, ambulances, quints (advanced fire trucks with space for extra personnel and equipment), aerials, foam units, and fireboats. You may apply for only one vehicle per year.

USFA received 19,949 applications for over \$2 billion in federal funding, and began awarding grants in June. As of July 11, 2003, USFA had announced 800 awards totaling \$48 million. By September of 2004, USFA plans to have obligated the full \$745 million through grants to approximately 7,000 fire departments.

In the FY 2004 budget request, the Administration proposed transferring the Assistance to Firefighters grant program to the Office of Domestic Preparedness within the Department of Homeland Security, to be funded at \$500 million. The proposed transfer is part of the Administration's effort to consolidate the counter-terrorism programs for emergency responders. While supportive of the first responder program, many in the fire services community have expressed concern about the transfer of the Assistance to Firefighters Grant Program out of USFA, arguing the proposal may result in a shift in program focus toward specialized equipment and training when many fire departments still lack the minimum tools and resources necessary for day-to-day emergency response.

On June 24, 2003, the House approved the FY 2004 spending bill for the Department of Homeland Security (DHS), providing \$750 million for the Assistance to Firefighters Grant Program and explicitly directing that the funds be administered from the Emergency Preparedness and Response Directorate. On July 10, the Senate Appropriations Committee approved its version of the bill, also providing \$750 million for the program, but placing it within the Border and Transportation Security Directorate per the Administration's request.

*H.R. 2692, the United States Fire Administration Authorization Act of 2003*

H.R. 2692, introduced on July 10, 2003 by representatives Smith (MI) and Johnson (TX), authorizes appropriations for "base activities" (those excluding the Assistance to Firefighters Grant Program, which is authorized through FY 2004) at the Fire Administration of \$61.0, \$62.83, and \$65 million annually for fiscal years FY 2004 through FY 2006, respectively. These amounts reflect the FY 2004 budget request, with approximately 3 percent annual increases thereafter. The legislation also:

- Reinstates the position of U.S. Fire Administrator as a Presidentially-appointed, Senate-confirmed position (this was unintentionally eliminated by the Homeland Security Act of 2002 by a broader provision modifying the status of executive positions transferred into the department).
- Requires the Administrator to develop and implement a strategy for promoting the installation and use of residential fire sprinklers.
- Transfers responsibility for administration of the Assistance to Firefighters Grant Program from the Director of FEMA to the USFA Administrator.

On June 19, 2003, the Senate Commerce Committee approved S. 1152, its version of the USFA Authorization legislation. S. 1152 authorizes USFA activities through FY 2008, and differs from H.R. 2692 primarily in its inclusion of provisions from S. 321, the Firefighting Research and Coordination Act. S. 321 and its companion in the House, H.R. 545, introduced by Representative Camp (MI), would (1) authorize the Administrator to develop standards for new firefighting technologies such as thermal imaging cameras and chemical protective equipment, and require that equipment purchased through the Assistance to Firefighters Grant Program meet those standards; (2) require the Administrator to work with State and local fire service officials to establish nationwide and State mutual aid systems for responding to national emergencies; and (3) authorize the National Fire Academy to train firefighters to offer courses to respond to acts of terrorism. A complete section-by-section analysis of both H.R. 2692 and H.R. 545 are included in the appendix.

*Council on Foreign Relations Report on Emergency Response Needs*

On June 29, 2003, the Council on Foreign Relations, a foreign affairs think tank, released a report entitled, *Emergency Responders: Drastically Underfunded, Dangerously Unprepared*. The report was compiled by an Independent Task Force on Emergency Responders led by former Senator Warren Rudman and former White House cyber security chief Richard Clarke. The task force met with emergency responder organizations across the country to identify needs—not a wish list—for minimum effective response to a catastrophic terrorist attack. The final unbudgeted needs of emergency responders was determined by the task force to be \$98.4 billion, including almost \$37 billion for the fire services. The report does not make clear how the task force arrived at this figure and how the how the \$37 billion estimated need for the fire services is broken down according to equipment, personnel, training, etc.

**6. QUESTIONS FOR WITNESSES**

In addition to being asked to provide written comment on H.R. 2692, witnesses were asked the following questions:

*Questions for Administrator Paulison*

- What is the Administration's position on the provisions of H.R. 545, the *Firefighting Research and Coordination Act* (enclosed)? What is the current process for developing standards for new firefighting technologies, and how does USFA contribute to this effort?
- What is the status of traditional USFA activities such as public education and outreach, fire research and data analysis, and National Fire Academy training programs? What is the status of the USFA Assistance to Firefighters Grant Program?
- What is the status of USFA-supported fire research programs? Please provide a list of these activities, including budget information. How do you work to leverage USFA's relatively small research budget with related efforts at the Department of Homeland Security, National Institute of Standards and Technology, other federal agencies, and the private sector?
- How have USFA activities been affected by its recent transition into the Emergency Preparedness and Response Directorate of the Department of Homeland Security?
- Please comment on the recently released report by the Council on Foreign Relations, *Emergency Responders: Drastically Underfunded, Dangerously Unprepared*. Are the findings and recommendations, which call for an additional \$36 billion annually for the fire services, realistic?

*Questions for Dr. Bement*

- Provide an overview of fire research activities at the National Institute of Standards and Technology (NIST), including budget details. With regard to mission and focus, how do NIST fire research activities compare to those at USFA? How does NIST coordinate and prioritize these activities with USFA?
- What is the current process for developing standards for new firefighting technologies, and how is NIST involved in this effort? What challenges exist associated with standardization of firefighting equipment and technologies? Has the absence of standards in any particular areas acted as a barrier to the introduction of new firefighting technologies?

*Questions for Mr. Hall*

- What is the NFPA position on H.R. 545, the *Firefighting Research and Coordination Act* (enclosed)? What is the current process for developing standards for new firefighting technologies, and how is NFPA involved in this effort? What challenges exist associated with standardization of firefighting equipment and technologies? Has the absence of standards in any particular areas acted as a barrier to the introduction of new firefighting technologies?
- Provide an overview of the findings of the recent FEMA/NFPA study, "A Needs Assessment of the U.S. Fire Service." How can Congress use the findings to strengthen USFA in the pending reauthorization legislation?
- Please comment on the findings and recommendations of recently released report by the Council on Foreign Relations, *Emergency Responders: Drastically Underfunded, Dangerously Unprepared*. How did NFPA contribute to this study?

*Questions for Mr. Compton*

- What is the fire services community's opinion of provisions in the enclosed legislation, H.R. 545, the *Firefighting Research and Coordination Act*?
- Is the Assistance to Firefighters Grant Program successfully meeting its charge to help the Nation's fire departments meet basic firefighting equipment and training needs necessary for day-to-day operations? Should the program be modified in this reauthorization legislation, and if so, how?
- What is the fire services community's general opinion on the proposed consolidation of the Assistance to Firefighters Grant Program with other first responder grant programs within DHS, including the recent proposal to move the program into the DHS Office of State and Local Government Coordination? What other encouragements and concerns does the fire services community have associated with the recent transition of FEMA and USFA into the Emergency Preparedness and Response Directorate of the Department of Homeland Security?
- How effective has USFA been at administering "traditional" agency activities such as public education, outreach, and research, and data collection and analysis? Please provide any recommendations for improving these activities within USFA.
- Please comment on the recently released report by the Council on Foreign Relations, *Emergency Responders: Drastically Underfunded, Dangerously Unprepared*. Are the findings and recommendations, which call for an additional \$36 billion annually for the fire services, realistic?

**7. APPENDIX I**

## SECTION BY SECTION ANALYSIS OF H.R. 2692

*Introduced by Mr. Smith of Michigan and Ms. Johnson of Texas*

**Section 1. Short Title.**

“United States Fire Administration Authorization Act of 2003”.

**Section 2. United States Fire Administrator.**

Preserves the position of U.S. Fire Administrator as a Presidentially-appointed, Senate-confirmed position.

**Section 3. National Residential Fire Sprinkler Strategy.**

Requires the Administrator to develop and implement a strategy for promoting the installation and use of residential fire sprinklers. Requires strategy to include advocacy and informational support to relevant stakeholders, with a particular focus on residences at high risk to fire hazards and occupants at high risk to fire hazards (such as senior citizens).

**Section 4. Support for Training to Fight Maritime Fires.**

Amends the Assistance to Firefighters Grant Program to allow support for training to fight maritime fires as an eligible grant activity.

**Section 5. Firefighters Assistance Grants Program.**

Transfers responsibility for administration of the program from the Director of the Federal Emergency Management Agency (FEMA) to the Administrator of the U.S. Fire Administration (USFA).

**Section 6. Authorization of Appropriations.**

Authorizes appropriations for USFA of \$61.0, \$62.83, and \$65 million annually for fiscal years FY 2004 through FY 2006, respectively.

**Section 7. Courses and Training Assistance.**

Clarifies that National Fire Academy Superintendent, in offering training courses, work to accommodate as many geographic areas and needs of firefighters as possible.

## 8. APPENDIX II

### SECTION-BY-SECTION ANALYSIS OF H.R. 545

*Introduced by Mr. Camp of Michigan*

#### **Section 1. Short title.**

“Firefighting Research and Coordination Act.”

#### **Sec. 2. New firefighting technology.**

Subsection (a) would establish a new section 8(e) of the Federal Fire Prevention and Control Act of 1974 (15 U.S.C. 2207). This new subsection would direct the Administrator, in consultation with the National Institute of Standards and Technology, the Inter-Agency Board for Equipment Standardization and Inter-Operability, national voluntary consensus standards development organizations, and other interested parties, to develop new, and utilize existing, measurement techniques and testing methodologies for evaluating the performance of new firefighting technology, including:

- personal protection equipment;
- devices for advance warning of extreme hazard;
- equipment for enhanced vision;
- devices to locate victims, firefighters, and other rescue personnel in above-ground and below-ground structures;
- equipment and methods to provide information for incident command, including the monitoring and reporting of individual personnel welfare;
- equipment and methods for training, especially for virtual reality training; and
- robotics and other remote-controlled devices.

The Administrator would also be required to evaluate the compatibility of new equipment and technology with existing firefighter technology, and support the development of new voluntary consensus standards through national voluntary consensus standards organizations for new firefighting technologies.

For equipment for which applicable voluntary consensus standards have been established, the Administrator would be directed to require, by regulation, that equipment purchased through the Assistance to Firefighters Grant Program established by section 33 of the Federal Fire Prevention and Control Act of 1974 (15 U.S.C. 2229) meet or exceed applicable voluntary consensus standards. For the purposes of this subsection, the Administrator would have the discretion to determine the applicability of voluntary consensus standards to an application under this program.

Authorizes appropriations of \$2.2 million for FY 2004 to carry out this section.

#### **Sec. 3. Coordination of response to national emergency.**

Subsection (a) would create a new section 10(b) of the Federal Fire Prevention and Control Act of 1974 (15 U.S.C. 2209). New subsection (b) would require the Administrator, after consultation with the Director of FEMA, to provide technical assistance and training to State and local fire service officials to establish nationwide and State mutual aid systems for dealing with national emergencies. These mutual aid systems would include threat assessment and equipment deployment strategies, and include means of collecting asset and resource information to provide accurate and timely data for regional deployment. These mutual aid systems also would have to be consistent with FEMA’s Federal Response Plan. The Administrator, in consultation with the Director of FEMA, would be required to develop and make available to State and local fire service officials model mutual aid plans for both intra-state and interstate assistance.

Subsection (b) would require the Administrator to report to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Science, within 90 days after the date of enactment of this Act, on the need for a strategy concerning the deployment of volunteers and emergency response personnel (as defined in section 6 of the Firefighters’ Safety Study Act (15 U.S.C. 2223e)), including a national credentialing system, in the event of a national emergency.

Subsection (c) would require the Director of FEMA to revise the Federal Response Plan within 180 days after the date of enactment of this Act to incorporate plans for responding to terrorist attacks, particularly in urban areas, including fire detection and suppression and related emergency services. The Director of FEMA would

also be required to transmit a report to the Senate Committee on Commerce, Science, and Transportation and the House of Representatives Committee on Science on these revisions.

**Sec. 4. Training.**

Subsection (a) would amend section 8(d)(1) of the Federal Fire Prevention and Control Act of 1974 (15 U.S.C. 2206(d)(1)) to authorize the Superintendent of the National Fire Academy to conduct training in the following areas:

- (i) strategies for building collapse rescue;
- (ii) the use of technology in response to fires, including terrorist incidents and other national emergencies;
- (iii) response, tactics, and strategies for dealing with terrorist-caused national catastrophes;
- (iv) use of and familiarity with FEMA's Federal Response Plan;
- (v) leadership and strategic skills, including integrated management systems operations and integrated response;
- (vi) applying new technology and developing strategies and tactics for fighting forest fires;
- (vii) integrating terrorism response agencies into the national terrorism incident response system; and
- (viii) response tactics and strategies for fighting fires at United States ports, including fires on the water and aboard vessels.

Subsection (b) would authorize the Superintendent of the National Fire Academy to consult with other Federal, State, and local government officials in developing curricula for classes at the Academy.

Subsection (c) would require the Administrator to coordinate the training provided under section 8(d)(1) of the Federal Fire Prevention and Control Act of 1974 (15 U.S.C. 2206(d)(1)) with the Attorney General, the Secretary of Health and Human Services, and the heads of other federal agencies, to ensure that such training does not duplicate existing courses available to fire service personnel and to establish a mechanism for eliminating duplicative training programs.

Chairman SMITH. The Subcommittee on Research of the Committee on Science will come to order, and certainly, I would like to welcome everyone here today for this Research Subcommittee hearing to review the activities of the U.S. Fire Administration and consider our reauthorization bill, H.R. 2692, and also, Dave Camp's bill, H.R. 545, the Firefighting Research and Coordination Act.

Created in 1974, the U.S. Fire Administration is now sort of closing out almost 30 years of service to the country aimed at reducing the Nation's fire losses through better fire prevention and control. During this time, the Agency has contributed what has been a very dramatic improvement in terms of reducing the loss of life and the loss of property. In 1973, over 12,000 citizens and 250 firefighters were lost to fire. Today, while our population has increased by 30 percent, the average number of deaths each year due to fires has decreased by over 60 percent. That is very impressive improvement and one that the U.S. Fire Administration can certainly be proud of.

However, there are still opportunities for further improvements to our fire safety record. As the lead federal agency working with Americans—America's 26,000 fire departments, the U.S. Fire Administration is properly positioned to help make those improvements through its support in areas such as training, fire research, data collection and analysis. Additionally, three years ago, I met with Congressman Curt Weldon and Steny Hoyer to write the floor amendment to start and kick off what has turned out to be a very successful assistance to firefighters grants program, now also, I think an important part of the effort for federal encouragement. USFA and the firemen that volunteer their time to be grant reviewers for this program should be congratulated for doing such a fine job.

In addition to receiving comments on the legislation before the Subcommittee, we will also discuss several issues not currently addressed in the legislation, but also of importance to fire services. Among these are the need for and use of equipment standards in fire services, U.S. Fire Administration's fire research program and third, the future of the Assistance to Firefighters grant program.

Allow me just to comment briefly on a few of these items so we can begin the testimony. First of all, I want to note that I have put a great deal of time and effort into learning more about the need and use of equipment standards. I believe that it is widely recognized that standards for equipment and new technologies are very important, and I—so I compliment my colleague, Dave Camp from Michigan, for initiating this legislation. We need to encourage more standards and evaluations in the current environment, where it seems that every equipment company, especially after 9/11, is coming and trying to sell our fire departments and our fire services new technologies for the challenge that lies ahead. I have called the fire chiefs in Michigan and other states, who have shared their concerns that any sweeping mandates requiring that federal grant funds purchase only equipment that meets the standards is too prescriptive and may limit the flexibility of fire departments who desire guidance and information but whose needs may not fit perfectly with, if you will, a one size fits all federal mandate.

I will also want to voice my concerns with the ongoing attempts to transfer the Assistance to Firefighters grant program out of the United States Fire Administration. I understand and support the notion that we should consolidate duplicative programs to increase efficiency of our federal support for emergency responders. In fact, I am pretty regularly one of those people working to find and eliminate unnecessary duplication in our federal programs. However, I can say for certain that the goals and objectives of the firefighters grant program, helping fire departments meet the equipment and training needs for basic day to day firefighting are quite different from other homeland security grant programs designed to better prepare first responders to defend against terrorism. I believe the Section 33 firefighters grant program should remain as it was envisioned when Congress established it, and it should be administered by those that best understand the needs of the fire services, which is the people of the USFA.

I would also like to highlight that today's legislation contains an important provision to authorize the Administrator to begin an aggressive strategy to advocate the use of residential fire sprinklers. We know that over 80 percent of the deaths due to fire are caused in the home and there has never been a multiple death fire in a home that had functional sprinklers. We also know that the technology of fast-response sprinklers has improved greatly while the cost has decreased, yet less than three percent of the residences in the United States have sprinkler systems. I am excited that this effort by USFA is—if successful, could help to substantially lower the loss of life and property due to fire in residences.

Finally, I would like to say a quick word about the recent report by the Council on Foreign Relations. It was called "Drastically Underfunded, Dangerously Unprepared." The report was led by former Senator Warren Rudman, who will be testifying in this room before the Select Homeland Security Committee later today. It calls for \$37 billion in additional funding for the fire services, and while I strongly agree that there is more that we need to do to improve emergency responder preparedness, I am concerned that the findings of the report may have been overestimated due to some—what looks like inaccurate calculations. The Committee will be looking into this today.

I am pleased that Administrator Paulison is here for the Subcommittee really for the first time since he took the reins at the end of 2001. Administrator Paulison may have to leave a bit early, so we will try to keep this thing moving to ensure adequate time for discussion with him this morning.

I look forward to a productive discussion, and I want to welcome Dave Camp before the Subcommittee, so Dave, welcome, and we will ask Representative Johnson for a comment and then the Chairman of the full Science Committee, so—Eddie Bernice.

[The prepared statement of Chairman Smith follows:]

PREPARED STATEMENT OF CHAIRMAN NICK SMITH

I would like to welcome everyone here today for this Research Subcommittee hearing to review the activities of the U.S. Fire Administration and consider H.R. 2692, the USFA AUTHORIZATION ACT OF 2003. We will also review H.R. 545, the *Firefighting Research and Coordination Act*, which has been introduced by my colleague from Michigan Mr. Camp.

Created in 1974, USFA is now closing in on 30 years of service to the country aimed at reducing the Nation's fire losses through better fire prevention and control. During this time, the agency has contributed to what has been a very dramatic improvement in America's once-dismal fire safety record. In 1973, over 12,000 citizens and 250 firefighters were lost to fire. Today, while our population has increased by 30 percent, the average number of deaths each year due to fires has decreased by over 60 percent. That is a very impressive improvement, and one that USFA can be proud of.

However, there is still some opportunities for further improvements to our fire safety record. As the lead federal agency working with America's 26,000 fire departments, USFA is properly positioned to help make those improvements through its support in areas such as training, fire research, data collection and analysis. Additionally, three years ago, I met with Congressman Curt Weldon and Steny Hoyer to write the floor amendment to start the very successful Assistance to Firefighters grant program, now also an important part of this effort. And USFA and the firemen that volunteer their time to be grant reviewers for this program should be congratulated for doing such a fine job.

In addition to receiving comments on the legislation before the Subcommittee today, we will also discuss several issues not currently addressed in the legislation but also of importance to the fire services. Among these are: (1) the need for and use of equipment standards in the fire services; (2) USFA's fire research program; and (3) the future of the Assistance to Firefighters grant program.

Allow me to just comment briefly on a few of these items so we can begin the testimony. First of all, I want to note that I have put a great deal of effort into learning more about the need for and use of equipment standards. I believe it is widely recognized that standards for equipment and new technologies are very useful to the fire services. We need to encourage more standards and evaluations are developed in the current environment where it seems every equipment company has suddenly become interested in selling their wares to fire departments. However, I have called fire chiefs in Michigan and other states who have shared their concerns that any sweeping mandates requiring that federal grant funds purchase only equipment that meets these standards is too prescriptive and may limit the flexibility of fire departments who desire the guidance but whose needs may not fit perfectly with one-size-fits-all standards.

I also want to voice my concerns with the ongoing attempts to transfer the Assistance to Firefighters grant program out of USFA. I understand and support the notion that we should consolidate duplicative programs to increase efficiency of our federal support for emergency responders. In fact, I am regularly one of the first people working to find and eliminate unnecessary duplication of effort in federal programs. However, I can say for certain that the goals and objectives of the firefighters grant program—helping fire departments meet equipment and training needs for basic day-to-day firefighting—are quite different from other homeland security grant programs designed to better prepare first responders to defend against terrorism. I believe the Section 33 firefighters grant program should remain as it was envisioned when Congress established it, and it should be administered by those that best understand the needs of the fire services, which is the people at USFA.

I would also like to highlight that today's legislation contains an important provision to authorize the Administrator to begin an aggressive strategy to advocate the use of residential fire sprinklers. We know that over 80 percent of deaths due to fire occur in the home, and we know that—amazingly—there has never been a multiple death fire in a home that had functional sprinklers. We also know that the technology of fast-response sprinklers has improved greatly while the cost has decreased, yet less than three percent of homes in the United States have them installed. The legislation before us today specifically directs USFA to develop a strategy to advocate increased installation of sprinklers. I am excited that this effort by USFA, if successful, could help to substantially lower loss of life and property due to fire in residences.

Finally, I would like to say a quick word about the recent report by the Council on Foreign Relations, *Drastically Underfunded, Dangerously Unprepared.* The report was led by former Senator Warren Rudman, who will be testifying in this room before the Select Homeland Security Committee later today. It calls for \$37 billion in additional funding for the fire services. While I strongly agree that there is more we need to do to improve emergency responder preparedness, I am concerned that the findings of the report may have been overestimated due to inaccurate calculations. The Committee will also look into this today.

