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AUTHORIZATIONS FOR THE FEDERAL FIRE PREVEN-

GOVERNMENT

TION AND CONTROL ACT OF 1974

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DOCUMENTS

DEC 20 1978

HEARING

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BEFORE THE

SUBCOMMITTEE FOR CONSUMERS

OF THE

COMMITTEE ON COMMERCE,
SCIENCE, AND TRANSPORTATION

UNITED STATES SENATE

NINETY-FIFTH CONGRESS

SECOND SESSION

ON

S. 1794

TO AUTHORIZE APPROPRIATIONS FOR THE FEDERAL FIRE
PREVENTION AND CONTROL ACT OF 1974, AND TO CHANGE
THE NAME OF THE NATIONAL FIRE PREVENTION AND CON-
TROL ADMINISTRATION TO THE UNITED STATES FIRE
ADMINISTRATION

MARCH 14, 1978

Serial No. 95-120

Printed for the use of the
Committee on Commerce, Science, and Transportation

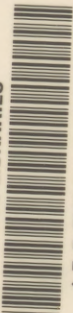


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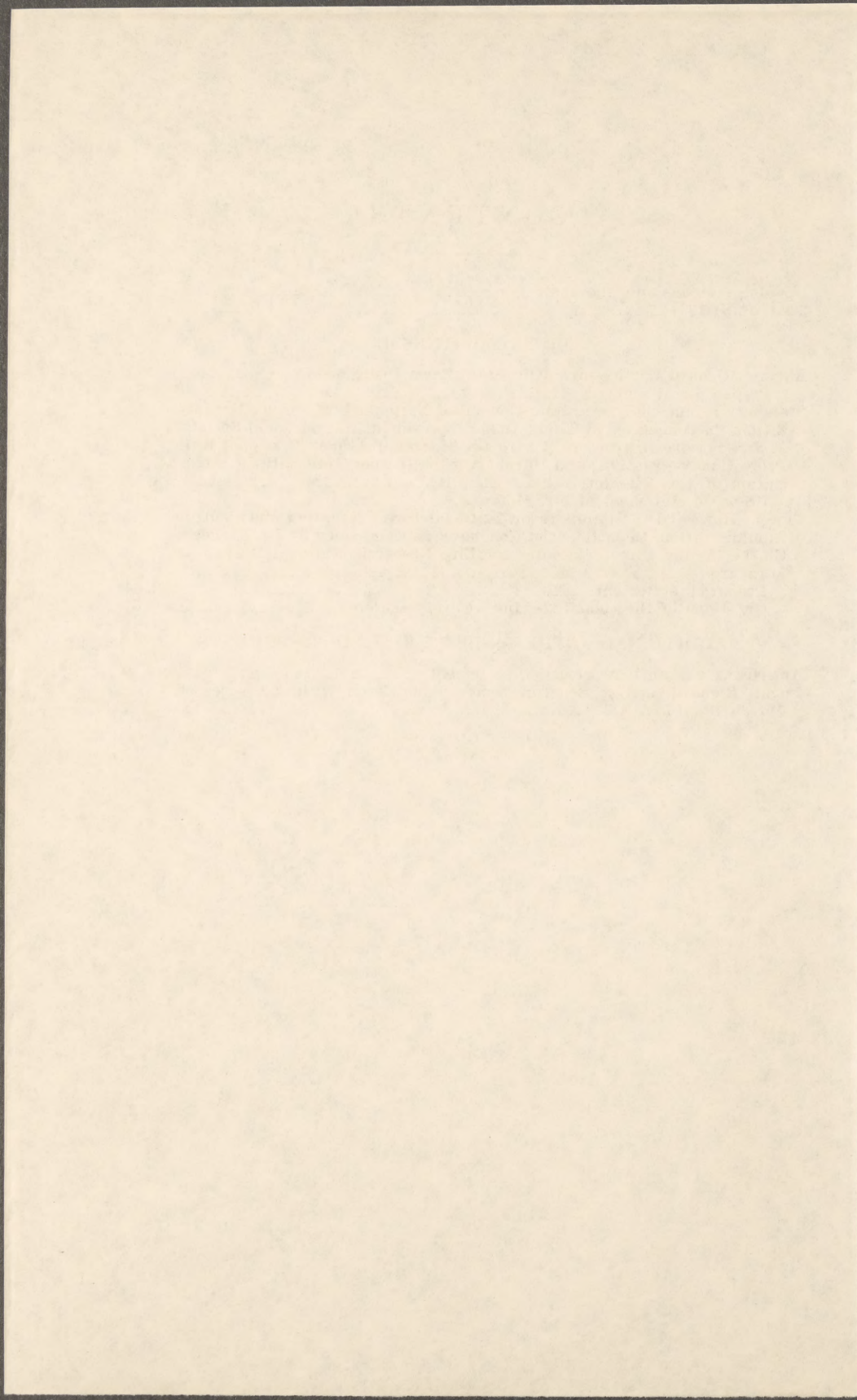
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AUTHORIZATIONS FOR THE FEDERAL FIRE PREVENTION AND CONTROL ACT OF 1974

TUESDAY, MARCH 14, 1978

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE,
AND TRANSPORTATION,
SUBCOMMITTEE FOR CONSUMERS,
Washington, D.C.

The subcommittee met at 10:40 a.m. in room 235, Russell Senate Office Building, Hon. Howard W. Cannon (chairman of the committee) presiding.

OPENING STATEMENT BY THE CHAIRMAN

The CHAIRMAN. The hearing will come to order.

Today's hearing on the Federal Fire Prevention and Control Act of 1974 provides this committee an opportunity to examine the adequacy of Federal fire programs. Fire continues to be one of the most serious threats to public health and safety. The National Fire Prevention and Control Administration (NFPCA), which Congress created to direct Federal fire prevention activities, has now been in existence for 3½ years. The NFPCA has passed its formative stage. We in the Congress must now judge whether it is satisfactorily fulfilling its goal of significantly reducing loss of life and property due to fire.

The National Fire Prevention and Control Administration was created by the Congress in recognition of the fact that the United States fire programs were inadequate. This committee played a major role in its formation. The Congress determined that it is unacceptable that the United States, the richest and most technologically sophisticated country in the world, continues to have the worst record of deaths, injuries, and property damage of any of the advanced nations.

Each year it is estimated that 7,500 people in the United States die from fire and 300,000 more are injured. Direct property damage from fire is \$4 billion annually, and it is estimated that the total cost of fire in the United States is more than \$13 billion per year.

These statistics, however impressive, are abstractions. The true cost of fire cannot be understood until one has seen a young child, an old person, or any victim of a fire, horribly scarred and permanently maimed and realizes that this tragedy is multiplied thousands of times each year throughout this Nation.

The fire problem is insidious. A major fire catastrophe can momentarily galvanize us to action. But too often, we find ourselves ignoring

or treating as inevitable the fact that every hour someone dies from fire injuries in this country.

The Congress formed the National Fire Prevention and Control Administration to assure forceful leadership in the fire area. Congress determined that in order to improve our fire prevention programs, we would have to develop an adequate statistical base in order to set priorities. We would have to greatly increase fire research and development efforts. We would have to teach our children and the public at large how to prevent fires, and how to respond to them quickly and effectively if they develop.

Congress further determined that a National Fire Academy should be created. The Academy was to provide an opportunity for firefighters across the country to be educated in the most advanced techniques of firefighting theory and practice.

Finally, the Congress determined that far more had to be done to insure the safety of firefighters. Our 2 million firefighters have the highest rate of fatalities and injuries of any of our professions. As many as 60,000 firefighters were injured in 1976. Such a toll is unacceptable.

Today, we intend to carefully analyze whether the NFPCA has carried out Congress mandate. We will determine how effective the NFPCA's programs have been in the past and what its plans are for the future. We will carefully examine the status of the development of the National Fire Academy.

Also, we will determine what the National Fire Prevention and Control Administration is doing in combating one of the fastest growing crimes in the United States—the crime of arson.

Finally, we intend to examine how the National Fire Prevention and Control Administration is interacting with the multitude of other Federal agencies that play a role in fire prevention and suppression.

[The bill follows:]

95TH CONGRESS
1ST SESSION

S. 1794

IN THE SENATE OF THE UNITED STATES

JUNE 30 (legislative day, MAY 18), 1977

Mr. MAGNUSON (for himself and Mr. PEARSON) (by request) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

A BILL^{*}

To authorize appropriations for the Federal Fire Prevention and Control Act of 1974, and to change the name of the National Fire Prevention and Control Administration to the United States Fire Administration.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*
3 That the Federal Fire Prevention and Control Act of 1974,
4 as amended (15 U.S.C. 2201 et seq.), is amended as
5 follows:

6 (a) Section 17 is amended by striking out the words
7 “except section 11 of this Act,” by striking out the word
8 “and” after the words “September 30, 1977,” and by
9 inserting before the period at the end thereof the following:

1 “, and such sums as may be necessary for each of the fiscal
2 years ending September 30, 1979”.