I am pleased that Administrator Paulison is here before the Subcommittee for the first time since he took over the reigns at the end of 2001. Administrator Paulison

may have to leave a bit early, so we will try to keep things moving to ensure adequate time for discussion with him this morning.

I look forward to a productive discussion this morning and a smooth markup of H.R. 2692 immediately following the hearing.

First I want to welcome Representative Dave Camp before the Subcommittee. Representative Camp is a friend and colleague of mine from Michigan and is here to talk about his legislation, H.R. 545, that we will be including in the substitute amendment during the markup that will immediately follow this hearing.

Ms. JOHNSON. Thank you very much, Mr. Chairman, and I am pleased to join you in welcoming our witnesses this morning to this hearing on legislation that Chairman Smith and I introduced to reauthorize activities of the U.S. Fire Administration.

The Federal Fire Prevention and Control Act of 1974 was intended to address a serious problem affecting safety for all Americans. Much progress has been made as a result of this legislation in public education about fire safety and improvements in the effectiveness of fire services and in the wider use of home fire safety devices. Nevertheless, the United States still has one of the highest fire death rates among advanced nations, and fire deaths exceed loss of life in all natural disasters combined.

The question then arises as to what is being done that is effective and what more ought to be done in order to make further progress in improving the Nation's fire safety record. As we begin the process of reauthorization of the 1974 Act, we seek the assistance of our witnesses in assessing how well current programs are working and whether the available resources are being allocated optimally.

A matter of concern for this committee is how well the Fire Administration will function and the degree of attention it will receive in its new position as part of the Department of Homeland Security. Based on our experience in getting the USFA budget information so far this year, the visibility and priority the Agency is receiving in the Department is not encouraging. Despite repeated requests, the first time the Subcommittee saw any budget details for Fiscal Year 2003 current spending plan and for Fiscal Year 2004 request was yesterday afternoon.

The authorization bill Chairman Smith and I have introduced attempts to preserve the status of the Fire Administration. First, it explicitly reestablishes the Presidentially-appointed and Senate-approved position of Fire Administrator. It also includes language to ensure that the Fire Administration runs the FIRE Grant program. This has been a valuable program, which most agree has been effectively administered by the Fire Administration.

One issue that I hope to explore today is the vitality of the Fire Administration's research activities. The current authorization statute includes provisions that attempt to reverse a withering away of support for this mission area, which is naturally of concern to this committee. One question is whether the Fire Administration and NIST are coordinating and cooperating effectively to develop and implement a fire research agenda of value to the fire services community. A Memorandum of Understanding regarding research activities has been in place between the two agencies for several years now, and I would like to find out more about how it has been working.

Finally, I encourage our outside witnesses to provide recommendations regarding the specific priorities of the Fire Administration's program, as well—programs, as well as recommendations on any aspect of the Agency's policies and operations that could improve its overall effectiveness in achieving its mission objectives.

Again, it is my pleasure to welcome all of our witnesses and our colleague, Congressman Camp, and I look forward to all of your testimony. Thank you, Mr. Chairman.

[The prepared statement of Ms. Johnson follows:]

PREPARED STATEMENT OF REPRESENTATIVE EDDIE BERNICE JOHNSON

I am pleased to join Chairman Smith in welcoming our witnesses this morning to this hearing on legislation that Chairman Smith and I introduced to reauthorize activities at the U.S. Fire Administration.

The Federal Fire Prevention and Control Act of 1974 was intended to address a serious problem affecting the safety of all Americans. Much progress has been made as a result of this legislation in public education about fire safety, in improvements in the effectiveness of fire services, and in the wider use of home fire safety devices. Nevertheless, the United States still has one of the highest fire death rates among advanced nations, and fire deaths exceed loss of life in all natural disasters combined.

The question then arises as to what is being done that is effective and what more ought to be done in order to make further progress in improving the Nation's fire safety record. As we begin the process of reauthorization of the 1974 act, we seek the assistance of our witnesses in assessing how well current programs are working and whether the available resources are being allocated optimally.

A matter of concern for this committee is how well the Fire Administration will function, and the degree of attention it will receive, in its new position as part of the Department of Homeland Security. Based on our experience in getting USFA budget information so far this year, the visibility and priority the agency is receiving in the department is not encouraging. Despite repeated requests, the first time the Subcommittee saw any budget details for the FY 2003 current spending plan and for the FY 2004 request was yesterday afternoon.

The authorization bill Chairman Smith and I have introduced attempt's to preserve the status of the Fire Administration. First, it explicitly re-establishes the Presidentially appointed and Senate approved position of Fire Administrator. It also includes language to ensure that the Fire Administration runs the FIRE grants program. This has been a valuable program, which most agree has been effectively administered by USFA.

One issue that I hope to explore today is the vitality of USFA's research activities. The current authorization statute includes provisions that attempted to reverse a withering away of support for this mission area, which is naturally of concern to this committee. One question is whether USFA and NIST are coordinating and cooperating effectively to develop and implement a fire research agenda of value to the fire services community. A Memorandum of Understanding regarding research activities has been in place between the two agencies for several years now, and I would like to find out more about how it has been working.

Finally, I encourage our outside witnesses to provide recommendations regarding the specific priorities of the Fire Administration's programs, as well as recommendations on any aspect of the agency's policies and operations that could improve its overall effectiveness in achieving its mission objectives.

Again, it is my pleasure to welcome all of our witnesses today, and I look forward to your testimony.

[The prepared statement of Mr. Sullivan follows:]

PREPARED STATEMENT OF REPRESENTATIVE JOHN SULLIVAN

Thank you Mr. Chairman. I appreciate your calling this hearing and markup on, H.R. 2692, the *United States Fire Administration Authorization Act of 2003*. As a member of the Research Subcommittee on the House Science Committee, I am glad to be a part of this hearing to address the needs of our nation's Firefighters.

The United States still has one of the worst fire safety records in the industrialized world. The per capita death rate remains two to three times that of several European nations and at least 20 percent higher than most developed countries. Fire remains the cause of approximately 3,700 deaths and \$11 billion in economic

damages each year, and every 18 seconds a fire department responds to a call somewhere in the United States.

Reauthorization of the United States Fire Administration Authorization Act of 2003 is critical to addressing the needs of our nation's Firefighters through preventing and limiting fire-related losses through training, public education, research, and data collection and analysis. It authorizes appropriations to fire departments through the Assistance to Firefighters Grant Program. This appropriation will greatly assist the needs of fire departments all across the country.

This reauthorization also transfers responsibility for administration of the Assistance to Firefighters Grant Program from the Director of Federal Emergency Management Agency to the United States Fire Administrator. This transfer will aid the development of a nationwide and state aid system for responding to national emergencies, and authorize the National Fire Academy to train Firefighters to offer courses to respond to acts of terrorism.

The reauthorization of H.R. 2692 is vital to our nation's safety and security in a post 9/11 world and I urge its adoption by this subcommittee this morning.

Chairman SMITH. Thank you, Representative Johnson. The gentlemen from New York, the Chairman of our Full Science Committee, Sherry Boehlert.

Chairman BOEHLERT. Thank you, Mr. Chairman. I am here to one, compliment you for the leadership you are demonstrating repeatedly in dealing with these very important programs and secondly, to provide tangible evidence of the Chair's importance that he assigns to these programs. I have been an unabashed champion of the fire program since I first came here and sat down at the bottom 21 years ago as a raw rookie, and since that time, I have been educated by the fire services and my affection for them, my appreciation for them and my determination to be helpful to them has increased exponentially. Administrator Paulison, you are going to—this is your maiden journey before the Subcommittee and you will find that we are going to be asking some questions, I am sure, and it is sort of a tough love scenario. We want you to succeed. We don't want to see cuts in programs. We want the Fire Academy to succeed. We don't want to see cuts in programs. We are determined to do what the rest of the Nation finally has got its mind set on doing, and that is not only appreciating but supporting the fire services from coast to coast. It took 9/11 for some people to fully appreciate the fire services, but I can tell you, Chairman Smith and Ms. Johnson and the rest of us have been champions of the cause for a long, long time, and while you may have a new home in the Department of Homeland Security, that has only increased the attention you are getting from us, because we want to make sure you get it right, but we are here as partners, as facilitators. We want to work with you for the fire service. Thank you very much, Mr. Chairman.

Chairman SMITH. Now, for those that don't know, Sherry Boehlert and Curt Weldon started the Fire Caucus, so we welcome all of our witnesses and Congressman Camp, please proceed with your testimony.

## **Panel 1**

### **STATEMENT OF HON. DAVE CAMP, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN**

Mr. CAMP. Thank you, Mr. Chairman, and thank you, Congresswoman Johnson and Congressman Boehlert. I appreciate the op-

portunity to testify before the Subcommittee. The mission of the U.S.—United States Fire Administration has taken on added importance since the September 11 terrorist attacks, and America's firefighters are taking on heightened responsibilities that go beyond fighting fires. As the USFA locates in its new home in the Department of Homeland Security, its role in combating America's—and coordinating America's fire prevention and response activities and leadership in fire education must be strengthened to meet these new challenges, and I appreciate the inclusion of H.R. 545 in the reauthorization measure.

This bill was introduced in February as the Firefighting Research and Coordination Act, along with Senator McCain, who introduced a companion bill in the Senate, and this legislation will help address current policy questions on how the Federal Government can most effectively provide firefighters with the training and the equipment necessary to save lives, and in my view, the Firefighting Research and Coordination Act gives appropriate weight to the top fire service needs, more specifically, the bill supports the development of voluntary consensus standards for firefighting equipment and technology. I underscore the word voluntary. It establishes nationwide and state mutual aid systems for dealing with national emergencies and will authorize the National Fire Academy to train firefighters to respond to acts of terrorism and other national emergencies.

The first objective of the bill focuses on establishing equipment and technology standards, and would allow the U.S. Fire Administrator, in consultation with the National Institute of Standards and Technology and other standards organizations, to develop voluntary consensus standards for evaluating the performance and compatibility of new firefighting technology. And examples include personal protection equipment, devices for advance warning of extreme hazard, equipment for enhanced vision, robotics and other remote-controlled devices, among others. Equipment purchased under the Assistance to Firefighters grant program must meet or exceed the voluntary consensus standards.

Requirements for equipment to voluntary consensus standards aren't new, as James Shannon, President and CEO of the National Fire Protection Association testified in April in a hearing on this subject before the Senate Commerce Committee. The Department of Justice's Bulletproof Vest Partnership Grant Program requires that vests meet minimum safety and performance standards. In addition, the President has advocated for standards under the President's 2002 National Strategy for Homeland Security, the Department of Homeland Security will establish national standards for emergency response training and preparedness, and just recently, the Council on Foreign Relations released a study chaired by former Senator Warren Rudman that recommended Congress should require DHS and HHS to work with other federal agencies, state and local emergency responder agencies and officials, and standard-setting bodies from the emergency responder community to establish clearly defined standards and guidelines for federal, state and local government emergency preparedness and response in such areas as training, interoperable communications systems and response equipment. Mr. Chairman, this bill accommodates

these recommendations, but it also allows for the USFA Administrator to exercise some flexibility in the rare case when a newer technology is introduced that may make an existing voluntary consensus standard irrelevant.

The second objective of the bill is to address mutual aid systems. Mutual aid compacts are widely acknowledged to be an effective and efficient means of sharing emergency management resources among different jurisdictions. Federal support for mutual aid could be better—could better prepare states and localities for all types of disasters, including acts of terrorism. The Firefighting Research and Coordination Act directs the U.S. Fire Administrator, in consultation with the Director of FEMA, to provide technical assistance and training to state and local fire service officials to establish nationwide and state mutual aid systems for responding to national emergencies, and obviously September 11 is an important example of why those systems are important.

And the last objective, the third objective, permits the Superintendent of the National Fire Academy to coordinate with other federal, state and local officials in developing new curricula at the Academy. This legislation enjoys wide support among many of the Nation's fire groups, including the Congressional Fire Service Institute, International Association of Fire Chiefs, International Association of Fire Fighters, National Volunteer Fire Council, the National Fire Protection Association and many other prominent fire organizations, and I appreciate the inclusion of this legislation in the reauthorization, and I thank you, Mr. Chairman, for the opportunity to testify before the Committee.

[The prepared statement of Mr. Camp follows:]

PREPARED STATEMENT OF REPRESENTATIVE DAVE CAMP

Mr. Chairman, I appreciate the opportunity to testify before the Subcommittee. The mission of the United States Fire Administration (USFA) has taken on added importance since the September 11th terrorist attacks. America's fire fighters are taking on heightened responsibilities that go beyond combating fires. As the USFA moves to the Department of Homeland Security, its role in coordinating the America's fire prevention and response activities and leadership in fire education must be strengthened to meet new these challenges. I am hopeful that as the Subcommittee considers re-authorizing the USFA it will also examine the merits of the Firefighting Research and Coordination Act, H.R. 545 and include this important legislation into the reauthorization measure.

Mr. Chairman, in February I introduced the Firefighting Research and Coordination Act. Senator McCain has introduced this bill in the Senate where it enjoys broad support among members of the Commerce, Science, and Transportation Committee. This legislation will help address current policy questions on how the federal government can most effectively provide firefighters with the training and equipment necessary to protect lives. In my view, the Firefighting Research and Coordination Act gives appropriate weight to top fire service needs. More specifically, the bill seeks to:

1. Support the development of voluntary consensus standards for firefighting equipment and technology;
2. Establish nationwide and State mutual aid systems for dealing with national emergencies, and;
3. Authorize the National Fire Academy to train firefighters to respond to acts of terrorism and other national emergencies.

The first objective of the bill focuses on establishing equipment and technology standards. It would allow the U.S. Fire Administrator, in consultation with the National Institute of Standards and Technology, and other standards organizations to develop voluntary consensus standards for evaluating the performance and compatibility of new fire fighting technology. Examples of these new technologies include:

personal protection equipment, devices for advance warning of extreme hazard, equipment for enhanced vision, and robotics and other remote-controlled devices, among others. Equipment purchased under the Assistance to Firefighters grant program must meet or exceed the voluntary consensus standards.

Requirements for equipment to meet voluntary consensus standards are not new. As James Shannon, President and CEO of the National Fire Protection Association testified in an April 30, 2003 hearing on this subject before the Senate Commerce Committee, the Department of Justice's Bulletproof Vest Partnership Grant Program requires that vests meet minimum safety and performance standards. In addition, the President has advocated for standards. Under the President's 2002 *National Strategy for Homeland Security*, the Department of Homeland Security will establish national standards for emergency response training and preparedness. And just recently, the Council on Foreign Relations released a study chaired by former Senator Warren Rudman, that recommended, "Congress should require DHS and HHS to work with other federal agencies, state and local emergency responder agencies and officials, and standard-setting bodies from the emergency responder community to establish clearly defined standards and guidelines for federal, state, and local government emergency preparedness and response in such areas as training, inter-operable communication systems, and response equipment." Mr. Chairman, my bill accommodates these recommendations, but is also allows for the USFA Administrator to exercise some flexibility in the rare case when a newer technology is introduced that may make an existing voluntary consensus standard irrelevant.

The second objective of the bill addresses mutual aid systems. Mutual aid compacts are widely acknowledged to be an effective and efficient means of sharing emergency management resources among different jurisdictions. Federal support for mutual aid could better prepare states and localities for all types of disasters, including acts of terrorism. The Firefighting Research and Coordination Act directs the U.S. Fire Administrator, in consultation with the Director of Federal Emergency Management Agency (FEMA), to provide technical assistance and training to state and local fire service officials to establish nationwide and state mutual aid systems for responding to national emergencies. An important example of why model mutual aid systems are important to establish comes in part, as a response to the September 11th attacks.

The third objective of the Firefighting Research and Coordination Act permits the Superintendent of the National Fire Academy to coordinate with other Federal, State, and local officials in developing new curricula at the Academy. New training courses would focus on: building collapse rescue, the use of technology in response to fires; including terrorist incidents and other national emergencies; and strategies for dealing with terrorist-caused national catastrophes.

This legislation enjoys wide support among many of this nation's fire groups including the Congressional Fire Services Institute, International Association of Fire Chiefs, International Association of Fire Fighters, National Volunteer Fire Council, the National Fire Protection Association, and many other prominent fire organizations.

Thank you again Mr. Chairman for the opportunity to testify before the Subcommittee.

## DISCUSSION

Chairman SMITH. Turned this off, and—oh, there it goes. Dave, anyway, thanks for your leadership in developing this kind of language. I guess my question is, we—in your bill, in the substitute bill, we changed the mandatory, that they have to only use federal grant money for equipment that met the standards to make it more flexible, that in applying for a grant, that—and you have read the language that makes it a little more flexible. Do you support that change?

Mr. CAMP. I do, and just let me say that the standards really only apply to protective clothing, not to all other equipment, and so that—yes, I think what the Committee is doing is certainly supported by me and others and look forward to working with you to move this bill forward. Thank you.

Chairman SMITH. Representative Johnson, do you have questions? Mr. Chairman. Microphone is not working, let me see if this—here we go.

Chairman BOEHLERT. Thank you for your outstanding testimony and leadership. I appreciate it. I would like to say that the Chairman, the Ranking Member and me are three people here, and a lot of people are wondering why the lack of more enthusiasm up here. It is not for lack of enthusiasm. I will tell you, most people look at fire programs and say, we are not going to take leave of our senses and do the wrong thing. They are convinced we are going to do the right thing, so I think this is one of the most important activities going on in any Subcommittee on the Hill today, and yet we have very sparse attendance, and you know, as I do, what the schedule is of all of our colleagues. It is rather mind-boggling on occasion, but the lack of attendance up here on the part of our colleagues does not in any way constitute a lack of interest. They just are confident that in Chairman Smith, the hearing is in good hands, and that Ms. Johnson and I are going to make sure he does the right things, and we want to thank you, Mr. Camp, for your outstanding testimony.

Chairman SMITH. I would just add to that the hearing is being simulcast, so it is available in—to staff and all of the Members of the Science Committee's offices, plus an estimated million people are tuning in waiting for what Administrator Paulison is going to tell us. Dave, thank you.

Mr. CAMP. Thank you, Mr. Chairman.

Chairman SMITH. Thanks again. If the next panel would come to the table.

[PA malfunction]

## Panel 2

Chairman SMITH. We will—our first witness will be David Paulison, who is the U.S. Fire Administrator and Director of the Preparedness Division of the Emergency Preparedness and Response Directorate/FEMA. Prior to his appointment as U.S. Fire Administrator in December of 2001, he was Chief of the Miami-Dade Fire Rescue Department. Administrator Paulison has 30 years of fire and rescue experience and was selected as Florida's Fire Chief of the Year for—in the 1990's, so Mr. Paulison, please proceed with your testimony, and then we will go to Dr. Bement.

### **STATEMENT OF R. DAVID PAULISON, U.S. FIRE ADMINISTRATOR AND DIRECTOR, PREPAREDNESS DIVISION OF THE EMERGENCY PREPAREDNESS & RESPONSE DIRECTORATE/FEMA, DEPARTMENT OF HOMELAND SECURITY**

Mr. PAULISON. Good morning, Mr. Chair and Members of the Subcommittee. I appreciate the opportunity to appear before you today on behalf of Secretary Ridge and Undersecretary Mike Brown.

As you stated earlier, each year, fire injures or kills more Americans than the combined losses of all other natural disasters. Death rates by fire in the United States are among the highest in the industrialized world. The U.S. Fire Administrator's mission is to re-

duce loss of life and property because of fire and related emergencies, and it is a sobering challenge for us, but it is also a hopeful challenge, because in our opinion, most of these deaths are preventable.

To accomplish this mission, we work with the fire service, other emergency responders, state and local governments, to better prepare our firefighters for all hazards, including acts of terrorism. We listen to state and local governments, and work with private industry to provide standardized practical compatible equipment that works in all possible circumstances.

The U.S. Fire Administration recognizes the importance of training as a vital step toward the first responder community that is prepared to respond to any kind of emergency, ranging from a small fire or a terrorist attack involving a large number of victims. Emergency preparedness and response provides training and emergency management to our firefighters, law enforcement officials, emergency managers, health care workers, public works directors and state and local officials at our National Fire Academy at the Emergency Management Institute and most recently, the Noble Training Center in Anniston, Alabama.

This year, you, Congress, appropriated \$750 million to emergency preparedness and response for the Assistance to Firefighters Grant Program, which provides grants directly to fire departments to build our basic response capabilities for fire suppression and fire prevention. This brings our total funding to this grant program to a little over \$1 billion since the program began three years ago, and the fire service is extremely appreciative of your support.

These competitive grants address training, safety, prevention, apparatus, personal protective gear and other firefighting equipment needs, as well as wellness and fitness issues for local fire departments. We have streamlined the online application process for fire grants and sped up the flow of resources to first responders, while ensuring the funds they use effectively and appropriately, and in the last three years, we have received applications from 20,000 departments each year, and every year we have had this application open.

The National Fire Academy and Emergency Management Institute offer a wide variety of training programs to promote the professional development of command level officers, emergency managers, emergency responders and technical staff.

Distance learning strategies and strategic partnerships with state fire training organizations have helped us realize approximately 15 off-campus students for every one of the 16,000 students who get to attend classes at the National Emergency Training Center in Emmitsburg. The National Fire Academy reached almost 8,000 students on campus and an additional 87,000 students off-campus, compared to 1995, when we reached a mere 15,000 students. In 2002, the Emergency Management Institute conducted training activities of almost 9,000 students on campus and 185,000 students off campus through our independent study courses.

We will continue to deliver fire safety messages to those most vulnerable to fire: the very young, those under 14, and elderly, those over 65 and others. And we will also continue to assist communities in establishing our community emergency response teams.

The USFA has a long-standing working relationship with a variety of federal agencies. In addition, there are partners with the national level trade—fire trade associations such as the National Volunteer Fire Council, the International Association of Fire Chiefs, the International Association of Fire Fighters and the National Fire Protection Association. And we also reach out to academic institutions for non-fire service organizations to direct topics of mutual interest that affect our fire service. A current example is our partnership with the American Forest and Paper Association to examine and promote building performance awareness of lightweight construction during fires. By sharing resources and expertise, the partners are able to achieve much more together than we could achieve individually.

I would also like to thank this committee for the opportunity to comment on H.R. 545. Developing new technology for firefighters is a critical need and has been so for a long time, and long before terrorism reached our shores. The development of measurement techniques for evaluating new firefighting technologies, rather than the actual development of technologies, is necessary, and the USFA is currently involved in such activities with a variety of organizations such as NIST, sitting next to me here.

For example, in Fiscal Year 2003, we collaborated with NIST on the following projects: Structural Collapse Prediction Tools, Full Ensemble Test Apparatus, Thermal Protective Properties of Personal Protective Clothing and Personal Alert Safety Systems, or PASS devices.

Reducing the loss of life and property caused by fire remains a significant challenge and firefighters pay a high price. In 2002, 102 firefighters died in the line of duty.

Although the numbers are still way too high, as most deaths can be prevented, great progress is being made as you pointed out, Mr. Chair, to reduce the toll from fires.

Interoperability issues are also one of the most significant things to overcome. It not only includes communication, but equipment, operations, training and other areas, such as communications on scene.

Thank you, Mr. Chair, for giving me this opportunity to appear before you today. Your continued support is greatly appreciated, and I will be happy to answer any questions you or the Subcommittee might have.

Thank you.

[The prepared statement of Mr. Paulison follows:]

PREPARED STATEMENT OF R. DAVID PAULISON

Good Morning, Mr. Chairman and Members of the Committee. My name is R. David Paulison. I am the Director of the Preparedness Division in the Emergency Preparedness and Response (EP&R) Directorate of the Department of Homeland Security (DHS). I appreciate the opportunity to appear before you today on behalf of Secretary Ridge.

Each year, fire injures and kills more Americans than the combined losses of all other natural disasters. Death rates by fire in the United States are among the highest in the industrialized world. The U.S. Fire Administration's mission to reduce loss of life and property because of fire and related emergencies is a sobering challenge, but also a hopeful challenge, since most of these deaths are preventable.

As a part of DHS, the staff works diligently to prevent these deaths, injuries, and the damage to property through leadership, advocacy, coordination and support in

four basic mission areas: fire service training, public education and awareness, technology and research, and data analysis.

To accomplish this mission, we work with the fire service, other emergency responders and State and local governments to better prepare them to respond to all hazards, including acts of terrorism. We are also listening to State and local governments, and working with private industry, to provide standardized, practical, compatible equipment that works in all possible circumstances. We are helping first responders and emergency managers practice and refine their response plans with partners at the local, State and federal level. We will continue to provide training and education, programs to prepare for the routine hazards as well as the emergent threats posed by WMD and terrorist incidents.

Today, I will focus my remarks on the U.S. Fire Administration (USFA), its programs and services, how to improve the preparedness and effectiveness and safety of our first responders, and summarize our current activities and future needs.

#### **Accomplishments**

The U.S. Fire Administration is a national leader in fire safety and prevention and in preparing communities to deal with fires and other hazards. USFA is working to support 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 training as a vital step toward a first responder community that is prepared to respond to any kind of emergency, ranging from a small fire to a terrorist attack involving a large number of victims. We continue to administer training and education programs for community leaders and first responders to help them prepare for and respond to emergencies regardless of cause or magnitude.

EP&R also continues to provide training in emergency management to our firefighters, law enforcement, emergency managers, health care workers, public works, and state and local officials at our Emergency Management Institute. I would like to give you a few more details about these and other USFA activities.

#### **Assistance to Firefighters Grant Program**

This year, Congress appropriated \$750 million to EP&R to for the Assistance to Firefighters Grant program, which provides grant directly to fire departments to build their basic response capabilities for fire suppression. This brings our total funding for this grant program to a little over \$1 billion since the program began three years ago.

These competitive grants address training, safety, prevention, apparatus, personal protective gear and other firefighting equipment needs as well as wellness and fitness issues of local fire departments. We have streamlined the online application process for fire grants and sped up the flow of resources to first responders, while ensuring that the funds are used effectively and appropriately. In 2001 and again in 2002, we received nearly 20,000 applications from fire departments across the country. Beginning with the 2001 grant program, the Emergency Education Network (EENET) broadcast valuable information on the grant programs and process. Prior to the application period in 2003, EENET broadcast an actual applicant workshop, which was rebroadcast six times during the application period. We heard from many organizations that this eased the application process. The 2003 application process closed on April 11 and again we received nearly 20,000 applications. We began announcing the FY 2003 awards to successful applicants in June 2003.

As you are aware, the Administration believes that this program should be integrated into the ongoing efforts to help the fire service prepare for acts of terrorism. To achieve that end in 2004, the Office for Domestic Preparedness in the Border Transportation and Security Directorate of DHS will manage the fire grants program to offer one-stop shopping for grants in the new Department. The transfer would enhance coordination with other DHS grants and prioritization of terrorism-preparedness needs, while retaining the current practices of expert peer review and direct grants to departments. EP&R and the U.S. Fire Administration will work closely with ODP to ensure the success of this program.

#### **Fire Service Training**

The National Fire Academy (NFA) and the Emergency Management Institute (EMI) offer a wide variety of training programs to promote the professional development of command level fire officers, emergency managers, emergency responders and technical staff. Fire departments will continue to receive training to respond to terrorist attacks from DHS in addition to training to respond to other hazards, such as chemical accidents, floods, or hurricanes. We will continue to develop policy, pro-

cedures and training for a cadre of structural firefighters that will be identified by states in wildland fire threat zones.

One training program under development is to prepare regional Incident Management Teams (IMT) to provide support for major incidents prior to, or in lieu of, the arrival of a federal IMT. Simultaneously, we are developing the training for the Federal Incident Management Teams Program.

Emergency responders, firefighters, emergency managers and others who have taken courses at EMI and NFA have told us these courses have added value to job performance and professional development. In fact, surveys conducted in FY 2000 and 2001 revealed that our student's supervisors have reported an 88 percent improvement in the student's job performance following training. Ninety-three percent report that EMI and NFA training have contributed to the student's professional development and almost 87 percent report that the training has improved the department's performance.

State and local support of fire service training must be increased and the federal role is to foster that participation. In the future USFA will:

- 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 the National Incident Simulation and Training network; independent study programs and computer-based courses;
- Increase the number of Integrated Emergency Management Courses with bio-terrorism scenarios aimed at bringing officials of local jurisdictions together to simulate and critique their responses to terrorism-driven events;
- Revise training courses to include the most updated information on risk management, public fire safety education and emergency response;
- Partner with associate and bachelor degree programs to align the national academic fire curricula; and
- Include multiple delivery formats in future course development so that the nexus of the course may be provided to the field in a variety of adaptable formats.

During 2002 and early 2003, the USFA held summit meetings in the EP&R regions looking for information that defined the needs of the first responder community in the new environment that includes WMD and terrorism preparation and response. Our staff also met with focus groups, course developers, and students at the National Emergency Training Center for the same purpose. Each group identified the skill sets necessary to conduct or support a WMD or terrorism catastrophe. Over 95 percent of those skills are already being taught in the existing curriculum and courses. The message conveyed by these organizations is very clear. We need to:

- *Continue teaching the curriculum we have on hand;*
- *Update our course materials regularly to reflect emerging issues;*
- *Continue to maximize learning opportunities for all first responders.*

During the past year, the importance of working directly with the emergency management, fire service and EMS communities has become even more apparent. It is critical that we keep the most likely first responders to any terrorism or WMD event fully advised of information and circumstances that might affect their response and their community's preparation. Partnering with the law enforcement community has enhanced our ability to deliver direct warnings that will result in improved operations and better outcomes.

Distance learning strategies and strategic partnerships with state fire service training organizations have helped us realize approximately 15 additional off-campus students for every one of the 16,000 students who get to attend classes on campus at the National Emergency Training Center, which is comprised of the National Fire Academy and the Emergency Management Institute. In FY 2002, the National Fire Academy reached a total of 7,860 students on campus and an additional 87,265 students off campus, compared to FY 1995 when that number was 15,000 students. In 2002, EMI conducted training activities for 8,968 students on campus and an additional 185,000 off campus through EMI independent study courses.

The USFA's National Fire Academy work also underpins the training provided by 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 five years, we have partnered with colleges and universities across the country to ensure that important fire safety concepts are delivered to the Nation's fire service. Our training programs continue to focus on those classes that

align with the USFA Operational Objectives. We develop and deliver the type of training that cannot be obtained through other institutions. A curriculum review for the National Fire Academy curriculum is scheduled for FY 2004 and we expect to see those results by 2005.

USFA continues a commitment to excellence in delivering fire related public education, training, research and technology, and data initiatives.

#### **Public Education and Awareness**

USFA continues to deliver fire safety messages to those most vulnerable to fire—the very young, the elderly and others. We will continue to manage Emergency Response Team activities with an eye toward public outreach and community hazards assessment and mitigation efforts. USFA will assist communities in establishing Community Emergency Response Teams.

We will continue to broadcast training information via the Emergency Education Network (EENET) twice a month to enhance State and local preparedness for all hazards, including terrorist incidents. Since 1981, EENET has broadcast more than 400 programs to meet the needs of all levels of emergency management, from volunteer fire fighters to State Emergency Management Directors.

EENET is an effective way to get timely information or training out to a large audience. Coupled with other outreach and training programs, EENET is a good way to share information about training and education and to keep first responders, abreast of emerging issues.

#### **Data Collection**

The Fire Administration continues to collect, analyze, publish and distribute data and information related to fire prevention, occurrence, control, and related fields; defines and describes the national fire problem; and supports State and local collection and analysis of fire incident data.

This past fall, in cooperation with the National Fire Protection Association, the USFA completed a needs assessment of the U.S. fire service to gain a current understanding of problem areas and to guide future planning and initiatives. Combined with the ongoing national fire department census, we continue to develop an increasingly complete and accurate picture of the Nation's fire departments' capability to meet the challenge of expanding roles and responsibilities in response to all hazards, including acts of terrorism.

#### **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 is almost without exception accomplished through partnerships.

USFA has long standing working relationships with a variety of federal agencies including the Consumer Product Safety Commission, Department of Transportation, National Institute for Occupational Safety and Health, Department of Housing and Urban Development, 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, and the National Fire Protection Association. The USFA also reaches out to academic institutions and non-fire service organizations to address topics of mutual interest. A current example is a partnership with the American Forest and Paper Association to examine and promote building performance awareness of lightweight construction during fires. 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 effort, have influenced the decisions of consensus standards-making committees on a variety of issues such as firefighting protective clothing, chemical protective clothing, protective clothing for urban search and rescue, self-contained breathing apparatus, and residential sprinkler systems.

Details of USFA's research program are being shared with the DHS Office of Science and Technology (S&T) 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 leverages research partnerships and technology developments to improve fire prevention and promote public safety. In April, the USFA met with the fire sprinkler community to reenergize our advocacy for residential fire sprinklers. I am happy to report that industry agreed to work with USFA on this project. The data suggests that localized fire suppression systems in kitchens would dramatically re-

duce the number of civilian fire deaths in this country by as much as 25 percent. The cost to retrofit a kitchen is minimal. This is an excellent opportunity to reduce residential fire losses in the U.S. Since 40 percent of firefighter deaths in the line of duty occur at or en route, to residential structures, the long-term, benefit is that firefighter injuries and deaths will also be reduced.

I also would like to thank the Committee for the opportunity to comment on H.R. 545. Developing new technology for firefighters is a critical need and has been so long before terrorism reached our shores. The development of measurement techniques for evaluating new firefighting technologies rather than the actual development of technologies is necessary and USFA is currently involved in such activities with a variety of organizations, including NIST.

For example, in FY03 USFA collaborated with NIST on the following related projects: Structural Collapse Prediction Tools, Full Ensemble Test Apparatus, Thermal Protective Properties of Personal Protective Clothing, Personal Alert Safety Systems (PASS). These activities appear to fit the bill as drafted.

It would be helpful to have the legislation identify priorities for the limited funds. We hope that it is not the intent of the legislation to limit this work to NIST. We have a very productive working relationship with NIST, but they are not the only partners we have for this type of activity. We do not believe it is in the best interest of the fire community to limit participation, and thus, inhibit creativity, efficiency and effectiveness.

A few examples of organizations other than NIST that have collaborated with USFA on evaluating technology and providing documentation for consideration by standards-making bodies include: Hughes Associates and Factory Mutual—water mist technology for residential applications, TRI Research, Austin, TX—standards for chemical protective clothing; and Lawrence Livermore Labs—testing of SCBA for standards development. We believe that the maintenance of partnerships with a wide range of organizations is in the best interest of technology development.

We believe the best course would be to identify, document, and, to the extent possible, assess the applicability of already existing technologies and testing methodologies.

### **Challenges**

Reducing the loss of life and property caused by fire remains a significant challenge. Each year, fire kills more than 4,000 people and injures more than 22,000. Annual property losses due to fire are estimated at nearly \$10 billion. And, firefighters pay a high price. In 2002, 102 firefighters died while on duty.

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 (P.L. 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 16 percent. During this same period, a 22 percent decline in civilian deaths and a 31 percent drop in civilian injuries were also reported.

USFA continues to deliver the strongest system of training with available funding. USFA training is designed to supplement the currently existing state and local accredited and staffed systems. These existing State and local systems have the expertise and an underutilized capacity that could be tapped to meet growing training needs.

Since the events of 9/11, and the increased threat to our homeland from terrorists organizations that have access to some of the most deadly forms of chemical and biological agents in human history, as well as radiological devices of various types and descriptions, the ability of the U.S. Fire Service to successfully deal with such potential incidents remains a priority of the Department. Providing the U.S. Fire Service with training, equipment, planning and exercise support would greatly benefit the public by providing levels of everyday fire protection and EMS delivery unsurpassed anywhere in the world while at the same time dramatically improving first responder capabilities to deal with terrorist attacks in the homeland.

This has been supported in two aspects by the Federal Government. Funds provided by Congress for the Assistance to Firefighters Grants Program have addressed basic fire suppression needs, while State Homeland Security Grants provided by the Office for Domestic Preparedness have supported terrorism-specific training and equipment purchases.

Fire and emergency responders to the three 9-11 incidents, when the motive is removed, confronted aircraft crashes. It was the sheer size and scope of these incidents that made them horrendous. While in many instances the normal equipment carried by fire-rescue departments may be sufficient to resolve a terrorist incident, the Federal Government has a unique responsibility to ensure that terrorism-spe-

cialized equipment is available to departments, especially those at greatest risk of terrorism. The Department of Homeland Security is committed to addressing those needs.

Interoperability issues are also one of the most significant matters to be overcome. This not only includes communications, but equipment, operations, training, and other areas.

The current lack of national consensus standards for response to terrorist incidents is a critical challenge that DHS faces and we are working diligently to address them. Without these consensus standards, there can be no measurement or analysis of response to terrorist incidents in any quantifiable manner. These standards should be developed through a forum that supports a consensus-making standards process.

### **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 R. DAVID PAULISON**

R. David Paulison of Miami was appointed U.S. Fire Administrator in December 2001. As U.S. Fire Administrator, Mr. Paulison heads the U.S. Fire Administration, part of the Federal Emergency Management Agency (FEMA), and supports state and local fire service programs as well as implementing FEMA Director Joe M. Allbaugh's initiatives for emergency readiness, firefighter training and equipment. The mission of the U.S. Fire Administration is to reduce life and economic losses due to fire and related emergencies through public education, training, technology and data research initiatives in coordination with other federal agencies and in partnership with fire protection and emergency service communities.

Before accepting this post, Paulison, who has 30 years of fire rescue services experience, had been chief of the Miami-Dade Fire Rescue Department since 1992. In that position, he oversaw 1,900 personnel with a \$200 million operating budget and a \$70 million capital budget. He also oversaw the county's emergency management office.

He began his career as a rescue firefighter and rose through the ranks to rescue lieutenant, battalion commander, district chief of operations, division chief, assistant chief and then deputy director for administration before becoming chief. His emergency management experience includes Hurricane Andrew and the crash of ValuJet Flight 592.

A native of Miami, Fla., Paulison earned a Bachelor of Arts from Florida Atlantic University 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 LeRoy Collins Distinguished Alumni Award and was inducted into the Miami-Dade Community College Hall of Fame. Paulison was selected as fire chief of the year by Florida in 1993 and holds positions in several professional associations. He is a certified paramedic and as fire chief, oversaw the Miami-Dade Urban Search and Rescue Task Force. He is also past president of the International Association of Fire Chiefs.

Chairman SMITH. Administrator, thank you. Director Bement is, of course, the Director of the National Institute of Standards, a position he has held since December of 2001. Before receiving this appointment, Dr. Bement served as the David A. Ross Distinguished Professor of Nuclear Engineering and head of the School of the Nuclear Engineering at Purdue University. From 1989 to '95, Dr. Bement was a member of the U.S. National Science Board, the governing board of the National Science Foundation. He is also a member of the U.S. National Academy of Engineering.

Welcome, Director Bement. We look forward to your testimony.

### **STATEMENT OF DR. ARDEN L. BEMENT, DIRECTOR, NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY**

Dr. BEMENT. We at NIST applaud the Committee for holding this hearing to discuss the needs of the fire services and to examine

H.R. 545. This very important legislation is aimed at getting better equipment into the hands of firefighters. To support this goal, there is an urgent need for performance-based consensus standards that will lead to better performing, safer, reliable and cost-effective equipment for firefighters.

NIST's mission is to support this effort through our expertise in measurement science and technology. NFPA [National Fire Protection Association] has committees that develop voluntary consensus standards. Many NIST staff members serve on these committees. Technical reports from NIST provide NFPA committees and NIOSH [National Institute for Occupational Safety and Health] with data and procedures to help advance national standards, based on these performance requirements.

The Department of Homeland Security's FEMA provides grants to fire departments allowing firefighters to better equip and prepare for fires and other emergencies. However, many new technologies are not yet supported by consensus standards. In the absence of such standards, individual fire departments must either assess the performance of these new technologies or rely solely on manufacturers' information and demonstration. Equipment interoperability also suffers from lack of consensus standards. To help address these issues, NIST, the Department of Justice and Department of Homeland Security are working together to evaluate equipment for use by the Nation's first responder and emergency management communities.

Less than a month ago, NIST, in partnership with DHS and Justice hosted a summit on interoperable communications for public safety. Three significant accomplishments were achieved during the summit. First, key interoperable—interoperability players were familiarized with the work being done by others. Second, insight was gained into where additional federal resources might be warranted. Finally, the summit was the first step in leveraging available resources to develop standards, approaches, products and services for the benefit of all.

NIST's current fire research activities comprise \$8.4 million in direct appropriations and an additional \$2 million being funded by the Fire Administration. Time only permits a brief summary of a few of the 20 or more projects that we are currently undertaking with this funding level.

In partnership with the Fire Administration, NIST is performing research on passive and active fire protection technologies that will assure that residential fires do not spread beyond the room where the fire starts. Fires that involve more than one room greatly increase fire deaths, injuries and property damage. NIST is determining how inexpensive clay nanoparticles added to ordinary plastics will dramatically reduce flammability while increasing the properties important to manufacturing.

Experiments at NIST have demonstrated a single sprinkler—sprinklers can provide active fire control for kitchens, where many home fires start. Results of this research are being shared with NFPA and others.

Portable thermal imagers are used by firefighters to enhance vision, to identify hot spots in cool surroundings, such as hidden fires, and to identify cool objects like victims of fire or downed fire-

fighters. NIST is developing an apparatus to measure how well such thermal imaging hardware is able to add to vision.

The fire alarm panel in buildings often found in the lobby near the main entrance is the heart of the building's fire information system. Until recently, even the best displays offered only rows of lights that indicated building zones where fire was detected. In many cases, it was easier to look for the fire than to decipher the panel display. The development of more powerful and affordable computer and graphic displays has provided an opportunity to expand the amount of information available at the panel. NIST created a standard set of graphic icons so the firefighters have only to learn the meaning of one set of symbols, and last fall, NFPA adopted a set of standard icons for fire alarm system displays. NIST is now turning its attention to the standards that will be needed to advance the wireless transmission of information from building emergency systems to responding firefighters even before they arrive at the building.

In conclusion, NIST welcomes its role as envisaged under H.R. 545 to work with the Administrator in the development of new technologies for firefighters, and to assist the Administrator in assuring that new equipment meets or exceeds voluntary consensus standards.

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

[The prepared statement of Dr. Bement follows:]

PREPARED STATEMENT OF ARDEN L. BEMENT, JR.

Good morning, Mr. Chairman and Members of the Committee. My name is Arden Bement. I am the Director of the National Institute of Standards and Technology (NIST). I appreciate the opportunity to appear before you today. NIST conducts research that advances the Nation's measurement and standards infrastructure and works closely with national voluntary consensus standards organizations to support the development of consensus standards. These standards are needed by U.S. industry for continually improving products and services. In relation to fire research, NIST was given specific authority under the Fire Prevention and Control Act of 1974 to "perform and support research on all aspects of fire with the aim of providing scientific and technical knowledge applicable to the prevention and control of fires."