3 (b) By striking out each time they appear in the Act
4 the words “National Fire Prevention and Control Admin-
5 istration” and inserting in lieu thereof the words “United
6 States Fire Administration”.

7 SEC. 2. Section 16 (b) of the Act of March 3, 1901, as
8 amended (15 U.S.C. 278f (b)), is amended by striking
9 out the word “and” after the words “September 30, 1977,”
10 and by inserting before the period at the end thereof the
11 following: “, and such sums as may be necessary for each
12 of the fiscal years ending September 30, 1979”.

The CHAIRMAN. Mr. Tipton, we look forward to receiving your testimony in regard to these very serious issues.

STATEMENT OF HOWARD D. TIPTON, ADMINISTRATOR, NATIONAL FIRE PREVENTION AND CONTROL ADMINISTRATION, DEPARTMENT OF COMMERCE; ACCOMPANIED BY DR. FREDERIC CLARKE, ACTING DIRECTOR, CENTER FOR FIRE RESEARCH, NATIONAL BUREAU OF STANDARDS

Mr. TIPTON. Thank you, Mr. Chairman.

We are pleased to appear before the committee this morning to request authorization under the Federal Fire Prevention and Control Act of 1974 for appropriations for fiscal year 1979.

Dr. Frederic Clarke, who is Acting Director of the Center for Fire Research at the National Bureau of Standards, is here at the table with me.

We also request a name change from the National Fire Prevention and Control Administration to the U.S. Fire Administration because there has been confusion with the National Fire Protection Association, which has been a longstanding private organization in the fire prevention field.

We are also requesting a minor technical amendment for the claims program. In the interest of time we are summarizing our testimony.

There are five divisions of the Fire Administration: the Fire Academy; the Center for Fire Research at the National Bureau of Standards, with which we have a close working relationship; the Public Education Office; the Fire Safety and Research Office; and our Fire Data Center.

We have prepared a very brief slide show to provide an overview of the program. With your permission, we will proceed.

Mr. Clay Hollister.

[Slide show.]

The CHAIRMAN. Would you supply us a text of your slide presentation for the record?

Mr. TIPTON. Yes, sir. We would be pleased to do that.

[The following information was subsequently received for the record:]

FIRE: THE FACT OF MATTER

NFPCA SLIDE/TAPE SHOW

- | | |
|------------------------------------|---|
| 1. Children playing | I would like to show you some people... |
| 2. Elderly lady on a park bench | |
| 3. Family picnic | ...and ask you a question about them. |
| 4. Crowded city street | What do these people have in common? |
| 5. Row of houses | And these homes... |
| 6. Interior of factory | ...factories... |
| 7. Aerial of city | ...and cities. What do <u>they</u> have in common? |
| 8. House, smoke coming from window | |
| 9. House, flames visible | They can burn. |
| 10. House, fully involved | Fire does this... |
| 11. Injured firefighter | ...and this... |
| 12. Burn victim's scarred back | ...and this. It is a fact of matter. |
| 13. Statistics graphic | In the next 24 hours, statistics predict that fires in America will kill 20 people and injure 849. What do these numbers mean? |
| 14. Statistics graphic | In Vietnam from 1961-72, over 45,000 American died in battle, 300,000 were injured. During the same period in American, approximately 100,000 died in fires and 2,600,000 were injured. |
| 15. Burned man under treatment | And there is no injury more painful or disfiguring than a burn. |

16. Burn doctors

And no treatment is more expensive. It costs about \$600.00 a day to treat a burn patient and this treatment can last for months.

17. Statistics graphic

Property loss is equally dramatic. Look at this prediction for the next 24 hours: 2,366 homes, 266 businesses, 159 industrial plants will succumb to fire.

18. Burning building

Each year, fire costs our country at least 13 billion dollars. It is a fact that fire takes this fearsome toll in human life, suffering and resources.

19. American Burning Report

America is Burning and the Federal government in response to this Congressional report has created...

20. NFPCA LOGO

...the National Fire Prevention and Control Administration.

21. NFPCA graphic
50% reduction

Its mission: to reduce our Nation's fire loss by 50% in the next generation. All the resources of the Administration are being directed to the achievement of this goal.

22. DATA Title

The starting point: Data, the prime responsibility of the Data Center is to describe the magnitude and characteristics of our National fire problem and...

23. Data expert and local
fire chief

...on the state and local level, to provide the tools and technical assistance to help them identify their own fire problems.

24. Hands on Map

Such information will help Federal and local authorities accurately target fire prevention and protection programs and measure their effectiveness.

25. Big Fire

Knowing what caused this fire could help an engineer, inspector or government official take the steps necessary to prevent a recurrence.

26. "Technology Abstract" in Reference Center
Through the Data Center's Reference Service, critical technical information is made available to the fire service industry and government.
27. Burning home
This home fire will never make the national press. But did you know that residential fires such as this cause 2/3 of our fire deaths?
28. Injured firefighter
This man rarely gets more than one line in the local paper. But did you know that, in terms of death rates, firefighting is our nation's most hazardous profession? Data such as this determines the major tasks of...
29. NFSRO Title
...The Fire Safety and Research Office. Here, studies of our residential fire problems are leading to the development of...
30. Smoke Detector
...efficient cost effective home detection and suppression systems. And for...
31. Firefighter physical test
...the health and safety of the firefighter a program with the University of Maryland has established the first firefighters physical fitness criteria.
32. Firefighters with air masks
Under a joint program with NASA safer protective equipment for the firefighter is being designed and developed. (pause) But these firefighters and the lives and buildings they protect do not exist in a vacuum.
33. Fireman at map
They are part of a community or states' total fire problem. A problem which can be controlled through the implementation of...
34. Master Plan Book
...the Safety and Research Office's Master Planning Program. Structured on innovative management research, Master Planning presents the methodology for a state or community to achieve greater fire protection with available resources.

35. Inspector

Another critical aspect of community fire protection is the development and implementation of codes and standards.
36. Blueprint with Super codes and standards cost effective, enforceable

The Safety and Research Office is developing analytical tools to determine their cost effectiveness and enforceability.
37. CFR Title (NBS)

The basic research for such studies is largely drawn from the testing done at the Center for Fire Research.
38. Room test fire-small

Working in conjunction with the Fire Administration, the Center's scientists and analysts look at fire...
39. Room test fire-larger

...as a chain of events, and try to discover where...
40. Room test-flashover

...in its sometimes violent growth, this chain can be broken.
41. Flammable fabrics test

They study the products that often lead to fires...
42. Burning chair test

...the furnishings that provide the fuel...
43. Mobile home test

...the environments in which fire occurs and how it spreads...
44. Fire test

...the chemistry and toxicology of the fire itself...
45. Smoke Detector

...detection systems to alert occupants...
46. Sprinkler head working

...and finally, suppression systems to knock the fire down.
47. Firehouse at night, door open

But the results of our research must be delivered to those whose lives and property we are committed to save.
48. PEO Title

The Public Education Office studies the needs of our high risk groups...
49. "Behavior" cartoon

...considers the complex behavioral attitudes people have toward fire safety...

50. "Planning" Publication
and then applies a systematic plan to develop programs and materials that speak directly to the needs and perceptions of the group.
51. Children practicing Stop-Drop-Roll
Programs that teach skills to save lives.
52. Burned-out electrical socket
Programs that can change peoples behavior toward fire safety...
53. Edmonds statistics
...and actually reduce a community's residential fires, over a two year period, from 164 to 26. This home survey program...
54. Miss Flame
...is now being implemented by the National Council on Aging, ACTION and the Community Services Administration.
55. Burning building
This is the result of Arson. But arson can be...
56. Boston Newspaper
fought. An education project in Boston led to the recent break up of a large arson ring.
57. Youth lighting up a cigarette
Public Education means helping Los Angeles County design a program for youthful firesetters that reduced the incidents in one year from 169 to 8.
58. Smoke Detector Manuals
The work of the scientists and the statisticians is studied, adapted, tested...
59. Education Conference Map
...packaged and disseminated across the country...
60. Smoke Detector Workshop
...to provide people with the skills and knowledge necessary...
61. Fire educator presenting smoke detector program to citizens
...to help them and their community reduce our loss to fire.
62. Firefighters working
But there will always be a need for men such as these. Ultimately, the prevention and suppression of fire rests on their shoulders. And in today's world, fire is a highly complex problem...

63. ACADEMY CAPTION
...that requires training and education in a wide variety of disciplines. The National Fire Academy is fulfilling this need.
64. Campus
The hub of the National Fire Training & Education System will be located in Washington, D. C.
65. Campus
When the remodeling is finished, the Academy will be holding courses here for over 4000 fire service and fire related personnel each year.
66. Firefighters by truck
But there are approximately 2 million in our country's fire service. The Academy must provide courses in the field.
67. Delivery system graphic
To do this, the Academy Planning and Assistance Program is working with the states, developing their capacity to deliver courses at the local level.
68. Classroom scene
Courses in Education Methodology for instructors.
69. Classroom scene-Chiefs
...executive development for department managers...
70. Classroom scene
...Fire Service Technology dealing with such subjects as arson investigation and code enforcement...
71. Architect and Fire Inspector at building sites
...and inter-disciplinary programs for architects, engineers and building inspectors.
72. Loss reduction graphic
The Fire Administration is working for this. To make our nation's tragic and wasteful fire loss decline.
73. Burning building
To roll back these flames...
74. Hand holding burning match
...and bring fire under control.
75. Firefighter
We owe it to him.
76. Child
We owe it to her. Those are the facts...
77. NFPCA Logo
The facts that most certainly matter.

Mr. TIPTON. Mr. Chairman, we do have a serious fire problem in this country. We lose about 8,000 people a year to fire, and there are some 300,000 injuries and a little over \$4 billion in property loss.

The National Commission on Fire Prevention and Control in their report, "America Burning," envisioned a comprehensive Federal program from research to delivery locally of the latest technology emphasizing prevention.

We are very proud of the model of technology delivery that we have in our Federal program. We have an excellent laboratory; we have a data system; a public education program; and through our National Fire Academy and our relations with State and local fire people, we are able to deliver that latest technology to the folks at home, where the real fire problem exists.

There were two concerns that the National Commission emphasized. The first was that we need to emphasize more prevention; that is the thesis of our act. Second, fire is a local problem and any kind of strategy developed must be a strategy that can be implemented locally.

We believe that we have made some worthwhile accomplishments, which are included in my full testimony. We think we have the knowledge to reduce fire, if we can get it out to the folks at home.

Thank you; and that concludes my summarized testimony.

Now Dr. Clarke.

Dr. CLARKE. Thank you, Mr. Tipton.

Mr. Chairman, I am Frederic Clarke, the Acting Director of the Center for Fire Research, National Bureau of Standards. If I may, I would like to take a few moments to summarize my testimony regarding some of the recent accomplishments at the Fire Research Center.

The Fire Research Center was established by the Federal Fire Prevention and Control Act of 1974, and charged with conducting basic research into the causes and effects of fire and for devising technical means whereby those fire losses can be reduced.

In establishing the Center, the mechanism was laid for a close consultation and working relationship with the Administrator of the Fire Administration so that priorities could be readily identified and closely coordinated.

The new Center's program is divided into a basic research effort and applied research effort. The basic research effort deals with the underlying principles of fire and this information is fed to the applied side of the program which develops directly recommended code revisions, proposed test methods, standards, and other technical measures which lead to fire loss reduction. Implementation of those measures then go to the voluntary standards network, the model code groups and particularly through the output mechanisms of the National Fire Administration—for example, the National Fire Academy, the Fire Research and Safety Office, and Public Education Office.

Now, while the NBS has been doing fire research for 50 years, the Fire Act of 1974 provided the loss-reduction focus for those efforts. In fact, when they established the Fire Research Center, that charge was very carefully laid by the Congress. As a result of that, we have spent some time in the planning efforts designed to bring those technical resources to bear on the loss-reduction problem.

The way we accomplished that was to take a scenario approach, as you heard alluded to in the film, whereby the chains of events leading to fire are analyzed and strung together and strategy is laid for breaking the chain and avoiding the loss.

The first plan went between 1979 to 1981. I am presently working with my staff to revise that plan, because some of the levels of support which we anticipated did not materialize. As a result we have had to reschedule some of those milestones and revise some of the priorities.

Mr. Chairman, my statement lists about 13 or 14 major accomplishments of our research program, which will appear in the record.

I would like to discuss just one of those with you right now, and that is the problem of combustion-product toxicology which is one of the major unexplored areas of fire loss.

While most people who die in fires bear no mark of burns, and they are subsequently thought to be victims of smoke inhalation, the actual cause of deaths, toxicity of the combustion products or whatever it might be, is something of which the fire community has little knowledge. We are pleased to contribute to that knowledge with a development of new test protocols which will allow industry and manufacturers to screen products before they are put on the market to identify any that would produce potentially extremely toxic combustion products.

Down the way, in the next year or two, we would expect to provide the regulatory officials with a means to help assess the risk of toxic gases posed by fires in buildings. That will be accomplished by combining the toxicity data which is now under development with the results of fire spread and growth studies which are also under way.

Mr. Chairman, the balance of my remarks are, of course, going to be submitted, and with that I would like to conclude and thank you.

The CHAIRMAN. The complete statement will be made a part of the record.

Are you able to provide us with any quantifiable statistics to show what effect the NFPCA programs have had on the lessening of fire deaths or injuries or property damage in this country at the present time?

Mr. TIPTON. Mr. Chairman, we are able to present statistics in which we do not have full confidence, simply because we have only statistics based on our first two States reporting for a full year. We have 9 States reporting to us at this time, and we will have some 19 States by the end of this year. We expect to have a great deal more confidence in our next annual report estimate, but with the report that we have now, we can at least show some base lines.

We are very hesitant to talk about what has been done nationwide when our base line has not been established. We need about 19 States to have some confidence in established base-line figures. We hope to have those after those 19 States report for 1 year.

The CHAIRMAN. Until that base line is established, are you able to satisfactorily allocate where the spending of your money ought to go?

Mr. TIPTON. Mr. Chairman, we have brought together the best professionals in this country, and depend upon their wisdom, together with in-depth analysis in the research of fire problems. We have been able

to secure information from others, like insurance companies, who have certain analyses, or the National Fire Protection Association. We have been able, through those types of surveys, to set priorities which we think are aimed at the real fire problems. We have set priorities; we have a 5-year plan.

We think we are organized, but we do not have full confidence in our statistics at this time.

The CHAIRMAN. Do you have adequate manpower in your department to carry out the mandate that Congress has imposed on you?

Mr. TIPTON. Mr. Chairman, the National Commission on Fire Prevention and Control estimated in 1973 that an adequate program level would be about \$128 million a year for this program to operate with the State and local assistance that it is supposed to provide. We have been operating at about 10 percent of that level, and of course we are concerned that if we are going to reach a goal of 50-percent reduction in the next generation of fire deaths and injuries, it will be difficult for us to do that if we do not have those kinds of resources.

The CHAIRMAN. Did you request an allocation of more funds and were denied that level in the budget process?

Mr. TIPTON. Yes, sir. We requested of the Department of Commerce, \$58 billion for 1979, approximately; the Department of Commerce requested approximately \$28 million; from the Office of Management and Budget, and of course the President's budget is \$17.8 million.

The CHAIRMAN. Do you think you are going to be able to carry out your program in light of those kinds of cuts?

Mr. TIPTON. It will be very difficult. We will do the best job we can.

The CHAIRMAN. Well, that does not really tell me much, when you say you will do the best job you can. I am sure you would. But do you think you can carry out an effective program within those limits?

Mr. TIPTON. No, sir.

The CHAIRMAN. Are you going to have to abandon some of the programs that you had anticipated carrying out?

Mr. TIPTON. Many of the programs that we had planned for are not going to come to fruition because we do not have the resources provided; that is correct.

The CHAIRMAN. Which ones do you think are the most important ones that you will have to abandon?

Mr. TIPTON. Mr. Chairman, I have here a detailed statement listing the number of programs that were requested that we will not be able to proceed with, and in particular a summary of that in the statement which I would like to submit for the record.

The CHAIRMAN. That will be made a part of the record.

[The information follows:]

NATIONAL FIRE PREVENTION AND CONTROL ADMINISTRATION—1979 BUDGET HISTORY FOR PROGRAM INCREASES
[Dollar amounts in thousands]

Program/line item/item	Request to Secretary		Staff recommendation		Requested appeal		Request to OMB		OMB allowance	
	Permanent positions	Amount	Permanent positions	Amount	Permanent positions	Amount	Permanent positions	Amount	Permanent positions	Amount
National Fire Academy:										
A. Operations, planning, and evaluation:										
1. Establish physical Academy facility	2	\$505	2	\$400			2	\$400		
2. Establish program evaluation system	3	129								
Subtotal	5	634	2	400			2	400		
B. Education and training development:										
1. Instructional resource service	8	619								
2. Develop effective teaching techniques	2	140								
3. Model fire service entrance/promotion examinations	1	74								
4. Establish an adjunct faculty	4	1,053	4	1,053			4	1,053		
5. Fire safety program for practitioners in the field of architecture	1	64								
6. Executive development series	5	437								
7. Innovative grants program	2	2,049								
8. Open university system	2	349								
Subtotal	25	4,785	4	1,053			4	1,053		
C. Assistance programs:										
1. Master planning technical assistance	5	2,506	5	2,506			5	2,506		
2. Academy planning assistance program (APAP)	3	1,057	3	1,057			3	1,057		
3. Student assistance (onsite)	3	6,893			2	\$2,062				
4. Student assistance (onsite)	1	1,032	1	1,032			1	1,032		
5. Student assistance (loans for research)	1	106								
Subtotal	13	11,594	9	4,595	2	2,062	9	4,595		