Equipment for first responders is very specialized. It also constitutes a small market that is generally served by small manufacturers. Producing new equipment for the market in the absence of generally-accepted standards is a high-risk venture. In addition, standards that reflect in use conditions for determining the performance of firefighter equipment would assist industry in providing equipment that meets or exceeds firefighter needs.

The U.S. fire service looks to the National Fire Protection Association (NFPA) and the National Institute for Occupational Safety and Health (NIOSH) as its primary sources of equipment performance standards and safety information. NFPA has established committees that consider the need for equipment performance standards and develop consensus standards where views of industry, the fire service, government and commercial laboratories, and other interested parties are represented. Many of the staff in the NIST Building and Fire Research Laboratory and the Office of Law Enforcement Standards at NIST are members of NFPA and serve on their standards developing committees. NIST provides technical assistance to NIOSH in firefighter fatality investigations and thermal sensor evaluation. Technical reports from NIST on measurement techniques, methodologies, and results, provide NFPA committees and NIOSH with data and procedures to help advance national standards. NIST developed measurement methods are also adopted by the American Society for Testing and Materials (ASTM) and the International Organization for Standardization (ISO).

In FY 2001, FEMA established the Assistance to Firefighter's Grant Program following passage of the Firefighter Investment and Response (FIRE) ACT that pro-

vides fire departments funding through grants for needed equipment. These funds are now allowing firefighters to be better equipped and prepared for fires and other emergencies. However, many new technologies are not yet supported by the existence of consensus standards. Individual fire departments are forced to assess the performance of these new technologies or rely solely on manufacturers' information and demonstrations. Inter-operability of equipment also suffers from lack of consensus standards.

To help address this issue, a Memorandum of Understanding (MOU) between NIST and FEMA was signed in March 2002 and establishes a framework for NIST to serve as a standards and measurement science resource for the Department of Homeland Security's FEMA in the areas of fire, disaster prevention, and homeland security. One of the purposes called out in the agreement is to aid the development of standards and methods to evaluate equipment for use by the Nation's first responder and emergency management communities. The MOU also reaffirms NIST's role as a critical element of our national fire strategy. Additionally, NIST will continue to work with other agencies and directorates of the Department of Homeland Security. In particular, the Under Secretary of Technology recently signed a Memorandum of Understanding between the Technology Administration and the Directorate of Science and Technology at the Department of Homeland Security to formalize this relationship.

NIST is proud of its role as FEMA's science and technology resource and in helping the Fire Administration to improve the effectiveness and safety of firefighting. NIST's current research activities in this area comprises \$8.4 million in direct appropriations with an additional \$2 million being funded by the Fire Administration. Below is a brief description of our current and recent activities.

Portable thermal imagers are used by firefighters to enhance vision. They are used to identify hot spots in cool surroundings such as hidden fires in void space or over-heated fluorescent light ballasts. They are also used to identify cool objects, like victims of fire incapacitated by smoke or downed firefighters in hot surroundings during building search and rescue. Unfortunately, the performance of the sensors implemented in various products has not been measured under controlled conditions. Furthermore, the minimum level of important performance attributes, such as image contrast, have not been determined.

NIST, with added funding from USFA, is developing an apparatus to measure how well thermal imaging hardware is able to aid vision and hazard sensing under a variety of realistic conditions. These laboratory measurements will be compared to measurements made in actual building fires and in large-scale fire experiments at NIST. The results will be used to assure that laboratory measurements are reliable indicators of real-world performance. Standards built on this foundation will provide for accurate measurement of the important performance attributes of firefighter equipment essential for quality, reliability, safe, and effective use.

Another example of our work deals with firefighter protective clothing. The NFPA Standard on Protective Ensemble for Structural Fire Fighting (NFPA 1971) specifies the minimum design, performance, certification requirements, and test methods for structural firefighter protective ensembles. The test method for measurement of thermal protective performance for firefighter protective garment and the minimum rating required for safety is part of this NFPA standard. The Thermal Protective Performance (TPP) rating is determined by exposing dry materials to a single high intensity exposure condition that is often related to an extreme fire condition called flashover. This standard has contributed substantially to improved safety for firefighters, but firefighters tell us they are being burned through their gear under lower intensity exposures.

During firefighting, a firefighter's protective clothing is wet from the outside by water spray and the inside by perspiration produced from strenuous activity. NIST, assisted by funding from USFA, is performing measurements under a range of thermal exposures and moisture conditions and has found that wet gear performs differently than dry gear with respect to burn injury protection. Manufacturers have come to NIST to utilize the NIST apparatus to understand more about the behavior of their products under conditions different from those assumed in the present standard. This data generated by manufacturers working at NIST will be used to improve protective clothing products. In addition, the testing approach used at NIST will be offered for consideration for adoption as part of the current standard. The apparatus is also being used in exploratory NIST research to evaluate the thermal protective attributes of new materials such as carbon nano-tube composite fabrics. These measurements can help in the development of future protective clothing that has even better resistance to burn injury with reduced weight.

NIST works hard to anticipate needs so that information is ready when needed by industry to advance their products and provide for inter-operability. Four years

ago, NIST formed a consortium with several fire alarm hardware manufacturers. The fire alarm panel in buildings, often found in the lobby near the main entrance, is the heart of the building's fire information system. Condition measurements and alarms from fire detectors placed throughout a building are sent to this display. Until recently, even the best displays offered only rows of lights that indicated the zones in the building where fire was detected. Often a key or map was needed to interpret the lights. In many cases, it was easier to look for the fire than to use the information from the panel display.

The development of more powerful and affordable computer and graphic displays has provided manufacturers with the opportunity to expand the display capabilities and the amount of information available at the panel using graphic icons. NIST created a standard set of icons for these panels and other fire command devices. In this way, firefighters would only have to learn the meaning of one set of symbols if they were applied on all fire service graphic displays. Last fall, working from documents submitted by NIST, the NFPA Technical Committee on Testing and Maintenance of Fire Alarm Systems adopted a set of standard icons for fire alarm system displays and published these in the 2002 Edition of National Fire Alarm Code (NFPA 1972). NIST is now turning its attention to the standards that will be needed to advance the wireless transmission and display of information contained in the building emergency systems to responding firefighters even before they arrive at a building.

Interagency research managed by NIST is also helping to protect firefighters responding to terrorism incidents. Threat analyses and simulations have been conducted to examine chemical warfare agent hazard concentrations in a variety of domestic terrorist attack scenarios, both for respiratory and percutaneous (skin) threats. Results are being supplied to the NFPA committee revising the Standard on Protective Ensembles for Chemical/Biological Terrorism Incidents (NFPA 1994).

Additionally, NIST and the Department of Homeland Security have begun to coordinate efforts aimed at improving the communication capabilities of first responders. Even though there are many exceptional inter-operability program efforts underway, they are being conducted (more or less) independently. They were established with a particular mission, to meet certain objectives, and to satisfy a set of user requirements. And they continue to operate in that vein. While these programs are accomplishing good things within the confines of their operating environment, they may not ever be able to realize the broader impact that comes with greater exposure and cooperation. That is why less than a month ago NIST's Office of Law Enforcement Standards, in partnership with DHS' Science and Technology Directorate and the National Institute of Justice, hosted a Summit on Inter-operable Communications for Public Safety. Three significant accomplishments were achieved during the Summit. First, key inter-operability players were familiarized with the work being done by others so that mutually-beneficial coordination and collaboration among the various technical programs can be established. Second, insight was gained into where additional federal resources might be warranted. Finally, the Summit was the first step in maximizing the limited resources that are available across all government levels so that we can begin to leverage program successes and use developed standards, approaches, products, and services for the benefit of all.

While these activities are significant additional activities need to be undertaken in order to develop consensus standards for new firefighting technologies as described in H.R. 545.

First, priorities must be established for the development of the standards. In cooperation with the USFA, NIST has hosted workshops with representatives of the fire service, industry, and other laboratories to establish priorities for fire service research. Published results of these workshops have helped set the current research agenda for both NIST and USFA. Similar workshops should be held to establish priority and a timeline for the development of measurement techniques, testing methodologies, and consensus standards.

Second, measurement techniques and testing methodologies need to be developed for evaluating the performance of firefighter equipment using new technologies. NIST is the Nation's primary measurement laboratory. Our mission is to develop measurements and standards to enhance productivity, facilitate trade, and improve the quality of life. NIST has specialized laboratory facilities and staff expertise ideally suited for the development of these techniques and methodologies for many of the new firefighting technologies.

Third, a network of private sector laboratories and facilities are needed where the measurement techniques and the methodologies can be used in a reproducible way, a necessary condition for the success of any standard. NIST will work with other organizations to assure that the measurement results are reproducible.

Finally, NIST will work closely with national voluntary consensus standards organizations to support the development of the consensus standards. An unbiased source of technical information and data, such as that supplied by NIST, is critical to the success of this effort.

I am delighted that there is recognition by this Subcommittee of the importance of standards development for firefighting equipment. NIST is the Nation's primary measurement laboratory and has always played a critical role in the development of effective consensus standards. This role was first demonstrated with our study of "the problem of fire hose couplings" during the Baltimore Fire of 1904 and it continues today as we support the improved safety and effectiveness of firefighting in America.

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

#### BIOGRAPHY FOR ARDEN L. BEMENT, JR.

Arden L. Bement, Jr., was sworn in as the 12th director of NIST on December 7, 2001. Bement oversees an agency with an annual budget of about \$812 million and an onsite research and administrative staff of about 3,000, complemented by a NIST-sponsored network of 2,000 locally managed manufacturing and business specialists serving smaller manufacturers across the United States. Prior to his appointment as NIST director, Bement served as the David A. Ross Distinguished Professor of Nuclear Engineering and head of the School of Nuclear Engineering at Purdue University. He has held appointments at Purdue University in the schools of Nuclear Engineering, Materials Engineering, and Electrical and Computer Engineering, as well as a courtesy appointment in the Krannert School of Management. He was director of the Midwest Superconductivity Consortium and the Consortium for the Intelligent Management of the Electrical Power Grid.

Bement came to his position as NIST Director well versed in the workings of the agency, having previously served as head of the Visiting Committee on Advanced Technology, the agency's primary private-sector policy adviser; as head of the advisory committee for NIST's Advanced Technology Program; and on the Board of Overseers for the Malcolm Baldrige National Quality Award.

Bement joined the Purdue faculty in 1992 after a 39-year career in industry, government, and academia. These positions included: Vice President of Technical Resources and of Science and Technology for TRW Inc. (1980–1992); Deputy Under Secretary of Defense for Research and Engineering (1979–1980); Director, Office of Materials Science, DARPA (1976–1979); Professor of Nuclear Materials, MIT (1970–1976); Manager, Fuels and Materials Department and the Metallurgy Research Department, Battelle Northwest Laboratories (1965–1970); and Senior Research Associate, General Electric Co. (1954–1965).

Along with his NIST advisory roles, Bement served as a member of the U.S. National Science Board, the governing board for the National Science Foundation, from 1989 to 1995. He also chaired the Commission for Engineering and Technical Studies and the National Materials Advisory Board of the National Research Council; was a member of the Space Station Utilization Advisory Subcommittee and the Commercialization and Technology Advisory Committee for NASA; and consulted for the Department of Energy's Argonne National Laboratory and Idaho Nuclear Energy and Environmental Laboratory.

He has been a director of Keithley Instruments Inc. and the Lord Corp. and was a member of the Science and Technology Advisory Committee for the Howmet Corp. (a division of ALCOA).

Bement holds an Engineer of Metallurgy degree from the Colorado School of Mines, a Master's degree in Metallurgical Engineering from the University of Idaho, a doctorate degree in Metallurgical Engineering from the University of Michigan, and a honorary doctorate degree in Engineering from Cleveland State University. He is a member of the U.S. National Academy of Engineering.

#### DISCUSSION

Chairman SMITH. Director, thank you very much. Administrator Paulison, it seems like the environment is—gives us a lot of potential to expand in the areas that we need to expand for greater fire safety, for greater assistance in helping our firefighters. After 9/11, I think there is a greater appreciation for the contribution that our first responders make to their communities, their states and their

countries. In terms of—for lack of a better way, holding your own for firefighters, as FEMA and you are incorporated into Homeland Security, do you see dangers in performing the traditional role that the U.S. Fire Administration has had with sometimes a greater concentration and push toward protecting against terrorism? How do you see the compatibility of the two goals?

Mr. PAULISON. I think it is a concern that all of us had going into the Department of Homeland Security. You know, we know we have to pick up the terrorism piece. It is extremely important for this country to be prepared for this, but at the same time, we wanted to make sure we didn't forget what our core mission was.

I think having an Office of Disaster Preparedness outside of EP&R in B&TS [Border and Transportation Security] right now helps us focus on our core mission. We continue to focus on firefighter safety. We have concentrated very clearly that our mission is to provide protection to the people that live and travel in this country and predominantly, those that are under 14 and over 65, and we are continuing to focus on that. We are going to continue to focus on firefighter safety. We still lose 100—over 100 firefighters every year in this country. Totally unacceptable. So as we moved into this Department, a huge Department, you know, some 200,000 employees or more, we have been able to keep that focus, and we have got a tremendous amount of support from Secretary Ridge for all hazards approach to—from the Fire Administration.

Chairman SMITH. Let me just mention for the record that the Committee staff and the Committee were disappointed that we didn't get your—the Administration's—your estimates of what is needed in terms of authorized funding until the night before last. I would just hope that somehow, our communication could be such that we could have more advance notice of that kind of information, and also, there is still a question in my mind on the Noble Training Center. Is it the Administration's recommendation that the Noble Training Center funding be transferred to the USFA?

Mr. PAULISON. Yes, sir. We are going to—the Noble Training Center will come under the Preparedness Division in EP&R, which I oversee, and that will be part of our three legs that we are developing. We are trying to develop a university type system, so we will have the Emergency Management Institute for the emergency management, we will have the Fire Academy for the fire training side and then we will have the Noble Training Center for the medical side, as far as training our EMS people in our health positions out there in dealing with biological disasters and chemical disasters.

Chairman SMITH. Let me—in March, you announced that you would—because of budget constraints, there would be a cut in some of the classes. With this kind of funding that is being recommended by the Administration, can you give us assurance that classes won't be cut in '04?

Mr. PAULISON. The '04 budget as it is proposed, it gives full funding for the Fire Academy and all of the classes that we had scheduled will be delivered.

Chairman SMITH. Dr. Bement, the problem of communications has been identified as a major challenge to the ability of fire departments to effectively communicate and respond to emergencies.

Is this problem being addressed, at least in part, through the development of standards?

Dr. BEMENT. Yes, sir, it is. We are working closely with NTIA [National Telecommunications and Information Administration] and Commerce in terms of examining spectrum allocation, but also, in looking at the future of wireless and broadband communication. We are also looking at new technologies through spectrum switching and through software-defined radio and other new developments that will allow a higher level of interoperability among different wavelengths of communication equipment, not only handheld but also land mobile radio systems.

I had my eyes open when I attended the conference just—the summit just a few days ago on communication interoperability. The great complexity that currently exists in this area, because over the years, we have developed so many different approaches to emergency response and communication, but I am very much encouraged that with the effort that we are taking now and the level of cooperation that is now recognized that is going to be needed, that we are going to make good progress but it is going to take time. It will probably take another five or 10 years before we have the system fully interoperable.

Chairman SMITH. My time has expired. Maybe we will have time for a second round. Representative Cardoza.

Mr. CARDOZA. Thank you, Mr. Chairman. Mr. Paulison, Mr. Bement. Do you believe that firefighting and fire protection equipment obtained under the FIRE Grants program should conform to consensus standards where such standards exist, and should this be an explicit requirement of the program?

Mr. PAULISON. The consensus standards apply mostly to protective gear, so the general answer is yes. However, what we don't want to do is to cut off any new technologies out there, so if, you know, if we give preference to fire departments that have included that in their application, that the particular equipment they are buying does not meet particular consensus standards, such as NFPA or OSHA [Occupational Safety and Health Administration] or other ones, and then they get preference in that, but at the same time, you know, we need to give a little bit of leeway, if there are new technologies out there. Like Mr. Chairman here mentioned, that we need to look at those very closely.

Mr. CARDOZA. Mr. Paulison, the blue ribbon panel that reviewed USFA in 1998 recommended a \$10 million per year increase in research activities. What is the current funding level for research activities? Do you believe that these resources are adequate?

Mr. PAULISON. Well, right now, we give \$2 million to NIST to do the research we talked about earlier, and we also work with other agencies that we don't necessarily fund, but we partner with, such as the Maryland Fire Rescue Institute at the University of Maryland.

Mr. CARDOZA. My alma mater, sir, that is a good school.

Mr. PAULISON. Is it really?

Mr. CARDOZA. Yes.

Mr. PAULISON. By the way, they are doing an excellent job in doing research into some of these technologies that we are talking about. And there are also private agencies that are doing some—

Motorola is working very significantly now since September 11 of 2001 on interoperability issues. Other companies are stepping up to the plate to recognize that. So it allows to—although the dollars are not necessarily what was recommended by the blue ribbon panel, we are able to leverage those relationships to make sure the research is being done, and we are getting—we are making a significant headway into getting some of these equipments out on the street.

Mr. CARDOZA. Thank you.

Chairman SMITH. This is one of the most high tech advanced offices we were to—or hearing rooms, we were told.

Mr. PAULISON. Maybe we need some technological research and standards.

Chairman SMITH. I guess.

Mr. PAULISON. Standards.

Chairman SMITH. I guess they resolved the communications issue.

Mr. GINGREY. You have got to have this on the Science Committee, of course. Thank you, Mr. Chairman. Is that not working? Musical chairs, here. Thank you, Mr. Chairman, and thank you, Mr. Paulison and Dr. Bement for being here this morning and giving your testimony. Administrator Paulison, according to the USFA's strategic plan, the 10 year goal is to reduce America's loss of life by fire to 30 percent with the 1998 national fire data statistics used as the baseline. It is through, of course, targeting of high-risk groups such as children, the elderly and firefighters. At the halfway point in working toward the 10 year goal, do you believe the United States Fire Administration and the country is on a glide path to achieve the goal, and if not, what else must happen to realize this reduction in loss of life?

Mr. PAULISON. The reduction in loss of life for our citizens, our residents and our firefighters is not where I want it to be. We are still losing 4,000 people a year to fires, and like the Chairman pointed out, 80 percent of those are in their homes, and we are still losing over 100 firefighters a year, so there are things we have to do. One of the things we are doing is we are going to start putting a big, major focus on the residential sprinkling. We have met with the sprinkler industry. They have been opposed to what we call localized sprinkler systems, where instead of sprinkling the whole house, we are recommending we target those areas that we know we have the fires in: our kitchens, utility rooms, garages, those areas where our fires are most prevalent. And in work with builders and developers to start sprinkling some of these—onto those—in those areas. It is the minimal cost, and we think it will greatly reduce the loss of life.

Smoke alarms that we put in some 15 years ago have been the—in my opinion, the big difference between the 8,000 or 9,000 people we lost back in the '60's and '70's to down to 4,000, but now, we have come to a plateau and we need to move on with that, and I think sprinklers are the next move.

Public education plays heavily into that, and also with firefighters. Most of our firefighter deaths are heart attacks and vehicle accidents, two of the most preventable things that we have. So we are focusing on driver training and also, we are focusing on

wellness and fitness in the fire station itself and with the firefighters. So we think we are—we have got the answers to move to the next level to see a decline in these deaths.

Mr. GINGREY. Well, it would seem to me, of course, that you are already doing a lot in regard to physical fitness, and when I look at—you can almost spot a firefighter out of uniform in an instant. They look like—look pretty good. Pretty good physical specimens, so they are obviously working out and spending some valuable time doing that, and I think that is good. You mentioned, of course, putting in alarm systems and maybe over a few years, bringing the loss down from 9,000 to 4,000, and I am pleasantly surprised at that. I would think, though, that getting builders to do that would be a lot easier and a lot cheaper than getting them to agree to put in sprinkler systems even in targeted areas. Although I certainly—you know, it makes sense to me thinking about that that that would certainly save lives, but you indicated maybe that the costs wouldn't be that significant, but it seemed like to me would be a much more substantial cost than just putting in an alarm system.

Mr. PAULISON. Well, it is more expensive than just putting—we need the alarm system also. The smoke alarms are what alerts our people that there is a fire in the house, but at the same time, there needs to be something in the home to contain that fire until they can get safely out of the building. The focus of residential sprinklers is not necessarily to put the fire out, but to contain the fire. That is different than our commercial occupancies. Our commercial occupancies, a sprinkler system is designed to put the fire out, because they may be closed, you know, overnight, but our goal with residential sprinklers is to get people out of the home. You mentioned—I just recently built a home, and tried to get the builder to put sprinklers in there. Even though I was willing to pay for it, the builder refused to do that, because it—their—his impression was it would slow down the closing on the house, which slows down their draws from the bank, so we have to overcome that, and we are going to be meeting with builders. We have already met with the sprinkler industry on several occasions. They have agreed to get on board with us to promote these residential sprinklers, and even retrofit existing homes with the localized sprinkler system.

Mr. GINGREY. Mr. Chairman, I had a second question. Do I need to wait for the second round, or do we have—it is widely agreed that in addition to saving lives, lower property losses are a significant secondary benefit to increased use of residential sprinklers. Approximately how many years does it take before these sprinklers pay for themselves in terms of potential savings, and do insurance companies offer reduced policy premiums for those who install sprinklers? If they don't, how can USFA reach out to the insurance companies and encourage them to do the premium reductions?