NATIONAL FIRE PREVENTION AND CONTROL ADMINISTRATION—1979 BUDGET HISTORY FOR PROGRAM INCREASES—Continued

[Dollar amounts in thousands]

Program/line item/program	Request to Secretary		Staff recommendation		Requested appeal		Request to OMB		OMB allowance	
	Permanent positions	Amount	Permanent positions	Amount	Permanent positions	Amount	Permanent positions	Amount	Permanent positions	Amount
Public Education:										
A. Operations:										
1. Administration, planning, and evaluation	43	\$17,013	15	\$6,048	2	\$2,062	15	\$6,048		
Subtotal, National Fire Academy										
B. Assistance program:	2	80	2	80			2	80	2	\$80
1. Burn prevention catalog	1	83	1	83			1	83		
2. Resource manuals	2	160	2	160			2	160		
3. Public education assistance program (PEAP)	3	178	3	178			3	178		
4. Technical assistance	5	284								
Subtotal										
	13	785	8	501			8	501		
C. Education, research and development:										
1. Fire graphic standards		114								
2. Evaluation methods	2	160								
3. Children with matches	1	222								
4. Elderly fire education		218								
5. Residential fire survey		190								
6. Smoke detector education	1	250								
7. Urban fire loss reduction	2	1,101			2	1,101	1	500	1	500
8. Rural fire loss reduction		74								
9. Commercial/industrial		198								
10. Juvenile fire setting prevention		291								
11. Arson prevention										
Subtotal										
	6	2,918			2	1,101	1	500	1	500
Total	19	3,703	8	501	2	1,101	9	1,001	3	580

NATIONAL FIRE PREVENTION AND CONTROL ADMINISTRATION—1979 BUDGET HISTORY FOR PROGRAM INCREASES—Continued

[Dollar amounts in thousands]

Program/line item/item	Request to Secretary		Staff recommendation		Requested appeal		Request to OMB		OMB allowance	
	Permanent positions	Amount	Permanent positions	Amount	Permanent positions	Amount	Permanent positions	Amount	Permanent positions	Amount
D. Analysis and evaluation:										
1. National estimates.....	4	\$227	4	\$227				\$143	2	\$143
2. Scenario and strategy analysis.....	1	132								
3. Validation of NFIRS data.....	2	97	2	67			1	51	1	51
4. Rural fire problem.....		95		95				95		95
5. Fires of unknown cause.....		95								
6. Improving dollar loss estimates.....	1	112		83				83		83
7. Prototype analyses.....		267								
8. Estimating fire risks.....		67								
9. Indirect cost of fire protection.....		123								
10. U.S.-foreign fire experience differences.....		156								
11. Household fire survey.....		698								
12. Evaluating major fire protection programs.....		225								
13. Specific analysis for fire departments.....		310								
Subtotal.....	9	2,570	6	472			5	372		372
E. Computer systems support.....	2	119	1	17			1	17		
Subtotal, National Fire Data Center.....	27	7,493	16	2,522	1	\$500	16	2,522	6	1,226
Fire technology and management research:										
A. Operational planning, and evaluation:										
1. National fire research and development policy.....	2	300	2	300			2	300	1	300
2. Program management.....	2	100								
Subtotal.....	4	400	2	300			2	300	1	300
B. Technology development:										
1. Firefighters protective equipment handbook.....		200								
2. Firefighters physical fitness program.....	1	300								
3. Assessment of arson detection equipment.....		175		50				50		
4. Training simulator for service officers.....	1	475								

5. Residential fire technology development.....	7	2,010	3	550	3	550	
a. Smoke detectors.....	(2)	(400)					
b. Remote early warning systems.....	(3)	(900)	(2)	(400)	(2)	(400)	
c. Automatic residential suppression systems.....	(1)	(560)					
d. Impact evaluation.....	(1)	(150)	(1)	(150)	(1)	(150)	
Subtotal.....	9	3,160	3	600	3	600	
C. Management research and policy:							
1. Fire safety effectiveness statements.....	4	500					
2. Fire engineering guides.....	2	400					
3. Master planning support.....	2	500					
4. Management studies.....	4	1,000	3	600	2	500	1
5. Building and fire code analysis.....	3	750	3	300	3	300	1
Subtotal.....	15	3,150	3	300	5	800	2
Subtotal, fire technology and management research.....	28	6,710	8	1,200	10	1,700	3
Fire Research Center:							
A. Fire research:							
1. Toxicity studies.....	4	550					
2. Arson investigation techniques.....	11	500					
3. Residential design concepts.....	8	790	(4)	430	(4)	430	
4. Residential fire protection systems.....	3	400	(3)	400			
Subtotal.....	26	2,240	(4)	430	(4)	430	
B. Fire research facility.....	26	2,700	(3)	2,700			
Subtotal, Fire Research Center.....	26	4,940	(4)	430	(4)	430	
Administration and operations:							
A. General Administration:							
1. Planning and evaluation.....	4	372	4	372	4	372	3
2. Office of Administration.....	14	462	3	80	3	80	
3. Office of the Chief Counsel.....	14	462	4	120	4	120	
4. Office of Information Services.....	4	143	1	20	1	20	
Subtotal.....	36	1,439	12	592	12	592	3
B. Facility operations and maintenance.....	11	1,298	11	1,298	11	1,298	
C. Office of Policy:							
1. Intergovernmental relations.....	32	1,563					
2. Federal interagency relations.....	2	304					
Subtotal.....	34	1,876					
Subtotal, administration and operations.....	81	4,604	23	1,890	23	1,890	3
Total, NFPCA increase.....	224	44,463	70	12,591	73	13,591	15

Mr. TIPTON. I would say first we are quite concerned about our National Fire Academy. We believe the only way, really, we are going to change the way fire departments operate toward a greater prevention mode is by an education and training program with the future leaders and by training the trainers.

Second, we are very concerned about our State and local technical assistance program. Unless there is an ability to interface with people when they need assistance, for example, in community fire protection master plans, it is very difficult for people who have not been trained in that subject to understand what risk analysis means.

Further, in areas like arson, where we have a significant problem in this country, there are programs that we are aware of in communities than can be used as models and be brought to other communities. We have some special expertise in this area. We think that in working with a number of programs, a number of communities, we can show an actual arson reduction. So those are three examples.

The CHAIRMAN. What is your best estimate for the economic cost of arson-related fires, per year?

Mr. TIPTON. Well, it is not a very good estimate, but it is somewhere around \$1 billion, and somewhere around 1,000 deaths nationally.

The CHAIRMAN. How much of your budget and your manpower are you directing toward that problem?

Mr. TIPTON. Mr. Chairman, I would have to submit that for the record. I have not added up all those different numbers and different program areas.

The CHAIRMAN. At the same time that you submit that, will you tell us how much you requested of the Secretary for those types of programs for the year and then how much was requested of OMB?

Mr. TIPTON. Yes, sir. I will be pleased to do that.

[The following information was subsequently received for the record:]

NATIONAL FIRE PREVENTION AND CONTROL ADMINISTRATION ARSON BUDGET

Request to Commerce:

Base:

Academy courses.....	194,000
Public education.....	17,000
Data.....	15,000
Center for Fire Research.....	92,000
Arson coordinating committee.....	5,000

Total base.....¹ 323,000

Increases:

Public education (arson prevention).....	291,000
Data (arson data collection system).....	259,000
Fire safety and research (assessment of arson detection system).....	175,000
Center for Fire Research (arson investigation techniques).....	500,000

Total increases..... 1,225,000

Request to Commerce..... 1,548,000

Deletions:

Public education (arson prevention).....	-291,000
Fire safety and research (arson detection system).....	-125,000
Center for Fire Research (arson investigation techniques).....	-500,000

Total deletions..... -916,000

Request to OMB..... 632,000

Deletions:

Data (data collection system).....	-259,000
Fire safety research (detection equipment).....	-50,000

Total deletions..... -309,000

Request to Congress.....² 323,000

¹ 1978 level of effort \$323,000; 1 position full time and several part time totaling 1 additional position.

² 1979, no increase over 1978.

The CHAIRMAN. I take it that arson is like your other programs, that there is far too little being spent in that area.

Mr. TIPTON. We are concerned, of course. Our concern in the arson program is that we hit it from a number of approaches. We believe in a number of cases arson can be predicted and therefore a prevention program can be designed for arson.

Second, we need to do a better job in the data area to really target the special types of arson problems. We need to make a study of the arson-detection equipment. And we need to know more about the arson investigative techniques. So those are the four program areas of our request.

If they are not funded, we are not able to proceed.