Mr. PAULISON. We haven't seen insurance companies willing to take that step yet, and that is one of our goals, along with getting the sprinkler companies on board with our philosophy, is to also work with insurance companies to see if we can do—we can get them to start reducing the premiums. If—for those homes that are sprinkled, if something as simple as putting in a localized fire sprinkler system, let us say in a—just put a sprinkler head in a kitchen in an existing home, is somewhere between \$500 and

\$1,000, it is just a simple plumbing issue, it is not a major issue, a new existing home, it would depend on the locality and the type of laws that they have, but the cost of amortizing that sprinkler system over the life of that home is insignificant, and we think that the value is way out—outweighs any cost that may be incurred.

Mr. GINGREY. Thank you, Mr. Paulison, and thank you, Mr. Chairman.

Chairman SMITH. Thank you, sir. Representative Lofgren.

Ms. LOFGREN. Thank you. First, let me apologize for being late. I was speaking to a whole room full of the top science and math graduates in the country, who were—they were just—cheers you up just to see these kids and—just down the way. I am interested in how we are developing standards for new firefighting technologies, and also, what challenges are present in the standardization of firefighting equipment and technologies that exist today. I remember the Oakland fire. I am sure that is legendary in firefighting worlds, and I was on the Board of Supervisors in Santa Clara County when the Oakland fire broke out, and my cohort, Don Perata, was on the Board of Supervisors in Alameda County. I later found out when I called Don at home on that Sunday that that was the first communication between an outside agency and Alameda County, and when we sent equipment up, we couldn't connect our hoses to their hydrants, because they were not the same size, and it did contribute to the conflagration. So that may not be the main issue that we are dealing with, but I am wondering if you had thoughts and advice in that arena. Would you turn on the mike?

Mr. PAULISON. I did.

Ms. LOFGREN. Very good.

Mr. PAULISON. The equipment interoperability and—you were singing my song—I appreciate you asking that question—is a significant issue. We keep talking about interoperability and people focus on radio interoperability, which is an issue we are trying to deal with. But the equipment interoperability is as significant as the interoperability of our radio systems. You know, I am from Miami, I am a scuba diver. I can take my diving regulator anywhere in the world, and rent a scuba tank and it always fits, but I can't take an air bottle off of one air pack and put it on a different brand, both made here in the United States. The—I can rent an air compressor in Miami and take it to Seattle and rent a jackhammer, it always fits, but our hydraulic tools, our jaws of life and those types of equipment are totally incompatible from one brand to another, and the construction industry has figured it out, you can go to a Home Depot and rent—and buy saw blades and they will fit any saw you have, but the fire industry is totally incompatible, and I have been meeting with the Fire Equipment Manufacturers Association. I met with them four times, and they recognized that we have to change this, and they are working diligently to do that. We have already got some manufacturers that—for instance, airbag manufacturers are very close—or lifting bags, to lift cars off people—and have already agreed that they were going to start changing their fittings to where they are all the same. It is just a small step, but it is a big step. The International Association of Fire Chiefs was created in the late 1800's to resolve the hose

thread differences, and here we are 150 years later and we are worse off than we were back then.

Ms. LOFGREN. Isn't there a role to play for the Federal Government in this area? I mean, I don't know what the standards ought to be, but NIST actually is a standard-setting body.

Mr. PAULISON. Yes.

Ms. LOFGREN. Shouldn't we ask them to work with the fire-fighting world and develop some standards to get this moving along?

Mr. PAULISON. Absolutely. The—part of the problem is us in the fire service ourselves. Different—for particularly—for instance, the hose thread standards is the most significant. New York—the City of New York has its own hose threads. Kansas City has its own hose threads that they designed themselves and make, and we perpetuate the problem, because we are unwilling to make those changes, but other areas are—definitely are resolvable, and Doctor, do you want to address that?

Dr. BEMENT. Well, I am glad you brought it up, Representative Lofgren, because this is what got us involved in fire standards in the first place. It was the Baltimore fire of 1903, where different responding fire companies couldn't participate because their hoses wouldn't fit the hydrants. It is surprising that even today, almost 100 years—almost exactly 100 years later, we still have similar problems. We deal with interoperability issues not only in protective equipment and hydrants and so forth, but—in almost every area, communications.

By working closely with standard development organizations in order to develop standards in this area, this is what consensus standards are all about, we work very closely with stakeholders, including the U.S. Fire Administration, to hold workshops to identify performance-based standards, because if standards are too prescriptive, they add only cost to the equipment. And through our testing efforts, our research efforts, our guide—issuing technical guidelines, our work with the Fire Administration, in putting out newsletters, like fire.gov on the Internet, which informs the fire community of technical developments throughout the world, we are trying to get more agreement on what these performance standards should be.

I should say, incidentally, in this area of flexibility, the test work that we do at NIST and the research that we do at NIST informs not only the standard development organizations but the fire community at large in their procurement decisions. We had guests just two days ago from local fire chiefs and the National Association of State Fire Marshals visiting NIST so they could identify the test beds that we currently have that would help them evaluate some of their procurement decisions that they have to make in the absence of standards, and so much equipment is coming on the market now, and technology is flourishing more rapidly than the standards development effort, so we have worked with ANSI [American National Standards Institute] in establishing the Homeland Security Standards Panel to work with the standard development organizations to see how we can accelerate the effort in bringing new standards to bear on some of these issues.

Chairman SMITH. The—are you finished?

Ms. LOFGREN. My time has expired. I appreciate the Chairman's—

Chairman SMITH. The gentleman from Missouri, Congressman Akin.

[PA malfunction]

Mr. AKIN. St. Louis area, of our first responders, fire folks, the ambulance, as well as some of the local police and—okay, we have got it. I asked them, I don't want to know your second and third and fourth priority, what is your number one priority, in terms of what we ought to be looking at, and there was a complete consensus that it was the interoperability of the communication systems. They said that is the thing that they really—you know, we are—our assessment was for small kinds of incidents, you know, some truck of chemicals that goes off the highway or something, we are—we handle those kinds of things very well.

Our concern was the larger scale kinds of deal where you have got, you know, 50 different police districts within a particular metropolitan area, you may go across the Mississippi River to Illinois, you have got different states, different governments. How do you coordinate those kinds of things? They said their big concern was communications. Now, this new technology that—is it Nextel is advertising, that walkie-talkie type thing, does that answer those problems, or is that the potential—or if it doesn't, what still has to be done, because their first estimate to us was, oh, all we need is a couple hundred million dollars, and of course we all kind of rolled our eyes at that, but the next thing we saw were those vans that have the different antennas and you can—with a computer, you can hook up your Wal-Mart little \$30 walkie-talkie with a police radio with a military, so you could interlock those things.

What do you see in that area and where are we?

Mr. PAULISON. It is—the radio communications, the interoperability is significant. We have fire departments out there with low band radios with UHF, VHF, 800 megahertz, and now, the new frequency, 700 megahertz coming on the board, and they don't communicate with each other.

There are interface boxes like you mentioned, and the one particular van you saw, that allows that to be set up on a particular incident to deal with that. I think—I see that as a short-term solution. We have—between the Department of Homeland Security and the COPS program in Justice, I think it is right around \$100 million, we are going to be issuing in these next couple months, on a competitive basis to cities around the country, and to look at best practices, where they are—these companies, or these cities that are awarded these grants will set up their interoperable communications system and then we can look at those and offer those as best practices, or not if they don't work, to the different cities to deal with this.

The—I just had a meeting with one of the major radio manufacturers, and they perceive the answer to this is a radio that will adapt to whatever system it goes into. So if you have a base for a handheld radio, and you are dispatched into a territory on a different system, if you have a—let us say UHF, with a 450 megahertz and you go into a system on an 800, the radio could adapt

to that new system. And I believe if they can resolve that technical issue inside those radios, that will be the answer.

What we don't want, though, is every radio able to talk to every radio. It overwhelms the system. We need every radio to be able to communicate with the command post, because we are trying to set up unified command systems throughout the country, so that—I think that is the answer down the road.

I don't know, Dr. Bement, if you have any response to that, too.

Dr. BEMENT. I think Dr. Paulison—or Mr. Paulison stated it very clearly, it is not just the interoperability of the communication system, but it is also interoperability of the communication system with the decision support system, the command system itself, and in many cases, it is not only how you transmit voice, but how you transmit data, and the cross-band switching issues in going from band to band and developing interoperability is a very daunting challenge.

More than that, in many cases, some of the 800 megahertz systems don't communicate inside buildings very well, especially buildings that are very well shielded, so in some cases, that is going to take ancillary equipment like co-ax repeaters built into the building so that you can transmit effectively from inside the building to outside the building and actually engage in the fire operation itself. So this is a very big menu of things that we have to address, and we are addressing it in every one of these areas. In fact, the Advanced Technology Program at NIST is funding some of this work in cross-band switching and also XML and being able to exchange data in disparate systems, and so we feel that NIST is very much engaged.

Mr. AKIN. Is there—to follow on, is there any use—I understand there was a big fire situation last summer out West where they used those walkie-talkie type handheld—they were actually cell phones, you know, essentially.

Dr. BEMENT. Yes.

Mr. AKIN. And that that was supposed to be the backup system and the firefighters all switched over to the backup because they like it so well.

Dr. BEMENT. Well, we have actually developed a test bed at NIST, not only to use these handheld phones, but also to use PDAs that will operate in an interoperable mode, and that system is up and operating, and we are using it to evaluate different products that are coming into the marketplace that will help serve this need, but I have to say that there is not a secure component yet in this form of communications, and as Administrator Paulison indicated, in some cases, you want that security level built in to the system as well, and that is where we are focusing our attention at the present time.

Mr. AKIN. Is there any one agency or person that is responsible for basically dealing with this problem and coordinating a solution, or is this something that you have got different agencies and different people stumbling over themselves on?

Dr. BEMENT. Well, I mentioned the summit that we had just a couple weeks ago that brought together federal agencies, state agencies, the firefighting community, National Laboratories, so NIST is trying to bring this community together. Through our Of-

office of Law Enforcement Standards, we do serve as a coordinating arm for the Office of Disaster Preparedness of the Science and Technology Directorate in the Department of Homeland Security, and the National Institute of Justice in trying to coordinate investments in research and development in this area, and to try and coordinate the technical approach to developing standards in this area.

Mr. AKIN. I think what I heard you say is no. I said, I mean, is there one person that is tasked with the responsibility, and I think—I understand you have got to talk to a lot of different people and sort of develop what you are going to do, but is there somebody who is spearheading that, or is it really something that that responsibility currently is on an organization chart, or is that being shared?

Dr. BEMENT. There is a committee or a group inside of the Department of Homeland Security called SAFECOM that brings all of the federal agencies together to work on the issue together, and that—they are the ones that are coordinating the effort, and make sure the money is being spent.

Mr. AKIN. So if there is any—

Chairman SMITH. I am going to have to interrupt you. The Administrator is going to have to leave in a few minutes, and we have two more questioners, Congressman, so I apologize, but I will now call on Representative Johnson.

Ms. JOHNSON. Thank you very much. This question will go to both witnesses. A Memorandum of Understanding is now in place between NIST and the Fire Administration that calls for one, establishing points of contact in each agency to be responsible for carrying out the purpose of the Memorandum of Understanding, and two, jointly drafting an annual fire research and technology development agenda with input from the research community, fire services representatives and other end users, and three, holding bi-monthly meetings with participation by representatives of the fire services industry and other interested groups for the coordination and implementation of the fire research plan, and four, disseminating the results of the fire research program more broadly. And I want to ask each of you three questions, one, are all of these components of the agreement being carried out, and two, are you both satisfied with the process, and in particular, are you satisfied that a research agenda is being developed that has priorities acceptable to the fire services community and has an appropriate balance between long-term research and near-term development, and the final question is, is there an adequate coordination in developing research agendas among the federal agencies that support fire research?

Dr. BEMENT. I can address part of that list of questions. Yes, there has been ongoing consultation between NIST and the U.S. Fire Administration, as well as the Directorate for Science and Technology on the research and development agenda. That has been ongoing. It existed even before the Memorandum of Understanding was signed.

In addition to that, we have sponsored joint workshops in addressing some of the issues having to do not only with technical needs, but also performance-based standards. That is ongoing. That

continues. NIST has established a technical liaison with the Fire Academy at Emmitsburg, and we continue to work with them on agenda development.

And of course, there is the direct support from the Fire Administration for the research that is currently going on at NIST.

So in those areas, this is a very active engagement.

Mr. PAULISON. The other player we need to bring in, also, which we are doing now, is the Science and Technology Division or Directorate inside of Homeland Security—Department of Homeland Security, and we are doing that. They are very interested in getting involved in our research and helping fund some of those things also. So they will be a player with us also, along with NIST and other groups out there. We have a lot of work to do. There is no question about it. But I am comfortable that we are on the right road to do this research.

Ms. JOHNSON. Thank you very much. Mr. Paulison, what is the budget for the National Fire Incident Reporting System for Fiscal Year 2003, and what is requested for 2004?

[PA malfunction]

Mr. PAULISON. Our total budget is \$56 million, I believe, this year, to run that whole program at Emmitsburg. But I will get those, I will break those out for you. I just don't have it at my fingertips right now. I can get that to you tomorrow, or even this afternoon.<sup>1</sup>

Ms. JOHNSON. Thank you very much. Thank you.

[PA malfunction]

Chairman SMITH. The—we are delighted that the Vice Chairman of the full Science Committee has joined us, Representative Gutknecht.

Mr. GUTKNECHT. Thank you, Mr. Chairman. I apologize for being late. I don't have any specific questions. I think the questions I was going to ask have pretty well been answered, but if my colleague from Missouri would like, I would be happy to yield him a few minutes of my time.

Mr. AKIN. These buttons are hard things to learn to work. I would just—the concern I have is, is having been in some big corporations and all, sometimes if you have a responsibility that it isn't really clear who is doing what that you end up with a whole lot of people doing a lot of different things, and it gets kind of scrambled, and my concern is particularly in the communications area, where our people back in the St. Louis area say that is their number one priority, do we have somebody that—not necessarily that they have to be made a czar or something, but is there a good consensus that one group is going to come up with at least a good workable solution?

Mr. PAULISON. The group that I mentioned earlier is—that is their task, to make sure that happens. The—but I don't want to mislead you, because is one group going to come up with the answer? I don't know. There is a lot of people working on the communications issue, a lot of people in private industry are very serious about this, so the answer may come from them, but as far as the

<sup>1</sup>The National Fire Incident Reporting System's FY03 budget is \$1 million and the FY04 budget is currently undetermined.

Federal Government is concerned, we have one group that is focusing our dollars and our attention to make sure we are going in the right direction.

Mr. AKIN. Thank you very much.

Chairman SMITH. The—just a quick last question. The Fire Chief in Jackson, Michigan, in my district, has been trying to get the state legislature to require that mobile homes be built with a sprinkler system inside those mobile homes. Is that something that should be considered by the state or Federal Government?

[PA malfunction]

Mr. PAULISON. Firefighter for 30 years, I can tell you that when we respond to a mobile home fire, seldom do we get there and put the fire out. It is usually—the mobile home is burnt to the ground before we arrive. If we sprinkle anything, from the day they built it, it—mobile homes is extremely important.

Chairman SMITH. And Administrator Paulison, if there is anything else, we understand you have got a commitment at 11. I hope it is within 10 minutes of here. If you make it, and with that, you are certainly—we thank you both. If you have any additional advice, please inform this committee on the Noble Training, whether we should include that in this bill, that \$8 million, as far as being within the U.S. Fire Administration, or whether it should be a separate authorization for Homeland Security.

Let us know your recommendation on that.

Mr. PAULISON. Yes. Yes, sir, and thank you for your support, too, and if there is any other questions that we have missed, you know, if you would just give those to us, we will get them right back to you in writing.

Chairman SMITH. Okay. Thank you.

Mr. PAULISON. Thank you very much.

Chairman SMITH. Again, thank you both for your presence today. If we could start Panel 3.

[PA malfunction]

### Panel 3

Chairman SMITH. Dr. Dennis Compton is the immediate past Chair of the Board for International Fire Service Training Association. Chief Compton has served for over 32 years in the fire service, 27 years with the Phoenix Fire Department, five years as the Mesa Chief and he was selected as a charter member of the Arizona Fire Service Hall of Fame and recently received the Congressional Fire Service Institute, the CFSI 2003 Mason Langford National Fire Service Leadership Award, so Chief, congratulations. Thank you for sharing some of your advice and wisdom today and please proceed with your testimony.

[PA malfunction]

Chairman SMITH. I think, I am not sure but—whether it is a long push on the button, or a short push.

**STATEMENT OF DENNIS COMPTON, IMMEDIATE PAST CHAIR,  
BOARD FOR THE INTERNATIONAL FIRE SERVICE TRAINING  
ASSOCIATION**

Mr. COMPTON. Members of the House Research Subcommittee, my name is Chief Dennis Compton of Mesa, Arizona. I am honored to testify before the House Research Subcommittee on issues of great importance to you and our nation's one million career and volunteer fire and emergency response personnel. I have a full statement I have submitted for the record.

Chairman SMITH. Without objection, all full statements will be included in the record.

Mr. COMPTON. For 32 years, I have been a firefighter, 27 years with the Phoenix, Arizona Fire Department and the last five as Chief of Mesa, Arizona Fire Department. Although retired from Mesa, I continue to remain very active, serving as a leader in many national fire service organizations, including the International Fire Service Training Association and the Congressional Fire Services Institute's National Advisory Committee.

I have been asked to present my views on a number of important issues that this subcommittee is addressing. First, the reauthorization of the United States Fire Administration. The USFA is doing an excellent job serving its core mission, in addition to assuming new responsibilities in the area of terrorism training. Its Administrator, Chief David Paulison, is a widely respected 30 year veteran of the fire service who understands what is needed by our firefighters and how the Federal Government can respond to those needs. The United States Fire Administration is the lone federal agency tasked with reducing the Nation's loss of life and property due to fire.

I urge Congress and this subcommittee to never allow the USFA to lose its identity. The U.S. Fire Administrator should maintain a prominent presence within the Department of Homeland Security. I also strongly believe that the Fire Administrator should remain a Presidential appointed position confirmed by the Senate.

I also fully support developing a national residential fire sprinkler strategy. In fact, my home is fully sprinklered. The combination of fire sprinklers and smoke alarms installed in homes can significantly reduce the number of lives lost from fires each year in this nation.

Regarding the Firefighting Research and Coordination Act, a key element of that Act, introduced by my Senator, John McCain and Congressman Dave Camp, addresses the advent of firefighting technology and the development of new standards to measure their performance as well as calling for coordination of response to national emergencies, including training and credentialing. Credentialing of emergency responders is critical to the successful management of national emergencies. It is important that existing fire service certification systems be incorporated into any national program to improve emergency management.

This legislation has received the support of more than 40 national fire organizations, composing the Congressional Fire Service Institute's National Advisory Committee. Nothing is more critical to our mission than continuing to fund the FIRE Act grant program. The FIRE Act is directed at addressing basic needs. Accord-

ing to the survey recently completed by the USFA and the NFPA, data reveals that many fire departments are understaffed and in need of basic equipment, such as turnout gear, radio communications, breathing apparatus.

The management of the FIRE Act grant program by the U.S. Fire Administration has been an incredible success, and the fire service is concerned that transferring that responsibility to the Office of Domestic Preparedness will dilute the effectiveness of that program.

Unlike grant programs administered by ODP, the FIRE Act grant program sends money directly to local fire departments. ODP's focus is on state terrorism grants. While the act focuses on basic, everyday response needs, using the states to direct the flow of dollars, which is consistent with ODP grant programs, has never proven to be effective for the fire service, and it is primarily because the fire service lacks any centralized representation at the state level in any of the states.

The Council on Foreign Relations recently issued a report titled "Emergency Responders: Drastically Underfunded, Dangerously Unprepared." The report outlined a number of concerns regarding our nation's preparedness for potential terrorist attacks. I was intrigued by their assessment of how slowly federal funds are being distributed and spent at the state level.

Conversely, the United States Fire Administration has been very effective in distributing FIRE Act funds. Should the Federal Government be spending five times the current amount, as the report recommends? It is hard to say. However, I know that given the challenges facing local fire departments, we need to spend more. Through the FIRE Act, we need to bring all fire departments up to a baseline level of training and equipment. Through pending SAFER legislation, we need to address the staffing shortages in both the career and volunteer fire services, and we must also make certain that fire departments serving high risk areas for terrorism are fully staffed and prepared.

The fire service appreciates the support Congress has provided to the United States Fire Administration. Through the outstanding work performed by USFA, the increased funding contained in your reauthorization measure is well justified and should continue to target USFA's major program areas.

I strongly appeal to this subcommittee to preserve the FIRE Act program in its current structure, under the management of the United States Fire Administration. I also urge this Congress to ensure that the fire service plays a key role in homeland security and the development of national strategies dealing with terrorism preparedness.

It is truly an honor for me to testify before you today, and I thank you for this opportunity, and I will be glad to answer any questions you might have.

[The prepared statement of Mr. Compton follows:]

PREPARED STATEMENT OF DENNIS COMPTON

Good Morning.

Chairman Smith, Ranking Member Johnson and Members of the House Research Subcommittee, my name is Chief Dennis Compton of Mesa Arizona. I am honored to be testifying before the House Research Subcommittee on issues of great impor-

tance to both this subcommittee and to our nation's fire and emergency response personnel—issues that impact the readiness of approximately one million firefighters from every state in the Nation who serve as both career and volunteers. Prepared to make the ultimate sacrifice, our nation's firefighters respond to over 17 millions calls, annually. . . from fire and emergency medical calls, to hazardous materials incidents, and potential acts of terrorism.