The CHAIRMAN. The committee has been informed that the OMB reorganization study group is considering the possibility of placing NFPCA into a new agency to be developed to be called the Civilian Emergency Management Administration. It is our understanding that in this agency the areas of civil defense, earthquake, flood, and other similar emergency prevention programs would be included. Do you have a departmental reaction to that proposal?

Mr. TIPTON. Yes, sir. The Secretary of Commerce has opposed that proposal. We are concerned about that proposal very much, because we do not have very many details about it. We know only that it is a proposal that indicates that the Fire Administration would be in a much lesser position policywise than it is at this time, and of course most significantly, our program was placed in the Department of Commerce because we have our laboratory there.

This proposal would divorce us from our laboratory and place us in this new emergency preparedness, civil defense agency. So our ability to transfer what we know from the research level through the academy to the local folks would be made more difficult by that kind of a process.

Most importantly, we feel that prevention is our primary thrust, not responding to an emergency after the fact. That is not to say that we aren't putting out fires in this country with the fire departments. We obviously are. But our legislation emphasizes prevention. That requires a different approach than the kind of basic thesis that is being taken in this new agency, which is responding to a disaster.

The CHAIRMAN. In your statement earlier, Mr. Tipton, you mentioned that you have worked with the various States in combating fire problems. Take my State as an example: What have you done specifically to help combat fire problems in the State of Nevada?

Mr. TIPTON. In the State of Nevada I believe we have conducted one of our smoke-detector programs, which is the single most significant device that we have to lower life loss and injury in residential units. That is a program we have put on throughout the United States. As you saw in the slide show, the different manuals we have developed use our research knowledge and deal with the problem of moving the media and the public toward smoke detectors. So we have worked with your fire departments in emphasizing the value of conducting a good public education program for the public to buy smoke detectors, because we think that can lower life loss and property loss as much as any one single item.

We have also been working, Mr. Chairman, with all of the States for our first 10 courses that are coming out of the Fire Academy. We are conducting those courses on a pilot basis, in almost every State in the Union. I would be pleased to submit that for the record. I cannot tell you specifically what course is being taught in Nevada, but one of those courses is being taught.

We are also working with the State of Nevada in our academy planning assistance program where the State develops, first, an organization design describing the education delivery system for fire training in the State; and second, a 5-year plan stating what the goals and objectives of the State of Nevada will be for the next 5 years in fire education and training.

It is my understanding that the State of Nevada has completed the 5-year plan.

[The following information was subsequently received for the record:]

NATIONAL FIRE ACADEMY, 1978 COURSE DELIVERY SCHEDULE

Course	Dates	Location	Region	Program manager
Educational Methodology I	Feb. 6-10	Billings, Mont.	VIII	Massa.
Management Overview	Feb. 14-16	Ames, Iowa	VIII	Hawkins.
National Fire Incident Reporting System	do.	Madison, Wis.	V	Powell.
Management Overview	Feb. 24-26	New Brunswick, N.J.	II	Hawkins.
Do.	Mar. 3-5	Rapid City, S. Dak.	VIII	Do.
Pesticide Fire and Spill Control	Mar. 6-7	Dover, Del.	III	Carlson.
Educational Methodology I	Mar. 6-10	Shreveport, La.	VI	Massa (Bassett)
NFIRS	Mar. 13-16	Providence, R.I.	I	Powell.
NFIRS	Mar. 21-23	Memphis, Tenn.	III	Do.
Fire/Arson Investigation	Apr. 3-14	Richmond, Va.	III	Palumbo.
Management Overview	Apr. 3-6	Yakima, Wash.	X	Hawkins.
Labor/Management Relations	Apr. 3-7	Monterey, Calif.	IX	Steiner.
Fire Protection Design	do.	Gaithersburg, Md.	III	Prendergast.
Educational Methodology	do.	Las Vegas, Nev.	IX	Massa.
Pesticide Fire and Spill Control	Apr. 4-5	Indianapolis, Ind.	V	Carlson.
Management Overview	Apr. 10-12	Oklahoma City, Okla.	VI	Hawkins.
NFIRS	Apr. 12-14	Anchorage, Alaska	X	Powell.
NFIRS	Apr. 17-19	Fairbanks, Alaska	X	Do.
Pesticide Fire and Spill Control	Apr. 17-18	Kansas City, Mo.	VII	Carlson.
Labor/Management Relations	Apr. 24-28	Sudbury, Mass.	I	Steiner.
Fire Protection Design	do.	Longrove, Ill.	V	
Educational Methodology I	May 1-5	Montour Falls, N.Y.	II	Massa.
Pesticide Fire and Spill Control	May 1-2	Billings, Mont.	VIII	Carlson.
NFIRS	May 2-4	Salt Lake City, Utah	VIII	Powell.
Fire/Arson Investigation	May 1-12	Omaha, Nebr.	VII	Palumbo.
Do.	May 8-19	Framingham, Mass.	I	Do.
Labor/Management Relations	May 8-12	Washington, D.C.	III	Steiner.
Management Overview	May 11-13	Columbia, S.C.	IV	Hawkins.
Pesticide Fire and Spill Control	May 10-11	Dallas, Tex.	VI	Carlson.
Labor/Management Relations	May 22-26	Portland, Oreg.	X	Steiner.
NFIRS	May 23-25	Waterville, Maine	I	Powell.
Pesticide Fire and Spill	May 25-26	Tucson, Ariz.	IX	Carlson.
Management Overview	June 1-3	University of Connecticut		Hawkins.
Fire/Arson Investigation	June 5-16	Casper, Wyo.	VIII	Palumbo.
NFIRS	June 5-8	Salt Lake City, Utah	VIII	Powell.
Fire Protection Design	June 5-9	Houston, Tex.	VI	
Educational Methodology I	do.	Concord, N.H.	I	Massa.
Management Overview	June 12-14	Morgantown, W. Va.	III	Hawkins.
Fire Protection Design	June 19-23	San Francisco, Calif.	IX	
Fire/Arson Investigation	June 19-30	New York City, N.Y.	II	Palumbo.
Educational Methodology I	June 26-30	Salem, Oreg.	X	Massa.
Pesticide Fire and Spill Control	June 29-30	Boise, Idaho	X	Carlson.
Fire/Arson Detection	July 10-12	Lewistown, Pa.	III	Palumbo.
Fire/Arson Investigation	July 17-28	Memphis, Tenn.	IV	Do.
Pesticide Fire and Spill Control	July 18-19	State Police Academy, Vermont.	I	Carlson.
Fire/Arson Detection	July 21-23	Montour Falls, N.Y.	II	Palumbo.
Do.	Aug. 1-3	Anchorage, Alaska	X	Do.
NFIRS	Aug. 2-6	Columbia, Mo.	VII	Powell.
Fire/Arson Investigation	Aug. 7-18	East Camden, Ark.	VI	Palumbo.
Do.	do.	Urbana, Ill.	V	Do.
Preparation for Master Planning	Aug. 7-11	California	XI	Greenwald.
Labor/Management Relations	do.	New Brunswick, N.J.	II	Steiner.
Do.	Aug. 14-18	Fort Collins, Colo.	VIII	Do.
Preparation for Master Planning	do.	Oregon	X	Greenwald.
Fire/Arson Detection	Aug. 28-30	Oklahoma City, Okla.	VI	Palumbo.
Educational Methodology I	Aug. 28-Sept. 1	Millwaukee, Wis.	V	Massa.
Fire/Arson Investigation	Sept. 4-15	Salem, Oreg.	X	Palumbo.
Fire/Arson Detection	Sept. 7-9	Salt Lake City, Utah	VIII	Do.
Pesticide Fire and Spill Control	Sept. 9-10	New Brunswick, N.J.	II	Carlson.
Fire/Arson Detection	Sept. 11-13	Providence, R.I.	I	Palumbo.
Preparation for Master Planning	Sept. 11-15	Illinois	V	Greenwald.
Educational Methodology I	Sept. 18-22	Omaha, Nebr.	VII	Massa.
Fire/Arson Investigation	Sept. 18-29	West Sacramento, Calif.	IX	Palumbo.
Preparation for Master Planning	Sept. 14-18	Missouri	IV	Greenwald.
Labor/Management Relations	Sept. 18-22	Charlotte, N.C.	VI	Steiner.
Do.	Sept. 25-29	Lubbock, Tex.	VI	Do.
Preparation for Master Planning	do.	Florida	IV	Greenwald.
Management Overview	Sept. 28-30	Phoenix, Ariz.	IX	Hawkins.
Fire/Arson Detection	Oct. 23-25	Asilomar, Calif.	IX	Palumbo.
Do.	do.	Louisville, Ky.	IV	Do.
Management Overview	Nov. 1-3	Columbus, Ohio	V	Hawkins.
Educational Methodology I	Nov. 6-10	Ocala, Fla.	IV	Massa.
Labor/Management Relations	do.	Ames, Iowa	VII	Steiner.
Fire/Arson Detection	Nov. 8-10	Grand Rapids, Mich.	V	Palumbo.
Do.	Nov. 13-15	Lawrence, Kans.	VII	Do.
Labor/Management Relations	Dec. 4-8	Cincinnati, Ohio	V	Steiner.
Pesticide Fire and Spill Control	Dec. 5-6	Tuscaloosa, Ala.	IV	Carlson.

The CHAIRMAN. You mentioned smoke detector programs in your statement. It seems that every drugstore and market and business establishment in the country now is selling smoke detectors of varying sizes, styles, shapes, and prices. Many of these stores are using smoke detectors as loss leaders. Do you check these products out to see if all of them will really work?

Mr. TIPTON. One of the things, Mr. Chairman that we are very proud of is the activity in our laboratory which has led to the latest standard adopted by Underwriters Laboratories, standard No. 217, which is directly concerned with the criteria of how a smoke detector should operate.

I would like to ask Dr. Fred Clarke to comment further on it, but make one additional comment. In those publications that we have made to send out to fire departments throughout the country about smoke detectors, some 29,000 fire departments, we show those detectors that are listed by the Underwriters Laboratories, so that fire departments do have a list of those that have been tested to that standard, and can recommend those to the public.

The CHAIRMAN. When you find a smoke detector that is being sold, but has not been tested or at least is not approved, what can you do about it?

Mr. TIPTON. We have had that problem, and we have notified the Consumer Product Safety Commission about that problem, and they have notified the manufacturers, and the manufacturers are working hard to correct those difficulties; but I would like to ask Dr. Clarke if he wanted to add anything to that.

Dr. CLARKE. Mr. Tipton has covered very well what the thrust of our detector work has been. Let me just add that there are many aspects of smoke detection, and while it is not now possible to measure all of them, our efforts so far have concentrated on determining whether or not, in a real-life fire situation, a detector will respond with sufficient time to allow the occupants to get out of the building before conditions become untenable. That is the thrust of our work, and the thrust of the standard adopted by Underwriters Laboratories who does day-to-day testing of smoke detectors.

Test methodology developed at NBS can also be used by any other agency that chooses to.

The CHAIRMAN. What do those detectors have on them to indicate they are approved? Is there a Good Housekeeping Seal of Approval or something like that?

Mr. CLARKE. The label can state that the device meets U.L. standard 217 for smoke detectors.

The CHAIRMAN. "Meets U.L. standard 217." If it says that, that means a similar one has been tested and meets the standard.

Mr. TIPTON. Mr. Chairman, that is not to say we don't have problems with smoke detectors. Anything that has grown as quickly as this market has in the past few years requires some vigilance and some proper concern. We are concerned about smoke detectors, and whenever we are aware of a smoke detector not performing in a proper life safety fashion, we certainly report that to the CPSC and expect they will pursue the correction of the deficiency.

The CHAIRMAN. Do you check some of these ads or spot-check some of the stores to see if they are selling products there that are not approved?

Dr. CLARKE. No, sir. Not as a matter of practice. However, we are closely in touch with fire officials throughout the country, and if there is a problem with a smoke detector, it's almost always brought to our attention. Then, generally on an informal basis, our experts will look at the smoke detector and make a determination of the problem. If in their judgment it is a real or systematic problem, they will notify the Consumer Product Safety Commission, which actually has the authority in that area.

The CHAIRMAN. That doesn't make me feel very comfortable, to know if I wanted to go out and buy a smoke detector today, and hadn't heard you tell me about the Underwriter's Laboratories standard that is on it, that I or the general public might inadvertently purchase a less than adequate smoke detector. Smoke detectors are being advertised every day in the newspaper. I don't know that those ads give any indication as to whether they are approved by anybody.

Mr. TIPTON. In some cases they do, and in some cases they do not. We would say in the great majority of those ads, they are U.L.-tested smoke detectors, but we believe very strongly that if we have given the local fire departments who are telling the public what is safe good information, that they will be able to protect the public.

It is true that by spot-checking, if the CPSC who has regulatory authority were to do that, they might be able to eliminate some of the abuses.

The CHAIRMAN. Let's turn for a moment now to the issue of the National Fire Academy. In a document supplied to the committee, it states that the Department of Commerce has initiated a two-phase study, that phase one will reassess the educational strategy of the NFPCA, with particular attention to the "need for and the scope of the central training facility."

Now, I know that in the Federal Fire Prevention and Control Act Congress spelled out that the Secretary shall establish at the earliest practicable date a National Academy for Fire Prevention and Control.

In light of that mandate, what is the point in going ahead with this study?

Mr. TIPTON. Mr. Chairman, the administration is concerned with the cost of the facility and the issue of location and square footage and that this matter be reassessed. I would like to briefly recite for you what has happened as a matter of history, and submit a longer statement for the record on the Fire Academy, if that is permissible at this time.

The CHAIRMAN. Tell me, also at the same time, how much is being spent, how much manpower is being used in carrying out the study, and when it will be completed?

Mr. TIPTON. To answer the second part first, the study is funded in the Office of the Secretary. We are not aware of the cost. We understand that one man is conducting the study, and I am sure that the Office of the Secretary will be pleased to submit that information for the record.

The CHAIRMAN. We would be glad to have a response to those questions for the record. Go ahead.

[The following information was subsequently received for the record:]

NATIONAL FIRE PREVENTION AND CONTROL ADMINISTRATION—NATIONAL FIRE ACADEMY FACILITY

I. Background

The Federal Fire Prevention and Control Act of 1974 mandated the establishment of a National Academy for Fire Prevention and Control within the NFPCA. The stated purpose of the Academy is "to advance the professional development of fire service personnel and of other persons engaged in fire prevention and control activities."

The Academy is to: (1) develop course packages, conduct training programs and provide educational materials for dissemination to fire service personnel; (2) provide technical and financial assistance to states and localities to supplement existing training opportunities; (3) provide financial assistance to students attending Academy courses; (4) encourage architects, builders, city planners and others in the design and planning field to incorporate fire prevention and safety practices in their work; (5) develop standards for admission and performance for students at the Academy; and (6) have a site selected by the Secretary of Commerce within two years of the date of enactment of the Act (by October 1976).

The Act authorized a maximum of \$9 million for the construction of an Academy facility.

II. Site selection

The Secretary appointed a three-member Site Selection Board on January 22, 1976. The Board considered four program level options as well as over 220 potential Academy sites. The third option for facility size was selected instead of the maximum fourth option which was some 60,000 square feet more (154,000 vs. 95,000). This action reduced the Academy student capacity envisioned for the option four program from 12,000 to 4,000–6,000 students annually. The Board recommended:

A smaller direct Federal training program at a headquarters Academy, full-time faculty, support services and on-site dining and housing facilities.

Selection of the Marjorie Webster Junior College site as the location of the Fire Academy and other NFPCA programs. We believed we could collocate all offices on the campus for at least five years until staff outgrew the facilities, and after that the campus would only serve Academy needs. To provide sufficient space, we planned to keep 100 students off campus.

The Secretary concurred with the Board's recommendations on August 26, 1976. The property was acquired by the National Fire Prevention and Control Administration on May 26, 1977, for the purchase price of \$2.6 million.

III. Budget information

FY 1977 funding

The Administration requested a 1977 budget supplemental of \$5,000,000 to purchase and renovate the Academy site. This request included \$2,600,000 to purchase the site and \$2,400,000 to renovate the site for use by both the Academy and other NFPCA program areas.

The costs for renovation had been estimated solely on a gross square footage basis, by HOK, Architects, as reflected in 1977 Congressional testimony. Time and funds did not permit precise space planning and cost estimating.

The Congress appropriated a total of \$2,850,000; \$2,600,000 to purchase the site and \$250,000 to conduct detailed architectural studies to determine precise renovation requirements and cost estimates. Funds were not appropriated for actual renovation since the House Appropriations Subcommittee did not have confidence in the estimate done on strictly a square footage basis. The Subcommittee stated in its report that the Committee "would be willing to consider a funding request for the renovation costs after a precise estimate is developed."

FY 1978 supplemental budget request

In response to Congressional guidance, NFPCA awarded a contract to the architectural/engineering firm of HTB, Inc. to prepare detailed space planning architectural studies and cost estimates to support a supplemental budget request for renovation of the Academy.

Based on these studies, the Department submitted a 1978 supplemental budget request to OMB totalling \$6,043,000. Inflation and requirements for energy conservation and the handicapped account for about \$2 million of the increase. The following list shows additions to the preliminary estimate in order to explain the major cost items not included in that estimate:

Preliminary estimate (including design and project management fee) _	2,488
Inflation (1976-78) _	667
Higher gross area of buildings (however, lower net area) _	421
Features for the handicapped _	786
Energy conservation features _	456
Site preparation _	513
Building modifications required _	559
Due to more detailed analysis _	153
Total _	6,043

These costs are still within the \$9 million authorized by the Congress in 1974. Reasonable projections show now that the rest of the Administration could be housed on-site for only two years. The cost of retaining the 2400 M Street building for the Administration, exclusive of the Academy, will be offset completely by the savings realized from housing the 100 students on the campus instead of off-site. The cost and disruption of two moves and the uncertainties of an unknown future location will be avoided.