Before I advance into my testimony, I would like to express my thanks and appreciation to this committee, specifically Chairman Smith and Ranking Member Johnson, for your leadership on our behalf. We are the beneficiaries of several significant pieces of legislation enacted by Congress in recent years, most notably legislation that created and funded the Assistance to Firefighters Grant Program, commonly referred to as the FIRE Act. We, our nation's fire service, appreciate the willingness on the part of Congress to work in the spirit of bi-partisanship to address critical needs that will improve the level of readiness of our nation's first responders.

For 32 years, I have been a firefighter—27 years with the Phoenix, Arizona Fire Department and the last five as Chief of the Mesa Fire Department. From the very first, I have looked forward to every day on the job. Although retired from Mesa, I continue to remain active serving with the International Fire Service Training Association, as a board member of the National Fire Protection Association, member of the International Association of Fire Chiefs, and as immediate past chair of the Congressional Fire Services Institute's National Advisory Committee. The fire service will always be an important part of my life. . . and so will my desire to make the fire service better prepared to do its job.

I have been asked to present my views on a number of important issues this subcommittee is addressing: the reauthorization of the United States Fire Administration (USFA), the administration of the Assistance to Firefighters Grant Program, the position of United States Fire Administrator as a Presidential Appointee and the Firefighting Research and Coordination Act sponsored by my Senator, John McCain in the Senate and Congressman Dave Camp in the House. Following my testimony, I would be most willing to answer questions related to these issues as well as any others that pertain to what it takes to prepare our nation's fire service for its job.

#### **I. REAUTHORIZATION OF THE UNITED STATES FIRE ADMINISTRATION**

First the reauthorization of the United States Fire Administration. Five years ago, I was asked to participate in a panel convened by then-FEMA Director James Lee Witt. The mission of the panel was both compelling and time sensitive as there was a fear that our federal fire programs—specifically the United States Fire Administration and National Fire Academy—were languishing. The panel issued a report containing 34 recommendations for change. The panel did not point fingers at individuals, but rather cited core deficiencies in the areas of leadership, resource management and communication.

Wasting little time, the USFA began the process of responding to each recommendation. Today, USFA is serving its core mission in addition to assuming new responsibilities primarily in the area of terrorism training. It has as its administrator, Chief David Paulison, a widely-respected 30-year veteran of the fire service who understands what's needed by our firefighters and how the Federal Government can respond most effectively and efficiently.

The United States Fire Administration is the lead federal agency for the fire service. It is our voice. . . the guardian of our programs. We take great pride in the work of USFA. It is the lone federal agency tasked with reducing the Nation's loss of life due to fire through data collection, public education, training, and research and technology.

While I support transferring USFA and FEMA into the Department of Homeland Security, I urge Congress and this subcommittee to never allow USFA to lose its identity. Both the Fire Administration and the Fire Administrator should maintain a prominent presence within the Department of Homeland Security. When officials within the Department convene to discuss policy matters or heightened security alerts, USFA officials should have a seat at the table with their tent card reading "USFA" to make clear to everyone in the room the individual representing the interest of our one million firefighters.

#### **PRESIDENTIAL APPOINTMENT OF U.S. FIRE ADMINISTRATOR**

Moreover, I strongly believe that the Fire Administrator should remain a presidential-appointed position, confirmed by the Senate. Because of the important nature and duties associated with this position, the President needs an Administrator with whom he can place his trust and who shares his vision on homeland security

issues. I would also urge future administrations to look for candidates who possess an acute understanding of the fire and emergency services and hold no predisposition for any particular fire service group or element, but rather have holistic outlooks of the fire service.

#### *NATIONAL RESIDENTIAL FIRE SPRINKLER STRATEGY*

Section Three of the House measure addresses a National Residential Fire Sprinkler Strategy, a provision I fully support. I am a strong proponent of residential fire sprinklers. In fact, my home is fully sprinklered. When I served as Chief of Mesa, the city adopted a sprinkler ordinance for new residential construction. Saving lives starts with prevention and the combination of sprinklers and smoke alarms can significantly reduce the number of lives lost each year, which stands at approximately 4,000 annually. Many of my peers share my conviction and would look forward to supporting the Fire Administration in developing a strategy to promote the use of residential fire sprinklers.

One statistic says it all about fire sprinkler systems: there has never been a multi-death fire in a fully sprinklered building in which the sprinklers were fully operational.

#### *FIREFIGHTING RESEARCH AND COORDINATION*

One key difference between the House and Senate authorization measures is the inclusion in the Senate bill of the Firefighting Research bill introduced by Senator John McCain. Congressman Dave Camp introduced a similar measure, which is pending in the House Science Committee. Prior to introducing their measures, both Senator McCain and Congressman Camp sought input from the fire service organizations to ensure that their measures would have the desired results they intended.

A key element of the legislation addresses the advent of firefighting technology and the development of new standards to measure their performance. The legislation would not authorize the Federal Government to create standards, but rather to create measuring techniques and testing methodologies that can be incorporated into the standards-making process. The legislation has received the support of more than 40 national organizations composing the Congressional Fire Services Institute's National Advisory Committee.

Since September 11th, new technologies have been introduced to the market designed to address both existing and emerging threats. In the interest of firefighter safety, there must be some mechanism in place to measure the performance of this equipment, especially if they are going to be purchased with federal funds. Where standards do not exist to address this technology, the McCain-Camp bill will initiate the process.

The national fire organizations also support other sections of the legislation calling for coordination of response to national emergencies and for increased training. We believe strongly that the United States Fire Administration should serve as the primary point of contact for state and local firefighting units during national emergencies. But as we stated to both authors, Congress needs to appropriate additional funds for USFA to carry-out this legislation, and not use existing funds.

#### **II. ASSISTANCE TO FIREFIGHTERS GRANT PROGRAM (FIRE Act)**

As I mentioned earlier, the fire service is the beneficiary of a number of Congressional actions, but nothing is more critical to our mission than the measures that authorized and continue to fund the Assistance to Firefighters Grant Program.

Public Law 106-398, which contains the language that established the grant program, states that the purpose of the program is for "protecting the health and safety of the public and firefighter personnel against fire and fire-related hazards." Although funds can be used to purchase terrorism-related equipment, the program is directed at addressing basic needs. And according to the survey recently completed by the U.S. Fire Administration and National Fire Protection Association, many departments remain in need of basic equipment such as turn-out gear, radio communications, and breathing apparatus that only the FIRE Act can address.

The survey revealed that:

- An estimated 73,000 firefighters serve in fire departments that protect communities of at least 50,000 in population and have fewer than 4 career firefighters assigned to first-due engine companies. (The National Fire Protection Association calls for at least four firefighters per engine.)
- Fire departments that deliver an average of 4 or fewer volunteers to a mid-day house fire constituted 21 percent of departments protecting communities with less than 2,500 population.
- An estimated 57,000 firefighters lack personal protective clothing.

- An estimated one-third of firefighters shifts are not equipped with self-contained breathing apparatus.
- Overall, fire departments do not have enough portable radios to equip more than about half of the emergency responders on a shift.
- An estimated 120.1 million people are protected by fire departments that do not have a program for free distribution of home smoke alarms.

As you know, the House Appropriations Committee approved \$750 million for the program for Fiscal Year 2004, the same level as last year. In addition, they included in the report language that the Emergency Preparedness and Response Directorate should administer the program, giving USFA control of the program. The Senate version, approved last week, also contains \$750 million for the grant program, but transfers authority to administer the program to the Office of Domestic Preparedness (ODP). The \$750 million contained in both measures exceed the President's request of \$500 million; however the Senate measure is more closely aligned with the Administration's proposal which recommends the shift to ODP. The management of the FIRE Act by the U.S. Fire Administration has been an incredible success and the fire service is concerned that transferring that responsibility to ODP would dilute the effectiveness of the program.

Unlike grant programs administered by ODP, the FIRE Act sends money directly to local fire departments; only a small percentage is set aside for USFA to cover administrative costs. Now some argue the benefits of using the states to direct the flow of dollars, saying it's more cost effective and can target the money better. However, this method has never proven to be effective for the fire service, primarily because the fire service lacks centralized representation at the state level. We have neither state fire chiefs nor Secretaries of Fire Safety within any of the 50 states. Instead, the command structure originates from within local jurisdictions, with local fire chiefs occupying the top positions.

Moreover, reiterating what I just said moments ago, the FIRE Act is about addressing basic needs to enable fire departments to confront challenges they encounter on a daily basis—fires, emergency medical calls, hazardous material spills, etc. On the other hand, there is no question regarding the mission of ODP. Prominently displayed on its website, the mission statement reads, "Enhancing the capacity of state and local first responders to respond to incidents of terrorism involving weapons of mass destruction." This is what raises our concern; that eventually the FIRE Act would become another terrorism program, leaving thousands of fire departments unprepared for their basic missions.

### **III. COUNCIL ON FOREIGN RELATIONS REPORT**

As Members of the this subcommittee are aware, the Council on Foreign Relations, chaired by former U.S. Senator Warren Rudman, recently issued a report titled, "Emergency Responders: Drastically Underfunded, Dangerously Unprepared." The report outlined a number of concerns regarding our nation's preparedness for potential terrorist attacks. As it relates to the Assistance to Firefighters Grant Program, I was intrigued by their assessment of how slowly federal funds are being distributed and spent at the State level. The Council attributes it, in part, to the excessive amounts of paperwork. Conversely, USFA has been very effective in disbursing FIRE Act funds, enabling local fire departments to purchase needed equipment and training, including the types highlighted in the Council's report.

As the report says, "The United States could spend the entire gross domestic product (GDP) and still be unprepared, or wisely spend a limited amount and end up sufficiently prepared." Is the Federal Government spending enough? The answer is "no." Should it be spending five times the current amount as the report recommends? It's hard to say. I can only speak on the needs of the fire service.

I do believe that given the challenges facing local fire departments, we need to spend more. First we need to bring all fire departments up to a base-line level for training and equipment. This is being achieved through the FIRE Act. Then we need to address the staffing shortages in both the career and volunteer fire services. This can be addressed through the SAFER legislation pending in both the House and Senate (H.R. 1118 and S. 544). Then we must identify high-risk areas and make certain that the fire departments serving in these areas are fully staffed, trained, and equipped to respond to potential acts of terrorism. This might mean spending five times more than the Federal Government is spending, or it might mean less.

We can't say that time will provide the answers, because as you know, time is not on our side. We must move quickly.

#### IV. CONCLUSION

Members of this subcommittee, I thank you for allowing me this opportunity to testify today. Hopefully, both my oral and written testimonies have provided some valuable insight on the Federal Government's role to enhance the readiness of our nation's fire service.

Thirty years ago, the National Commission on Fire Prevention and Control issued a report titled, "America Burning," highlighting our nation's fire problems. At the time the report was issued, 12,000 people were dying in fire each year. Today the figure is down to approximately 4,000. The reason for the reduction has so much to do with the content of the report, including the recommendation to establish a United States Fire Administration and National Fire Academy.

The fire service appreciates the support Congress has provided to the United States Fire Administration. Through the outstanding work performed by USFA, the increased funding contained in your reauthorization measure is well justified. The funds should continue to target programs benefiting fire departments and their personnel, primarily through USFA's four program areas: data collection, public education, training, and technology development.

Moreover, I appeal to this subcommittee to preserve the FIRE Act in its current structure. Nobody can ascertain the needs of the fire service better than USFA, the national fire associations that continue to work in close consultation with USFA in administering the program, and the hundreds of firefighting personnel who volunteer their time to review the grant applications each year. We know what's best for our own.

On the important issue of homeland security, I urge this Congress to ensure that the fire service plays a key role in the development of national strategies dealing with terrorism preparedness. After all, we are the front line of defense prepared to send our bravest in the first wave of battle. Hence, we deserve to fill positions of leadership so that our voice will be heard.

It is truly an honor for me to have a role in this process today. Chairman Smith, I thank you in particular for your support of the National Fallen Firefighters Memorial Service. We were honored by your presence both last year and in 1999 as we paid final tribute to those firefighters who died in the line of duty.

Now I will be glad to answer any questions from this subcommittee.

#### BIOGRAPHY FOR DENNIS COMPTON

##### **Personal Information:**

Business Address: P.O. Box 21208; Mesa, AZ 85277-1208

Business Telephone: (480) 244-8529; Fax: (480) 654-5420

E-mail: dcompton@cableaz.com

Marital Status: Married to Sher since 1968

U.S. Army Veteran: 1968-1970; Honorable Discharge

##### **Employment and Acknowledgments:**

- Currently serve as an Executive Advisor, facilitator, teacher, and consultant in the public, private, and non-profit sectors.
- Functioned at the Executive level of two large, complex organizations. Served as the Chief Executive of the Mesa, Arizona Fire Department for more than five years and as Assistant Fire Chief for the Phoenix, Arizona Fire Department for more than fifteen years.
- Served for a total of thirty-two (32) years in the Phoenix and Mesa Fire Departments. During that time, I managed budgets in excess of \$120 million. Phoenix and Mesa are the 6th and 43rd largest cities in the United States and have earned reputations for having world class Fire Departments. The Mesa Fire Department is fully accredited since 2001. Responsible for City-wide Emergency Management in Mesa.
- Served in command of the Phoenix (FEMA) Urban Search and Rescue Team (USAR) that was deployed to incidents attracting worldwide concern, including the bombing of the Federal Building in Oklahoma City. Also served at the Pentagon and World Trade Center scenes immediately following the September 11, 2001 terrorist attacks.
- Co-owner of Dennis Compton & Associates and S&D Products and Services. These two businesses are held in partnership with my spouse.

- Selected as the 1991 National Instructor of the Year by the International Society of Fire Service Instructors.
- Selected as the Fire Service Person of the Year 2000 by the American Fire Sprinkler Association.
- Selected as the University of Phoenix Distinguished Alumnus of the Year 2001.
- Received the 2003 CFSI Mason Lankford National Fire Service Leadership Award.
- Member of the Arizona Fire Service Hall of Fame.

**Additional Professional Contributions and Experience:**

- Past Chair of the Executive Board of the International Fire Service Training Association (IFSTA).
- Elected as the Vice-Chair and Chair of the Congressional Fire Services Institute's National Advisory Committee (CFSI NAC) headquartered in Washington, D.C.
- Member of the National Fire Protection Association (NFPA) since 1979, serving in various capacities including:
  - Member of NFPA Board of Directors.
  - Managed the Fire Department Analysis Project (FIRECAP).
  - Strategist and facilitator for strategic and operational planning exercises throughout the operations and business areas of NFPA.
  - Member of NFPA Urban Fire Forum for five years.
  - Member of NFPA technical committees.
  - Representative on the National Home Fire Sprinkler Coalition.
- Appointed to the National Blue Ribbon Panel in 1998 to review the effectiveness of the United States Fire Administration.
- Served on the National Fire Service Leadership Summit since its inception.
- Elected President of the Metropolitan Phoenix Fire Chiefs Organization.
- More than thirty years of experience in local, county, State, and national politics.
- Member of the International Association of Fire Chiefs and their Metro Chiefs organization.
- Member of the Arizona Emergency Services Association.
- Serve on the Advisory Board of the non-profit Foundation for Burns and Trauma.
- Member of the Board of the non-profit 100 Club of Arizona.
- Member and Paul Harris Fellow in the Downtown Phoenix Rotary Club.

**International Involvement:**

- Consulted with international representatives to develop alliances directed towards integrating the IFSTA validation process into their countries and developing new product lines.
- Consulted with representatives of the Soviet Union, England, Germany, other European countries, Australia, Latin America, Mexico, Japan, and others to present and discuss community fire and life safety issues.
- Worked with Rotary International to provide ambulances, medical supplies, fire fighting apparatus, and other equipment to cities in Mexico.
- Invited to do various management presentations at several international conferences conducted abroad.
- Member of Institution of Fire Engineers (IFE).

**Education, Teaching, and Writing Experience:**

- Bachelor of Arts Degree in Management from the University of Phoenix.
- Associate of Arts Degree in Fire Science from Phoenix College.
- Selected as one of only forty participants in a one-year "Leadership Fellowship" in Phoenix, Arizona.
- Program Chair of Fire Science at Phoenix College for 14 years.

- Past member of the President's Commission on Excellence in Education at Mesa Community College.
- Member of the Advisory Board of the Arizona State University Fire Services Institute.
- Member of the Advisory Board for the Fire and Emergency Management Masters Degree Program at Oklahoma State University.
- Invited speaker at many national and international conferences.
- Teach accredited management and leadership courses at universities and symposia internationally.
- Author of three successful books in a continuing series focusing on management and leadership titled, *When In Doubt, Lead!*
- Co-editor of the current edition of the International City and County Management Association's text and reference book titled, *Managing Fire and Rescue Services*.
- Author of the leadership chapter of *The Fire Chiefs Handbook*, published by PennWell.
- Co-author of a lead chapter in the NFPA's *Fire Protection Handbook*.
- Contributing Editor for "Firehouse" Magazine, "FireTimes.com", and "Firehouse.com".
- Author of many articles published in national and international periodicals. Interviewed and referenced in technical articles and textbooks.

**Dennis Compton**  
**7346 East Sierra Morena Circle**  
**Mesa, Arizona 85207**  
**480-244-8529 480-654-5420 FAX**

July 15, 2003

The Honorable Nick Smith  
Chairman, Research Subcommittee  
2320 Rayburn Office Building  
Washington, DC 20515

Dear Congressman Smith:

Thank you for the invitation to testify before the U.S. House of Representatives Research Subcommittee, on July 17 for the hearing entitled *H.R. 2692, the U.S. Fire Administration Reauthorization Act of 2003*. In accordance with the Rules Governing Testimony, this letter serves as formal notice of the Federal funding I currently receive in support of my research.

I received no federal funding directly supporting the subject matter on which I testified, in the current fiscal year or either of the two preceding fiscal years.

Sincerely,

  
Dennis Compton

Chairman SMITH. The honor is ours, Dennis. Dr. John Hall is our next witness. Dr. Hall is Assistant Vice President for Fire Analysis and Research at the National Fire Protection Association, NFPA. This division of NFPA is responsible for the measurement of the national fire problem and the communication of the results as a statistical basis for the fire protection strategies.

Dr. Hall was formerly an operations research analyst with the U.S. Fire Administration. He holds a B.A. in mathematics from Brown University and a Ph.D. in operations research from the University of Pennsylvania.

Dr. Hall, welcome, and thank you.

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

Dr. HALL. Chairman Smith—honored to appear before you today. [PA malfunction]

Dr. HALL. Take three. Chairman Smith, Ranking Member Johnson and Members of the Committee, I am honored to appear before you today. NFPA is a non-profit organization founded more than 100 years ago with a mission to save lives through education, research and the development of consensus codes and standards. Our codes and standards are accredited by the American National Standards Institute and developed in a consensus process that ensures all interested parties have a say. Congress has repeatedly affirmed its support for voluntary consensus standards.

Today, I wish to testify in support of H.R. 545, and first, let me state emphatically that the reauthorization of the U.S. Fire Administration is extremely important to the effectiveness of the fire service throughout the United States. For nearly three decades, the USFA and the National Fire Academy have been working successfully with NFPA and the fire service to reduce the death and destruction caused by fire in the U.S.

The staff at USFA has done a tremendous job in administering the Assistance to Firefighters grant program. This program has provided more than \$1 billion in financial resources directly to fire departments. Nonetheless, fire departments have applied for more than \$7 billion, and the real needs are even greater, as I shall discuss.

It is crucial that the FIRE Grant program be maintained as a separate and distinct funding source where fire departments can receive direct funding from the USFA and avoid unnecessary red tape. I would also urge the Congress to fund the program at a level no less than its authorized amount of \$900 million.

When I said the needs are much greater than the currently authorized and appropriated amounts for the FIRE Grant program, I was speaking on the basis of the Needs Assessment Survey of the fire service, which was specifically commissioned by Congress as part of the FIRE Act, and which was recently completed by NFPA in cooperation with FEMA/USFA.

The needs assessment began before the horrific events of September 11, 2001, but because of the foresight of USFA and our fire service advisors, that survey included extensive attention to terrorism preparedness. Thus, when the Council on Foreign Relations

began their exercise under former Senator Warren Rudman to develop estimates of the costs of terrorism preparedness, the needs assessment permitted NFPA to develop and substantiate the fire service portion of these cost estimates with unusual supporting detail.

In a report released just a few weeks ago, the Council estimates that it will take \$98.4 billion in additional funds over the next five years to adequately meet the needs of our first responders to handle the additional responsibilities of homeland security. The fire service portion of this is more than half the total.

The needs identified by the Council are enormous, and the needs identified by NFPA for traditional fire service duties are equally impressive. It is important to understand that these needs are not a wish list for the fire service. They are the result of an objective third party comparison of what the fire service has to what the fire service needs to do its assigned job safely and effectively.

A key element of H.R. 545 is the requirement that equipment purchased through the FIRE Grant program must meet or exceed applicable voluntary consensus standards. This is not a new concept. For example, the Department of Justice's Bulletproof Vest Partnership Grant Program requires that vests meet minimum safety and performance standards. The Office of Domestic Preparedness and the Department of Homeland Security encourages and may soon require the use of NFPA standards for protective clothing in responding to hazardous materials, chemical and biological incidents. In July 2002, the national fire service organizations, including IAFC [International Association of Fire Chiefs], IAFF [International Association of Fire Fighters] and NVFC [National Volunteer Fire Council], stated that all equipment and training purchased with federal funds should be required to meet nationally recognized voluntary consensus standards whenever possible.

The Needs Assessment Survey and the Council on Foreign Relations exercise are a call to action, a challenge to our nation to respond fully to dangerous times.

Our firefighters face the same limitations and obstacles they encountered on September 11th. In fact, with the reported State and local budget cuts that are in the papers everywhere you look, they face even greater limitations. We can no longer ask our fire departments to survive entirely on local tax revenue supplemented by local fundraisers. The Federal Government must provide adequate resources and support to our firefighters, as they protect us and the security of our homeland.

This legislation would begin to address these urgent needs, and NFPA enthusiastically supports it. Mr. Chairman, thank you for the opportunity to testify today. I will be happy to answer any questions you or other Members of the Committee may have.

[The prepared statement of Dr. Hall follows:]

PREPARED STATEMENT OF JOHN R. HALL, JR.

Chairman Smith, Ranking Member Johnson and Members of the Committee, I am honored to appear before this Committee today. My name is John Hall and I am Assistant Vice President for Fire Analysis and Research of NFPA (the National Fire Protection Association). NFPA is a non-profit organization, founded more than 100 years ago, with a mission to save lives through fire and life safety education and

training, fire research and analysis, and the development of consensus codes and standards that are adopted by state and local jurisdictions throughout the United States and widely used by the Federal Government.

Today NFPA has nearly 300 codes and standards addressing safety, each accredited by the American National Standard Institute (ANSI) and developed by technical experts, the fire service, and others participating as volunteers in a consensus process. This process ensures that all interested parties have a say in developing standards. Congress affirmed its support for voluntary consensus standards in the National Technology Transfer and Advancement Act of 1995 (P.L. 104-113) and reaffirmed that support in the Homeland Security Act of 2002, the law that created the new department.

As the Congress considers the reauthorization of the U.S. Fire Administration (USFA) and its many important functions, I wish, Chairman Smith, to testify today in support of H.R. 545, the Firefighting Research and Coordination Act, which is Title II of S. 1152, the Senate version of the USFA reauthorization bill.

First, let me state emphatically that the reauthorization of the U.S. Fire Administration is extremely important to the effectiveness of the fire service throughout the United States. In May of 1973, just over 30 years ago, the Chairman of the National Commission on Fire Prevention and Control, Richard E. Bland, transmitted to President Nixon its final report "America Burning." In that report the Commission recommended establishment of the United States Fire Administration to:

- Evaluate the Nation's fire problem through data collection and analysis and research,
- Create a National Fire Academy to improve training and education for fire service personnel,
- Strengthen public awareness of the fire threat, and
- Provide grants to State and local governments.

For nearly three decades, the USFA and the National Fire Academy have been working successfully with NFPA and the fire service to reduce the death and destruction caused by fire in the U.S. We have made great strides over the past 30 years. While both civilian and firefighter deaths have decreased dramatically, we must do much more to ensure that our fire departments can meet the new challenges of homeland security, including responding effectively to biological or chemical accidents or attacks.

Because my job at NFPA is to coordinate our statistical work in tracking and analyzing the U.S. fire problem, I particularly wish to commend the USFA for the National Fire Incident Reporting System (NFIRS). It is no exaggeration to say that more than 90 percent of what we know about the details of U.S. fire risks today would be a matter of unsupported opinion if it were not for NFIRS. But NFIRS needs care and support, as does the National Fire Information Council, which is the association of states and large cities participating in NFIRS. They cannot do the work they need to do without continued support from USFA, but that support is in doubt in the next budget.

I also wish to commend the USFA for a quarter-century of leadership in advocacy of fire sprinklers in homes. From tests and engineering analysis to assessments of cost and public opinion, the USFA has contributed greatly to our national progress in bringing this life-saving technology to the places where most U.S. fire deaths still occur. I would note that the legislation you recently introduced to reauthorize the USFA to include a more explicit emphasis on residential fire sprinklers contains a point, which needs to be clarified. Kitchens are not a high-risk area for fatal home fires, and it is USFA's NFIRS data that tells us this.

Returning to the particulars of the USFA reauthorization, while we support the move of the USFA to the new Department of Homeland Security, there are important functions and positions that must be retained. For example, the USFA must continue to provide public education and fire prevention activities in partnership and cooperation with safety organizations, particularly those working to reduce fire deaths among high risk groups (children, older adults and persons with disabilities). It is also critical that the position of Administrator of the USFA remain a Presidential appointment to retain that important advocacy position within the Executive Branch.

The staff at USFA has done a tremendous job in administering the Assistance to Firefighters (FIRE) Grant Program. Since its creation in FY 2001, this program has provided more than \$1 billion in financial resources directly to fire departments. Nonetheless, fire departments have applied for more than \$7 billion, and the real needs are even greater than this, as I shall discuss. It is crucial that the FIRE Grant Program be maintained as a separate and distinct funding source where fire

departments can receive direct funding from the USFA and avoid unnecessary red tape. I would also urge the Congress to fund the program at a level no less than its authorized amount of \$900 million dollars.

When I said the needs are much greater than the currently authorized and appropriated amounts for the FIRE Grant program, I was speaking on the basis of the "Needs Assessment Survey" of the fire service, which was specifically commissioned by Congress as part of the FIRE Act and which was recently completed by NFPA in cooperation with FEMA/USFA. Let me share with you a few of the major findings from that survey.

- Only one in every 10 fire departments has the local personnel and equipment required to respond effectively to a building collapse or the release of chemical or biological agents with even minimal to moderate casualties;
- 50 percent of our firefighters involved in "technical rescue" lack formal training, but technical rescue involving unique or complex conditions is precisely the skill they would need to respond to a terrorist attack;
- There are other huge gaps in training—There has been no formal training for 21 percent of those involved in structural firefighting; for 27 percent of those involved in EMS work; and for 40 percent who are sent in to deal with hazardous materials;
- And we don't protect our firefighters as we should. One third of the protective clothing worn by firefighters sent into a burning building is more than 10 years old, and an estimated 57,000 firefighters lack any protective clothing at all;
- On a typical fire department shift, 45 percent of first responding firefighters lack portable radios; 36 percent lack self-contained breathing apparatus; and 42 percent answer an emergency call without a Personal Alert Safety System (PASS) device that is critical in locating an injured or trapped firefighter;
- Finally, at least 65 percent of cities and towns nationwide don't have enough fire stations to achieve widely recognized response-time guidelines. Those guidelines recommend that firefighters be on the scene of any situation within 4 minutes, 90 percent of the time.

Not surprisingly, the picture is bleaker in our smaller communities. And remember seventy-five percent of the country's firefighters are volunteers. Twenty-one percent of rural communities often respond with too few firefighters to engage safely in structural firefighting. Our research also found that thirty-eight percent of fire departments in communities with more than 50,000 residents often respond with too few firefighters.

The Needs Assessment began before the horrific events of September 11, 2001, but because of the foresight of USFA and our fire service advisors, the survey included extensive attention to terrorism preparedness. When the Council on Foreign Relations began an exercise, under former Senator Warren Rudman, to develop estimates of the costs of terrorism preparedness for the entire first responder community at all levels of government, the Needs Assessment permitted NFPA to develop and substantiate the fire service portion of these cost estimates with unusual detail.

In a report released just a few weeks ago, the Council estimated that it will take \$98.4 billion in additional funds above current spending (estimated at \$26-\$76 billion) over the next 5 years, or \$19.7 billion per year, to adequately meet the needs of our first responders to adequately handle the additional responsibilities of homeland security. The fire service portion of this, based on the Council's use of NFPA's analysis of the Needs Assessment Survey, was \$26.5 billion in initial costs and \$7.1 billion per year in ongoing costs. The Council report also addresses how federal funding is allocated, stressing the importance of including threats and vulnerabilities, not just population.

The terrorism preparedness needs identified by the Council for all first responders are enormous, and the needs identified by NFPA for traditional fire service duties are equally impressive, as may be seen in part in the background for the SAFER Bill, which NFPA also supports and the Science Committee held hearings on just one month ago. It is important to understand that these needs are not a wish list for the fire service. They are the result of an objective, third-party comparison of what the fire service has to what the fire service needs given its responsibilities, which have grown rapidly in the face of terrorism, and existing standards and guidelines. These standards and guidelines tell us what experts know about what it takes to do a particular job safely and effectively.

A key element of H.R. 545 is the requirement that equipment purchased through the FIRE Grant Program must meet or exceed applicable voluntary consensus standards. This concept is not new. Many existing federal grant programs already

have similar requirements. For example, the Department of Justice's Bulletproof Vest Partnership Grant Program requires that vests meet minimum safety and performance standards. In addition, through its equipment grant program, the Office of Domestic Preparedness (ODP) in the Department of Homeland Security encourages the use of NFPA standards for protective clothing in responding to hazardous materials/chemical/biological incidents. It is expected in FY 2004 that ODP will require this. Additionally, the fire service and their national organizations understand the importance of NFPA standards, which they help to develop. In July 2002, the national fire service organizations, including IAFC, IAFF, and NVFC, released a position paper that addressed this issue by stating that all equipment and training purchased with federal funds should be required to meet nationally recognized voluntary consensus standards, whenever possible.

The legislation you are considering is commendable and visionary. H.R. 545 will provide focus and resources for research on breakthrough technologies for the fire service. I will mention only one example of this kind of worthwhile research this program will advance. Research at the National Institute of Standards and Technology, under current cooperative agreements with USFA and under the direction of Dr. Randy Lawson, has already made major strides in developing better, more scientifically grounded methods of measuring the effectiveness of firefighter protective clothing in protecting the wearer from burns.

Both H.R. 545 and the Senate version also address coordination of response to national emergency situations. The approach is similar to that used with great success by the U.S. Forest Service and related agencies to coordinate response to major wildfires. Contrast the smooth-running, pre-planned operations these agencies have been able to mount with the more ad hoc approach to terrorist attacks on our country.

Both of these elements—focused research and multi-jurisdictional response planning—are excellent steps forward in meeting the needs of the fire service for both traditional responsibilities and the new responsibilities of terrorism response.

As the country braces for the unknown at home, our nation's firefighters, who are nearly always the first responders in any crisis, are woefully unprepared to fully protect our citizenry or themselves. The need is urgent and overdue. The Needs Assessment Survey of the fire service and the Council on Foreign Relations exercise on terrorism preparedness for first responders are a call to action—a challenge to our nation to respond fully to dangerous times.

Our firefighters face the same limitations and obstacles they encountered on September 11th. In fact, with the reported State and local budget cuts taking place, our firefighters face even greater limitations than they did on September 11th. We can no longer ask our fire departments to survive entirely on local tax revenue supplemented by local fundraisers. The Federal Government must provide adequate resources and support to our firefighters to meet the many challenges—whether natural, unintentional or deliberate—as they protect us and the security of our homeland.

This legislation would begin to address these urgent needs, and NFPA enthusiastically endorses it.

Mr. Chairman, thank you for the opportunity to testify today. I will be happy to answer any questions you or other members of the Committee may have.

#### BIOGRAPHY FOR JOHN R. HALL, JR.

Dr. John R. Hall, Jr. is the Assistant Vice President for Fire Analysis and Research at the National Fire Protection Association (NFPA) in Quincy, Massachusetts. Dr. Hall's division at NFPA is responsible for the measurement of the national fire problem and the communication of the results as a statistical bases for fire protection strategies.

Dr. Hall has authored or co-authored scores of articles and reports on fire statistics, effectiveness of fire service management practices, and fire risk analysis. He was formerly an Operations Research Analyst with the U.S. Fire Administration and with the National Bureau of Standards Center for Fire Research, after serving as a Senior Research Associate with the Urban Institute. He has been active in fire analysis and fire research for two decades.

He holds a B.A. in Mathematics from Brown University and a Ph.D. in Operations Research from the University of Pennsylvania. He is a member of the Institute for Operations Research and the Management Sciences, the American Society for Testing and Materials Committee E5 on Fire Tests, and the International Association for Fire Safety Science. He has served as an officer or member of the governance structure of all three organizations, and is the convener of the Fire Risk Analysis

working group of ISO TC 92 SC4. He is also a member of the Society for Risk Analysis.



499 South Capitol Street, SW, Suite 518, Washington, DC 20003 USA  
Phone: +1 (202) 488-4428 • Fax: +1 (202) 488-4452 • www.nfpa.org

July 15, 2003

Honorable Nick Smith  
Chairman  
Research Subcommittee  
Committee on Science  
U.S. House of Representatives  
Washington, DC 20515

Dear Chairman Smith:

On behalf of Dr. John Hall of the National Fire Protection Association (NFPA), thank you for providing Dr. Hall the opportunity to testify on July 17, 2003 on the U.S. Fire Administration. In accordance with the Rules Governing Testimony, this letter serves as a formal notice of the Federal funding NFPA currently receives from grant funding and for services provided.

I have attached to this letter a "Schedule of Federal Contracts/Grants Open during Fiscal 2003". If I can provide additional information please feel free to call on me.

Again, thank you for providing NFPA the opportunity to testify in support of your legislation.

Sincerely,

A handwritten signature in black ink, appearing to read "Jerry Ross", is written over a horizontal line.

Jerry Ross  
Director,  
Government Affairs

*Washington Office*

---

NFPA's mission is to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating scientifically-based consensus codes and standards, research, training, and education.

## Schedule of Federal Contracts/Grants Open During Fiscal 2003

As of: July 15, 2003

Contract Number	Title Contract Life	Agency	Contract Type	CFDA #	Agreement Amount
17140	Wildland/Urban interface '01-03 01/01/01-12/31/03 <b>01-CA-1113010120-048</b>	USDA/FS	Co-op. Agreement <i>Fed Share</i> <i>NFPA</i>	10.664 94.39% 5.61%	\$10,710,543 \$10,109,681 \$600,862
17158	Risk Watch @ Implementation Program 05/01/03-04/30/04 <b>Number has not been assigned yet.</b>	FEMA	2002 Fire Act Grant <i>Fire Prevention</i>	83.554	\$750,000
17146	Champion Mentorship Program 08/20/01-08/19/03 <b>EME-2001-GR-0355</b>	FEMA	2001 Fire Act Grant <i>Fire Prevention</i>	83.554	\$500,000
17145	Needs Assessment for Fire Service 05/30/01-01/31/03 <b>EME-2001-CA-0255</b>	FEMA	Co-op Agreement	83.AAB	\$275,710
17148	Admin. Org for Manufactured Housing 06/19/02-06/18/03 06/18/03-06/17/04 <b>C-OPC-21940</b>	HUD	Fixed/Cost Contract Phase I Phase II		\$161,980 \$60,000
17156	WTC First Person Accounts Analysis 04/14/03-05/26/03 <b>P.O. # SB1341-03-W-0471</b>	NIST	Purchase Order		\$28,500
17139	Decision Analysis Model 11/21/00-9/30/04 <b>P.O. # NA1341-01-U-0024</b>	NIST	Subcontract (HUD Prime)		\$24,822
17155	Uncertainty in Egress Models 02/01/03-11/30/03 <b>P.O. # 32917/00</b>	Ove Arup	Subcontract (NIST Prime)		\$20,000
17154	Fire Fighter Fatality 12/13/02-6/30/03 <b>P.O. # 2002-MD-341</b>	IOCAD	Subcontract (FEMA/USFA Prime)		\$8,000
			Total Fed Share		\$11,938,693
			Total NFPA Share		\$600,862
			<b>Total Grant/Contract Value</b>		<b>\$12,539,555</b>

**2003 Government Seminar Contracts**

<u>Date</u>	<u>Client</u>	<u>Mtg Cd</u>	<u>Seminar</u>	<u>Amount</u>
2/26/2003	NASA, John C. Stennis Space Center	XCN093	1-day NEC Hazard	\$5,600
3/4-6/03	TVA Tennessee Valley Authority	XCN063	3-day NEC	\$21,675
3/10-12/03	General Services Administration	XCN113	3-day LSC	\$13,800
4/22/2003	Westinghouse Savannah River Co. (WSRC)	XCN083	1-day 70E	\$10,200
5/14-5/03	US Department of State	XCN213	2-day NEC	\$16,400
4/4-8/03	Minnesota ARS	XCN-333	2-day NFPA	\$10,900
5/21-22/03	USARC-Cumberland, MD	XCN-243	2-day Managing	\$10,900
5/28-30/3	Brooke Army Medical Center	XCN-263	2-day LSC	\$13,800
6/17-19/03	Southest Naval Facility	XCN-153	2-day AS	\$13,800
6/23-24/03	Warner Robbins AFB	XCN-323	2-day NFPA	\$15,200
6/23-25/03	USMC Recruit Depot-Parris Island	XCN-283	3-day LSC	\$12,500
7/14-18/03	IMA Europe (Germany) APO,AE	XCN-203	4-day new LSC	\$29,300
7/28-30/03	Dept of the Army	XCN-303	3-day LSC	\$13,800
7/29-30/03	U.S. Air Force Reserve Command	XCN-333	2-day NFPA	\$8,500
8/19-21/03	Southwest Naval Fac. Eng Command	XCN-373	3-day LSC	\$13,800
9/3-5/03	Federal Bureau of Prisons	XCN-343	3-day LSC	\$13,800
Total Seminar Contract Income				\$223,975

## DISCUSSION

Chairman SMITH. Again, thank you very much. One of the concerns that Representative Lofgren had was the threads, and New York has got its own thread standard that it manufactures. How would we go about—other than, I mean, what we do in my home town is all of the local fire departments that tend to work with each other sit down and get together and say look, if we are going to be called in on a fire, then we have got to be able to match up with our equipment as it matches, to make sure that we can contribute when we are called in to one fire. On the thread problem, we have got an estimated four or five different standards for accommodating hookups. How would you go about—other than having local communities where you are going to call in local fire departments, try to get together and get together and say look, if we are going to make it compatible, how would you go about something like that, making it more consistent and more standard?

Dr. HALL. Well, the hose standards were actually one of the issues that led to the formation of NFPA over 100 years ago. The problem with achieving actual standardization and interoperability is always a multipart one. First, you have to have a standard, and second, you have to get compliance with the standard. There have always been jurisdictions which have, for their own reasons, decided to develop their own approaches, and it is not unusual that problems arise in interoperability when this is the case. One of the things that the Federal Government has often been able to do is not so much to develop standards that are missing as to achieve greater compliance with standards that exist. A good example is in the area of manufactured housing. When the HUD standard was developed in 1976, it basically took the language from an NFPA standard, but by becoming a federal law, it instantly achieved universal compliance with the manufacturers of manufactured housing, and there was a substantial reduction in fires and fire deaths as a direct result.

Unfortunately, over time, by having control over the development of the standard, it ceased to keep pace with new technology, so you both illustrated the specific advantage of the federal system, which is achieving compliance, and their weakness, which is maintaining modernness.

Chairman SMITH. Chief Compton, am I correct in assuming that most of the country operates similar to Michigan, that the State of Michigan provides funding for training, but essentially, the maintenance and support for local fire departments is a local effort that comes from whether it is fundraisers or local property taxes, is that the way most of the country operates?

Mr. COMPTON. Mr. Chairman, Members of the Committee, yes. That is the way that most—sort of states and communities operate. Most of the funding for fire departments is local funding, and really, the FIRE Act has been the first significant program that has provided direct support to those fire departments.

Chairman SMITH. Well, and just for the record, hopefully, the—those interested in having a stronger program, next year, when the \$900 million expires, hopefully, we can increase that to a level that is going to keep fire departments across the country in better shape

to respond to fires and emergencies that we are looking at. So, hopefully, we can call on the support of everybody that might be tuning in to this hearing today. Part of the challenge that I would like your advice on, Chief, is where we go with the grant program for fire departments to be better prepared for terrorist attacks, and how much can the Fire Administration be involved in that kind of effort as far as reviewing those grants, and I agree with the testimony that absolutely, we are going to insist that the—under the Section 33 FIRE Grant program be separated from any additional efforts for terrorist preparedness, but how—it seems to me like we have got to have fire experts to be involved in a close way in trying to decide what is reasonable for the FIRE Grant program that is going to apply just to preparing against terrorist attacks.

Mr. COMPTON. Mr. Chairman, Members of the Committee, the really separate methods of funding for preparing for some of the more extreme aspects of terrorism, but let me go back kind of to the beginning to your question. Is it—I was—I worked at Oklahoma City during the bombing there, the first seven days. I was also on the scene of the Pentagon and the World Trade Center, and those fire departments that responded there on those days did—on April 19, 1995, they responded just like they did on April 18, 1995, in Oklahoma City, and at the Pentagon, they responded the way they did on September 10, and it was the same way in New York City, and the funds that we invest in the day to day capability of our fire departments and the basic capability to deliver fire suppression services, emergency medical services, hazardous materials response, technical rescue capability, does tend to assist in preparing them more for any event that they respond to, so it is an investment in the front end of our system. We don't get a whole lot of additional assistance the day we respond to a national terrorist event. We respond the way we did the day before, from the standpoint of training and equipment.

Chairman SMITH. Yes. Excellent point. Representative Johnson.

Ms. JOHNSON. Thank you, Mr. Chairman. Do you believe that the firefighting and fire protection equipment obtained under the FIRE Grants program should conform to consensus standards where such standards exist?

Dr. HALL. I am assuming that question is for me. Yes, Representative Johnson, we very much do believe that that is an important provision of this bill. We are sensitive to the desirability of having a process that can establish equivalence to a standard, and I believe that the language that is being discussed for the bill may provide a basis for doing that. Compliance with all of our standards in all forums where they are examined for compliance always includes the possibility of equivalence and the tools to establish that something is equivalent are very much the subject of the good work at NIST. They have done a great deal to establish performance-based assessment procedures, so yes.

Mr. COMPTON. If I might add to that, many of the standards that you—we were talking about deal directly with personal protective equipment, and protecting firefighters and protecting the public, so I believe very strongly that that equipment should have to conform, but I also agree with Chief Paulison, in that the USFA needs some

latitude to deal with technologies and situations that were not anticipated, and so that we can continue to grow and improve.

Ms. JOHNSON. Thank you both. How do the fire services community get involved in the current process of developing the standards? I know that with all of the fire departments, urban and rural, across the country, there probably are some variations and some various needs, different needs as well.