Fiscal year 1979 budget request

The Commerce Department requested of OMB \$770,000 for initial Academy facility operations and maintenance. This request was supported by a projected opening date for the facility of October 1, 1979, with staff occupancy scheduled for July 1979. This request included operation and maintenance costs for this three-month period plus dormitory start-up costs.

The Department also asked OMB for \$528,000 for site-related program increases, including establishing a registrar function, purchasing classroom furnishings, coordinating the on-site student assistance program and coordinating adjunct faculty selection and orientation.

IV. OMB allowance

OMB deferred a decision on the total of approximately \$7.3 million for renovation in 1978 and for starting the first year's operation of the Academy facility in 1979. OMB guidance urged the Department to undertake a study to reassess the need for a central Academy facility and the appropriate Federal, state and local roles in fire prevention education. OMB further requested a reassessment of the type and magnitude of the program as well as alternatives to the Majorie Webster site, if a National Fire Academy is supported.

V. Academy educational methodology

Far West Laboratories, specialists in educational program development, has completed an analysis of various approaches to delivery of fire education and training. Their studies show that the most cost effective approach is direct training at a National Fire Academy site with an outreach program, as opposed to course materials development only at the Academy and teaching only in the field by others.

Specifically, the benefits of a national headquarters facility at the present site for the National Fire Academy are as follows:

(1) Since students will be employed (either paid firefighters or volunteers), courses should be conducted on a short-term immersion basis. A live-in campus atmosphere is most conducive to immersion learning.

(2) It serves as a resource center of fire protection information and expertise.

(3) It serves as a means of attracting and retaining highest quality faculty.

(4) It provides close proximity to other parts of NFPCA and NBS/CFR for information exchange. Promotes understanding among technical/scientific programs for students. Much of research on fire and building is conducted by NBS.

(5) Simulation facilities are necessary for the programs being developed—simulation is expensive to be developed at numerous locations or as a traveling facility.

(6) It provides National educational or achievement image for the American fire services.

(7) The national facility provides the opportunity to control variables, measure experience and make adjustments to program in order to achieve high standards of excellence.

(8) A headquarters facility provides a national focal point for sharing experience and programs with foreign countries which would be difficult at state, local or regional levels.

(9) Direct teaching by Academy staff in the field is seen by many state and local people as detracting from local efforts. The NFA needs to train the trainers and senior officials in support of, not in place of state and local efforts.

(10) Studies conducted by specialists in educational program development show that the most cost-effective approach to fire education and training is direct training at a National Fire Academy site combined with an outreach program, as opposed to course materials developed only at an Academy and teaching only by others in the field.

NATIONAL FIRE PREVENTION AND CONTROL ADMINISTRATION
RANKING OF 1979 PROPOSED ITEMS OF INCREASE

[Dollar amounts in thousands]

	Positions	Amount
Priority 1:		
Acquisition of classroom equipment and establish registrar function (academy)-----	+2	+\$400
Provide assistance to students attending on-site academy courses (academy)-----	+1	+1,032
Support a part-time (adjunct) faculty (academy)-----	+4	+1,053
Expand budget staff (administration and operations)-----	+2	+50
Subtotal, priority 1-----	+9	+2,535
Priority 2:		
Establish a central planning and evaluation staff (administration and operations)----	+4	+372
Provide assistance to communities for master planning efforts (academy)-----	+5	+2,506
Provide PEAP grants to 4 States to implement State systems previously developed (public education)-----	+3	+178
Provide financial assistance to students attending off-site, academy approved courses (academy)-----	+2	+2,062
Subtotal, priority 2-----	+14	+5,118
Priority 3:		
Conduct 3-yr program on urban fire loss reduction (public education)-----	+1	+500
Provide APAP grants to 12 States for organizational designs and 18 States for 5-yr plans (academy)-----	+3	+1,057
Conduct management studies (fire technology and management research)-----	+3	+500
Add 8 new States to NFIRS (data center)-----	+2	+240
Subtotal, priority 3-----	+9	+2,297
Priority 4:		
Review and evaluate fire codes and standards (fire technology and management research)-----	+3	+300
Upgrade data on extent and nature of rural fire problem (data center)-----	---	+95
Expand grants capability (administration and operations)-----	+1	+30
Expand Office of the Chief Counsel, legislation (administration and operations)-----	+1	+31
Subtotal, priority 4-----	+5	+456
Priority 5:		
Perform checks on NFIRS for face validity and internal logical consistency (data center)-----	+1	+51
Improve preparation of national fire estimates (data center)-----	+4	+143
Develop cost-benefit procedures for fire prevention programs (data center)-----	---	+110
Conduct detailed in-depth investigations of injuries and deaths in 1 and 2 family dwellings (data center)-----	---	+470
Subtotal, priority 5-----	+5	+774
Priority 6:		
Maintain, improve and disseminate data collected by the national fire incident reporting system (data center)-----	+5	+854
Initiate program on design concepts for residences (fire research center)-----	(+4)	+430
Coordinate input of all levels of fire community in developing national fire research policy (fire technology and management research)-----	+2	+300
Administer and coordinate public education programs (public education)-----	+2	+80
Subtotal, priority 6-----	+9	+1,664

NATIONAL FIRE PREVENTION AND CONTROL ADMINISTRATION
RANKING OF 1979 PROPOSED ITEMS OF INCREASE—Continued

[Dollar amounts in thousands]

	Positions	Amount
Priority 7:		
Increase and expand reference service functions (data center).....	+1	+\$200
Improve dollar loss estimates (data center).....		+83
Fire research facility (fire research center).....		+2,700
Subtotal, priority 7.....	+1	+2,983
Priority 8:		
Formulate arson data collection system (data center).....	+2	+259
Consult arson investigators to identify current needs and voids (fire technology and management research).....		+50
Expand Office of the Chief Counsel, claims program (administration and operations).....	+3	+89
Subtotal, priority 8.....	+5	+398
Priority 9:		
Expand research on detection and automatic suppression systems (fire research center).....	(+3)	+400
Expand evaluation of impact of in-place residential fire protection systems (fire technology and management research).....	+1	+150
Expand Office of Information Services (administration and operations).....	+1	+20
Develop and publish resource catalog on burn prevention (public education).....	+1	+83
Subtotal, priority 9.....	+3	+653
Priority 10:		
Develop and evaluate an experimental remote warning system for home installation and central dispatch operation (fire technology and management research).....	+2	+400
Provide general computer support to NFPCA (data center).....	+1	+17
Convert public education listings to in-house computer system compatible with national fire data system (public education).....	+2	+160
Subtotal, priority 10.....	+5	+577
Total.....	+65	+17,455

STUDY OF FIRE ACADEMY SITE

The Department of Commerce engaged a contractor to address questions relevant to study of the issues of delivery of Fire Academy programs and the need for a national facility. The contract work totaled one man-month at a cost of approximately \$3000. The contractor's report has been completed. The Department is currently reviewing that report and the entire subject. It is expected that a recommendation will be made to OMB and that a decision on the site will be made by mid-April.

Mr. TIPTON. Mr. Chairman, when we bought the site after looking at some 220 possible sites for the Fire Academy, we recognized it would be about a program level 3 of the four optional programs that we had looked at.

Now, program level 3 is significant in that we reduced the size of an Academy site recommended by the Academy for Educational Development, a consultant group, from 154,000 square feet to 95,000 square feet. When we bought the site the idea was that we would take the reduction of students from 12,000 to 6,000 students per year, recognizing that we would have a small, quality headquarters facility that would train the trainers, and train the future leaders of the fire service.

This represents about three-tenths of 1 percent of the fire people to be trained. We estimated last year that this site had about 100,000 net

square feet. We felt that with that 100,000 square feet we could collocate the other offices of the Administration with the Fire Academy for at least 5 years.

However, when we went forward with the precise plan, even though we had more gross square footage, we had less net usable square footage, and the actual figure came out at 88,000 square feet.

Looking at the square footage and the issue of colocation, we recognized we could only house the other offices of the Administration in the Marjorie Webster site for about 2 years, and therefore it seemed foolish to us to propose to move the Administration offices to the site when we already had a structure at 2400 M Street, and we should move ahead, to move the Academy there and be able to handle all 300 students on the campus at one time.

We had originally proposed to keep 100 students off the campus so we would have room for the other officers of the Administration, but now by placing those 100 students back on campus, we are able to pay the cost because we would have to pay for their upkeep off campus. Through this saving we are able to pay for the cost of our facility at 2400 M Street, which becomes cost-effective, and still move ahead with the Academy program.

So we can house about 300 students on site, and that is in keeping with the 6,000 students per year.