Dr. HALL. In the NFPA system, we achieve a balanced representation on all technical committees and the fire service is always a part of that. They get particular emphasis in any committee that is looking at standards of particular use to them, but we always have representation also from manufacturers and researchers, the public, other interests that have something to bring.

Ms. JOHNSON. Thank you very much, Mr. Chairman.

Mr. GINGREY. Am I on? All right. Thank you, engineer. Dr. Hall and Chief Compton, despite our wealth and prosperity, it is no secret that America has one of the worst fire records among developed nations. One of the reasons often cited for this is poor attention to fire prevention. Do you agree that this is a primary reason for our higher—high injury and death rate relative to other nations? What activities does USFA focus on in terms of fire prevention, and finally, do competing agendas perhaps cause us to focus too much on response and not enough on prevention?

Dr. HALL. That is an excellent question, Representative Gingrey. I appreciate your asking it. From the very beginning, I believe the U.S. Fire Administration has taken a very balanced approach to both prevention and mitigation of fires. They have made major impacts on public fire safety education, arson prevention on the prevention side and fire detection and suppression on the mitigation side. In each instance, what they try to do, and what we at NFPA try to do, is to find out which new idea is going to make the most difference for the least money.

Quite often, those new ideas are on the prevention side, because you are quite right. Traditionally, the U.S. has paid less attention to fire prevention than other advanced countries with better fire safety records than ours.

As to the question of competing agendas, I think that the different organizations have found a great deal of success in working together and complementing each other's efforts, reinforcing each other's work, and that within the U.S. Fire Administration, they have also done a very nice job of maintaining balance, so I would not regard that as a major problem.

Mr. GINGREY. Chief Compton?

Mr. COMPTON. I look at that more in a systems—from a systems standpoint, in that there are really three elements of a fire and life safety infrastructure that we have to deal with. One is the built environment, and it deals with prevention and codes and built-in protection and those types of issues, and there are some immediate gains made in that end of our system, but for the most part, that is a long-term approach to building an environment that is safer.

The second deals with human behavior, and it is almost impossible for someone to build something that we can't mess up by our own behavior. Basically, what we take into structures, the way we behave in those structures, the—literally, the way that we—the

way we teach people to either prevent situations from happening to them, and not just fires, but others, or survive them if something does occur, and then the other is the issue of emergency response, because when we have situations that occur, which is a much more short-term part of our system, matter of fact, it is usually three to six minutes is the expectation there, but it is also a critical element. It is very difficult for fire departments to shore up the long-term solutions to our nation's fire problem, which is fire prevention and public education to some extent.

While you are trying to get on the scene within three to six minutes, and you can't do that either, and it is another reason for the FIRE Act and the SAFER legislation and bills of that nature, is that we—if we can shore up the emergency response capability of our system, we can continue to build the other. And I also—I don't know if you are all aware or not, but the FIRE Act program has a percentage of those funds set aside for fire prevention and public education programs, and it is a very important part of that Act. So I appreciate the question as well. It is an important part of our system, and it is an issue that we deal with regularly at the local level.

Mr. GINGREY. Thank you both, and I yield back my time, Mr. Chairman.

Chairman SMITH. Gutknecht.

Mr. GUTKNECHT. Thank you, Mr. Chairman. The question I was going to ask, actually essentially was asked by Representative Gingrey, but I want to come back to a couple of points. One is, and I think we have to be careful in—first of all, I think I speak on behalf of every Member of Congress and virtually every American. We are so appreciative to our firefighters and what they do every day, and we learned so much about the risks that they take on September 11th and most of us have not forgotten that lesson, but I think we have to be careful, too, and that is that you can't build a levy high enough to protect against a thousand year flood, and I am not certain that we can do enough at the state, federal, or local level to ever ultimately be ready for another act like we saw on September 11, so I think we have to be careful to over-promise what we can do here, or at the local level.

But I want to change the subject slightly, because I also chair a Subcommittee, and we are responsible for—on that Subcommittee, for all of the national forests, through the USDA, and I know that that is not necessarily your bailiwick, but I think we need to remind ourselves, too, that last year, of the some 94 million acres of federal forest land, we had wildfires which burned millions of those acres, but worse than that, we lost, I believe the number is 22 firefighters in battling those blazes.

Is there anything the USFA or any of the groups are doing, any of the technology that you are deploying or any of the things that we can do to hopefully protect more of these principally young people, who are out there whenever we have a wildfire, whether it be in Arizona or Wyoming or Minnesota, wherever it happens to be, is there anything that you are doing in your research or at NIST that can help us do a better job of preventing those wildfires, and we have some ideas of our own, in terms of what the President has proposed and I am a strong supporter of that, but then secondly,

in terms of battling those blazes more effectively and protecting the lives of those young firefighters?

Dr. HALL. You are absolutely right that that is a very important part of the total U.S. fire problem. In fact, about a third of the costliest fires of all time in the U.S. consist of wildfires from the last decade and a half, so it is an area that needs more of our attention. NFPA is active in a program called Firewise, working with the U.S. Forest Service and other kindred agencies to address a whole host of research, educational and other programs to try to improve the situation in these wildland/urban interface problems, which is the term that is commonly used. The Forest Service, I think, is doing a superb job of leadership in this area, and I believe that they reach out to the Fire Administration and to NIST in areas where there is a common goal or a common set of resources, and certainly, NIST has a long history of technology applicable to all sorts of fires.

Some of the work of the last several years, they have looked at ways of modeling and predicting the development of fire in very large situations. Initially, the oilfields of Kuwait, but it is applicable in many respects to forest fires as well. So I think the short answer to your question is that we are all treating that as a priority, and there are always opportunities to work more together.

[PA malfunction]

Mr. GUTKNECHT. Here we go. Mr. Chairman, I will pursue this more with folks from NIST, because you know, the kids that we drop into those forest fires, I mean they don't take with them much technology at all, and it seems to me, especially since we are talking about federal lands, we have a very strong moral responsibility, and I would just say this editorially, I am very concerned about what is going to happen in northern Minnesota. We have had a terrible blowdown up there, and we know that sooner or later, it is going to burn, and when it does, it is going to be a horrific fire, and yet there is little being done right now to help clean up that and get some fireblocks put in place, so that we don't lose another 22 kids, and a lot of those kids are going to be from Minnesota.

I yield back my time. Mr. Compton, if you want to say.

Mr. COMPTON. The program John mentioned, or Dr. Hall mentioned on Firewise, is a program that if you all are not familiar with it, it is something that from a national standpoint that we could pay more attention to, because it is a prevention program. It does deal with fireblocks. It does deal with this interface issue, of where you have forest firefighting, but where we may have let that burn in the past, we have homes in there now, and we—and so there is a different motivation to deal with those fires differently, so from the standpoint of training and incident command and prevention, there are programs in place that can help us do that better.

Dr. HALL. If I could just add one other point, one of the features of the bill you are considering today which I spoke well of in the full written testimony would create the kind of national response to unusually large local situations which has already been well developed in the wildland area. The preexisting state and local agreements with federal agencies which now provide an automatic trigger for bringing in outside resources when a wildfire reaches a cer-

tain size are transportable to the building environment and you have a provision in your legislation that I think would implement that concept in a very useful way.

Chairman SMITH. Well, we are just—the fire—the western fire season is just starting, the fires have already started, a tremendous challenge.

Mr. GUTKNECHT. Mr. Chairman, if I could, I would like to at least continue this dialogue privately with you, and maybe we can do some things, because one of the concerns, and I know my time has expired, is that—and we had a situation, I think, a year ago in Colorado where we had planes that could have helped put out the fire faster, but for some arcane rules relative to the National Guard and other things, they were unable to even take off, and it seems to me there ought to be some ways we in Congress—it shouldn't require an act of Congress, but in Congress perhaps can help massage those rules so that we can get at these fires more quickly and get them under control. I yield back my time. I am sorry.

Chairman SMITH. Gentlemen, again, thank you very much. Chief Compton, just your practical commonsense approach is—should be—it is an inspiration for me to try to look at ways that we can make people more conscious of doing reasonable—taking reasonable precautions in their homes and in their backyards to prevent more fires, and I was especially struck recently by what appears to be sort of the loss of our pioneer spirit of taking care of ourselves and thinking somehow, somebody else should protect us from cracks in the sidewalk or whatever.

When a tree limb started cracking and I just happened to be walking by it two weeks ago, out by the guard gate going into the Capitol, and you could hear the cracking, you know, and people looked up and just kept walking underneath it, and the limb finally came down and knocked one guy and gave him a concussion, but we are losing the—sometimes, the danger is of becoming too protective that we lose some of that pioneer spirit, that communities and individuals have to start thinking and using common sense to try to prevent more of the fires that can happen in those communities.

Gentlemen, again, thank you very much. The hearing is concluded. The Committee will convene in three minutes for a markup on the bill.

Mr. COMPTON. Thank you, Mr. Chairman.

[Whereupon, at 11:25 a.m., the Subcommittee proceeded to other business.]

## Appendix 1:

---

ADDITIONAL MATERIAL FOR THE RECORD

108TH CONGRESS  
1ST SESSION

# H. R. 2692

To authorize appropriations for activities under the Federal Fire Prevention and Control Act of 1974 for fiscal years 2004 through 2006, and for other purposes.

---

## IN THE HOUSE OF REPRESENTATIVES

JULY 10, 2003

Mr. SMITH of Michigan (for himself and Ms. EDDIE BERNICE JOHNSON of Texas) introduced the following bill; which was referred to the Committee on Science

---

## A BILL

To authorize appropriations for activities under the Federal Fire Prevention and Control Act of 1974 for fiscal years 2004 through 2006, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “United States Fire  
5 Administration Authorization Act of 2003”.

6 **SEC. 2. UNITED STATES FIRE ADMINISTRATOR.**

7 Notwithstanding section 1513 of the Homeland Secu-  
8 rity Act of 2002 (6 U.S.C. 553), the Administrator of the  
9 United States Fire Administration shall continue to be ap-

1 pointed and compensated as provided under section 5(b)  
2 of the Federal Fire Prevention and Control Act of 1974  
3 (15 U.S.C. 2204(b)).

4 **SEC. 3. NATIONAL RESIDENTIAL FIRE SPRINKLER STRAT-**  
5 **EGY.**

6 Section 30 of the Federal Fire Prevention and Con-  
7 trol Act of 1974 (15 U.S.C. 2226) is amended—

8 (1) by inserting “(a) IN GENERAL.—” before  
9 “The Director, acting”; and

10 (2) by adding at the end the following new sub-  
11 section:

12 “(b) NATIONAL RESIDENTIAL FIRE SPRINKLER  
13 STRATEGY.—The Administrator shall develop and imple-  
14 ment a strategy for promoting the installation and use of  
15 residential fire sprinklers. The strategy shall include—

16 “(1) advocacy and informational support to rel-  
17 evant stakeholders, including builders, insurers, and  
18 State and local decisionmakers;

19 “(2) promotion of residential sprinklers in resi-  
20 dences supported by the Federal Government;

21 “(3) a particular focus on residences—

22 “(A) at high risk to fire hazards; and

23 “(B) with occupants at high risk to fire  
24 hazards, such as senior citizens; and

1           “(4) a particular focus on localized fire suppres-  
2           sion in high-risk areas of residences, such as kitch-  
3           ens.”.

4 **SEC. 4. SUPPORT FOR TRAINING TO FIGHT MARITIME**  
5 **FIRES.**

6           Subsection (b)(3)(B) of the first section 33 of the  
7 Federal Fire Prevention and Control Act of 1974 (15  
8 U.S.C. 2229(b)(3)(B)) is amended by inserting “maritime  
9 firefighting,” after “arson prevention and detection,”.

10 **SEC. 5. FIREFIGHTER ASSISTANCE GRANTS PROGRAM.**

11           The first section 33 of the Federal Fire Prevention  
12 and Control Act of 1974 (15 U.S.C. 2229) is amended—

13           (1) by striking “Director” each place it appears  
14           and inserting “Administrator”;

15           (2) by amending subsection (b)(2) to read as  
16           follows:

17           “(2) ADMINISTRATIVE ASSISTANCE.—The Ad-  
18           ministrator shall establish specific criteria for the se-  
19           lection of recipients of assistance under this section  
20           and shall provide grant-writing assistance to appli-  
21           cants.”; and

22           (3) in subsection (e)(2), by striking “operate  
23           the office established under subsection (b)(2) and”.

1 **SEC. 6. AUTHORIZATION OF APPROPRIATIONS.**

2 Section 17(g) of the Federal Fire Prevention and  
3 Control Act of 1974 (15 U.S.C. 2216(g)) is amended by  
4 striking “to carry out the purposes” and all that follows  
5 through the end of subparagraph (K) and inserting “to  
6 the Administrator to carry out the purposes of this Act,  
7 other than the firefighter assistance program under sec-  
8 tion 33—

9 “(A) \$61,000,000 for fiscal year 2004;

10 “(B) \$62,830,000 for fiscal year 2005; and

11 “(C) \$65,000,000 for fiscal year 2006.”.

12 **SEC. 7. COURSES AND TRAINING ASSISTANCE.**

13 Section 7(l) of the Federal Fire Prevention and Con-  
14 trol Act of 1974 (15 U.S.C. 2206(l)) is amended by adding  
15 at the end the following: “The Superintendent shall offer,  
16 at the Academy and at other sites, courses and training  
17 assistance as necessary to accommodate all geographic re-  
18 gions and needs of career and volunteer firefighters.”.

○

108TH CONGRESS  
1ST SESSION

# H. R. 545

To provide for the establishment of a scientific basis for new firefighting technology standards, improve coordination among Federal, State, and local fire officials in training for and responding to terrorist attacks and other national emergencies, and for other purposes.

---

## IN THE HOUSE OF REPRESENTATIVES

FEBRUARY 5, 2003

Mr. CAMP (for himself, Mr. DEUTSCH, Mr. ISRAEL, Mr. ETHERIDGE, and Mr. WELDON of Pennsylvania) introduced the following bill; which was referred to the Committee on Science

---

## A BILL

To provide for the establishment of a scientific basis for new firefighting technology standards, improve coordination among Federal, State, and local fire officials in training for and responding to terrorist attacks and other national emergencies, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Firefighting Research  
5 and Coordination Act”.

1 **SEC. 2. NEW FIREFIGHTING TECHNOLOGY.**

2 (a) IN GENERAL.—Section 8 of the Federal Fire Pre-  
3 vention and Control Act of 1974 (15 U.S.C. 2207) is  
4 amended—

5 (1) by redesignating subsection (c) as sub-  
6 section (f); and

7 (2) by inserting after subsection (d) the fol-  
8 lowing:

9 “(e) DEVELOPMENT OF NEW TECHNOLOGY.—

10 “(1) IN GENERAL.—In addition to, or as part  
11 of, the program conducted under subsection (a), the  
12 Administrator, in consultation with the National In-  
13 stitute of Standards and Technology, the Inter-  
14 Agency Board for Equipment Standardization and  
15 Inter-Operability, national voluntary consensus  
16 standards development organizations, interested  
17 Federal, State, and local agencies, and other inter-  
18 ested parties, shall—

19 “(A) develop new, and utilize existing,  
20 measurement techniques and testing methodolo-  
21 gies for evaluating new firefighting tech-  
22 nologies, including—

23 “(i) personal protection equipment;

24 “(ii) devices for advance warning of  
25 extreme hazard;

26 “(iii) equipment for enhanced vision;

1           “(iv) devices to locate victims, fire-  
2           fighters, and other rescue personnel in  
3           above-ground and below-ground structures;

4           “(v) equipment and methods to pro-  
5           vide information for incident command, in-  
6           cluding the monitoring and reporting of in-  
7           dividual personnel welfare;

8           “(vi) equipment and methods for  
9           training, especially for virtual reality train-  
10          ing; and

11          “(vii) robotics and other remote-con-  
12          trolled devices;

13          “(B) evaluate the compatibility of new  
14          equipment and technology with existing fire-  
15          fighting technology; and

16          “(C) support the development of new vol-  
17          untary consensus standards through national  
18          voluntary consensus standards organizations for  
19          new firefighting technologies based on tech-  
20          niques and methodologies described in subpara-  
21          graph (A).

22          “(2) NEW EQUIPMENT MUST MEET STAND-  
23          ARDS.—For equipment for which applicable vol-  
24          untary consensus standards have been established,  
25          the Administrator shall, by regulation, require that

1 equipment or systems purchased through the assist-  
2 ance program established by section 33 meet or ex-  
3 ceed applicable voluntary consensus standards.”.

4 (b) **AUTHORIZATION OF APPROPRIATIONS.**—Section  
5 17 of the Federal Fire Prevention and Control Act of 1974  
6 (15 U.S.C. 2216) is amended by adding at the end the  
7 following:

8 “(i) **DEVELOPMENT OF NEW TECHNOLOGY.**—There  
9 are authorized to be appropriated to the Administrator to  
10 carry out section 8(e) \$2,200,000 for fiscal year 2004.”.

11 **SEC. 3. COORDINATION OF RESPONSE TO NATIONAL EMER-**  
12 **GENCY.**

13 (a) **IN GENERAL.**—Section 10 of the Federal Fire  
14 Prevention and Control Act of 1974 (15 U.S.C. 2209) is  
15 amended—

16 (1) by redesignating subsection (b) as sub-  
17 section (c); and

18 (2) by inserting after subsection (a) the fol-  
19 lowing:

20 “(b) **MUTUAL AID SYSTEMS.**—

21 “(1) **IN GENERAL.**—The Administrator, after  
22 consultation with the Director of the Federal Emer-  
23 gency Management Agency, shall provide technical  
24 assistance and training to State and local fire serv-  
25 ice officials to establish nationwide and State mutual

1 aid systems for dealing with national emergencies  
2 that—

3 “(A) include threat assessment and equip-  
4 ment deployment strategies;

5 “(B) include means of collecting asset and  
6 resource information to provide accurate and  
7 timely data for regional deployment; and

8 “(C) are consistent with the Federal  
9 Emergency Management Agency’s Federal Re-  
10 sponse Plan.

11 “(2) MODEL MUTUAL AID PLANS.—The Admin-  
12 istrator, in consultation with the Director of the  
13 Federal Emergency Management Agency, shall de-  
14 velop and make available to State and local fire serv-  
15 ice officials model mutual aid plans for both intra-  
16 state and interstate assistance.”.

17 (b) REPORT ON STRATEGIC NEEDS.—Within 90 days  
18 after the date of enactment of this Act, the Administrator  
19 of the United States Fire Administration shall report to  
20 the Senate Committee on Commerce, Science, and Trans-  
21 portation and the House of Representatives Committee on  
22 Science on the need for a strategy concerning deployment  
23 of volunteers and emergency response personnel (as de-  
24 fined in section 6 of the Firefighters’ Safety Study Act

1 (15 U.S.C. 2223e), including a national credentialing sys-  
2 tem, in the event of a national emergency.

3 (e) UPDATE OF FEDERAL RESPONSE PLAN.—Within  
4 180 days after the date of enactment of this Act, the Di-  
5 rector of the Federal Emergency Management Agency  
6 shall—

7 (1) revise that Agency’s Federal Response Plan  
8 to incorporate plans for responding to terrorist at-  
9 tacks, particularly in urban areas, including fire de-  
10 tection and suppression and related emergency serv-  
11 ices; and

12 (2) transmit a report to the Senate Committee  
13 on Commerce, Science, and Transportation and the  
14 House of Representatives Committee on Science de-  
15 scribing the action taken to comply with paragraph  
16 (1).

17 **SEC. 4. TRAINING.**

18 (a) IN GENERAL.—Section 7(d)(1) of the Federal  
19 Fire Prevention and Control Act of 1974 (15 U.S.C.  
20 2206(d)(1)) is amended—

21 (1) by striking “and” after the semicolon in  
22 subparagraph (E);

23 (2) by redesignating subparagraph (F) as sub-  
24 paragraph (N); and

1 (3) by inserting after subparagraph (E) the fol-  
2 lowing:

3 “(F) strategies for building collapse rescue;

4 “(G) the use of technology in response to  
5 fires, including terrorist incidents and other na-  
6 tional emergencies;

7 “(H) response, tactics, and strategies for  
8 dealing with terrorist-caused national catas-  
9 trophes;

10 “(I) use of and familiarity with the Fed-  
11 eral Emergency Management Agency’s Federal  
12 Response Plan;

13 “(J) leadership and strategic skills, includ-  
14 ing integrated management systems operations  
15 and integrated response;

16 “(K) applying new technology and devel-  
17 oping strategies and tactics for fighting forest  
18 fires;

19 “(L) integrating terrorism response agen-  
20 cies into the national terrorism incident re-  
21 sponse system;

22 “(M) response tactics and strategies for  
23 fighting fires at United States ports, including  
24 fires on the water and aboard vessels; and”.

1 (b) CONSULTATION ON FIRE ACADEMY CLASSES.—  
2 The Superintendent of the National Fire Academy may  
3 consult with other Federal, State, and local agency offi-  
4 cials in developing curricula for classes offered by the  
5 Academy.

6 (c) COORDINATION WITH OTHER PROGRAMS TO  
7 AVOID DUPLICATION.—The Administrator of the United  
8 States Fire Administration shall coordinate training pro-  
9 vided under section 7(d)(1) of the Federal Fire Prevention  
10 and Control Act of 1974 (15 U.S.C. 2206(d)(1)) with the  
11 Attorney General, the Secretary of Health and Human  
12 Services, and the heads of other Federal agencies—

13 (1) to ensure that such training does not dupli-  
14 cate existing courses available to fire service per-  
15 sonnel; and

16 (2) to establish a mechanism for eliminating  
17 duplicative training programs.