The CHAIRMAN. It is my understanding that the cost of renovation of the Marjorie Webster Academy site has more than doubled since the preliminary estimates in 1976.

Mr. TIPTON. Yes, sir. Again, based on gross square footage we calculated for all 10 final sites, we estimated that the renovation cost would be approximately \$2.4 million. Those costs have escalated due to inflation, the handicap requirements, and energy requirements by approximately \$2 million, and there were site improvements that were not included in the original estimate, so that the figure escalated from \$2.4 million to \$6 million.

That is in keeping with the \$9 million authorization, but frankly, it is a disappointment to us that the cost has risen from \$2.4 million to \$6 million. We had hoped we could get in there for a lot less money.

The CHAIRMAN. As a part of this study, are you studying the possibility of using other sites?

Mr. TIPTON. No, sir. We are not. That would be considered in the second phase, depending upon the answers from the first-phase study.

The CHAIRMAN. Let's suppose that this one-man study comes up with the conclusion that there should not be a National Fire Academy.

What do you propose to do about it in light of the congressional mandate?

Mr. TIPTON. My personal opinion is it would be a very difficult situation.

The CHAIRMAN. I can assure you it would be. I would like to see that man, whoever he may be, up here to personally testify, when he tells us that Congress mandate was wrong and that the Academy should not be developed.

Mr. TIPTON. It is our understanding that the Secretary has stated that the Fire Academy will exist as an institution; it may not be

at this site. We have conducted 3 years of study plus the work of the National Commission and the Congress and we are prepared to go forward with a good program.

We are hopeful the report is a positive report because we think that all that has happened to date will show a great opportunity for a great program.

The CHAIRMAN. I am told Charles Morgan, president of the National Fire Protection Association, testified in the House authorization hearings, that:

We are very disturbed over what we feel is the growth of unnecessary proportions in the collection of data. If the plans of the NFPCA for this program are put into effect, for an ultimate collection of data from all states, it will require an extremely large staff and high expenditures. A carefully developed sampling could yield equally useful data and would be infinitely more cost-effective.

Would you care to comment on that statement?

Mr. TIPTON. Yes, sir.

I am fully aware of Mr. Morgan's statement and we have carefully looked at the data collection system that we are doing at this time.

First of all, as a former city manager, and as someone who is very familiar with the fire problems at the local level, I recognize that a data system should be secondarily for national estimate purposes.

We think the first purpose of the data system is to provide a management information tool for local fire departments, whether or not we ever make national estimates. If we can help to make decisions better at the local level, then we need to have that data system to target our fire problem and most importantly, measure the impact of the programs we place against them.

We are using the National Fire Protection Association's 901 system as a national model. They have helped us to start that program. We understand their concern and it is a proper concern. We are equally concerned about the cost of the data system but we strongly believe that we need to have a good data system in every fire department in America if we are going to show how our programs are affecting fire loss.

The CHAIRMAN. Mr. Morgan also said:

We are also concerned that there appears to be no intention of taking advantage of resources outside the federal government that have established fire data programs despite provision for such contained in the mandate given NFPCA in the Federal Fire Prevention Act of 1974. And there are several other aspects of this program that require revision. One of them being the omission of collection of full information on firefighter deaths, injuries and work-related illness.

Would you comment on that?

Mr. TIPTON. Yes, sir. Firefighter injuries—what was the first part?

The CHAIRMAN. That you weren't taking advantage of resources outside of the Federal Government.

Mr. TIPTON. First of all, we adopted the National Fire Protection Association 901 data system and contracted with the National Fire Protection Association to help install that system. We think we are using the proper people outside of the Federal Government.

We have also let a number of contracts to other information contractors and we are hopeful that we are doing the kind of work that

the National Fire Protection Association would support, because rather than developing our own system we have used their system to establish the data system.

As far as the firefighter is concerned, quite a bit of work has been done in setting up the firefighter injury and death reporting system. We have reviewed that matter with the International Association of Firefighters in particular, who have been quite concerned about that. We have done quite a bit of recent work and met with them again approximately a month ago to describe how that data system can best be set up and we think we are moving ahead in a very positive fashion to implement a firefighter death and injury data system.

We are, by the way, also working with the National Fire Protection Association's committee to improve the 901 system to make it a better local management information system.

We have been concerned that it may give us good information for national estimates but it is not always designed to help make the best decisions locally.

So we are hopeful in working with the private sector that we can develop the very best system for local management information.

The CHAIRMAN. In the report, "Federal Fire Strategies," by Kahl Associates it was stated, "The [NFPCA's] national mandate has been unduly compromised by the chaotic presence of too many uncoordinated fire programs at the Federal level."

Would you comment on that?

Mr. TIPTON. We would be pleased to submit for the record a list of all the fire programs at the Federal level.¹ The National Commission was concerned that all of these programs were not necessarily aiming at the high priority problems and perhaps the Federal dollars are not being expended in the most efficient manner by different agencies sponsoring various types of fire programs.

We have been looking at that issue. It is a very complex issue. We have had a half a man-year to spend on that and about all we have done so far is compile where all those programs are and a description of what they are doing.

It is a major issue because we do spend a lot of effort in the Federal Government on fire programs and in some instances they get at only a small percentage of the problem.

The CHAIRMAN. Well, is it a fact that there are many uncoordinated fire program activities at the Federal level?

Mr. TIPTON. Yes, sir.

The CHAIRMAN. What do you propose to do about it?

Mr. TIPTON. What we originally intended to do in the hearings before Congress, was to spend some time analyzing those fire programs and presenting a report to the Congress that would indicate the amount of funds being expended in the various fire programs, and their potential impact on the fire problem, so that the Congress would have the kind of numbers to determine whether or not Federal funds were being spent in the right place in the right amount.

The CHAIRMAN. Do you think there is any need for legislative authority to assure that the various Federal fire programs operate in a coordinated manner?

¹ The material has been placed in the committee files.

Mr. TIPTON. There may be. I say that because it may be that once a report like this is issued, people will choose to correct their own situations rather than have corrective legislation.

The CHAIRMAN. The Kahl study further said:

We have not been able to identify anywhere in the Federal Government a comprehensive plan as to the strategic approach to the prevention and control of fire. Each agency goes its own way and as a result is inefficient, duplicatory, and wasteful of manpower and funds.

Now, have you developed any kind of a plan to get at that particular problem?

Mr. TIPTON. We are working at that, Mr. Chairman, and we have received funding through OMB, if our budget is approved in 1979, which would allow us to really do an in-depth study to develop a national plan for a Federal fire program.

The CHAIRMAN. How big an effort is that?

Mr. TIPTON. It is about \$300,000.

The CHAIRMAN. Is that the amount that you requested for it?

Mr. TIPTON. \$300,000.

The CHAIRMAN. Is that what you requested?

Mr. TIPTON. Yes, sir.

The CHAIRMAN. And you got \$300,000?

Mr. TIPTON. We got the full amount.

The CHAIRMAN. Well, of course, if there is a duplication and wasteful allocation of resources in a lot of these efforts at the Federal level, obviously this would be a fertile area for remedial action.

Mr. TIPTON. Well, sir, we know that some departments have changed their programs as a result of interaction with our agency and others.

We know that some of these problems have been cleared up, but there still remains a significant expenditure in areas where there is a small percentage of the problem. We are only concerned that people be made aware that funds might be expended in areas where they are more significant than the present program would permit.

The CHAIRMAN. Thank you very much. We may have some other questions for you, and if we do we will submit them to you in order that you can respond for the record.

Mr. TIPTON. Thank you, Mr. Chairman.

[The statement follows:]

STATEMENT OF HOWARD D. TIPTON, ADMINISTRATOR, NATIONAL FIRE PREVENTION AND CONTROL ADMINISTRATION; AND FREDERIC B. CLARKE, ACTING DIRECTOR, CENTER FOR FIRE RESEARCH

Mr. Chairman, I am pleased to appear before the Committee to review progress to date under the Federal Fire Prevention and Control Act of 1974 and to support the extension of authorization for appropriations under that Act for Fiscal Years 1979 and 1980. We also have requested that the name of the agency be changed from the National Fire Prevention and Control Administration (NFPCA) to the United States Fire Administration.

With me at the table today is Frederic B. Clarke, Acting Director of the Center for Fire Research at the National Bureau of Standards.

The programs authorized by the Fire Act have been organized within five major divisions: the Fire Data Center, the Fire Academy, the Center for Fire Research, the Public Education Office and the Fire Safety and Research Office.

In the interest of time, we will summarize the statements which have been provided to the Committee. With your permission, I would like to begin with a brief slide/tape presentation which provides an overview of our national tragedy, fire, and of our programs in progress.

SLIDE/TAPE PRESENTATION

ORGANIZATION

The Congress, through the Fire Act, envisioned a comprehensive Federal program working in cooperation with and in support of state and local officials and private organizations. I believe that we have followed that direction to the best of our ability.

We continue to have a serious fire problem in America. In the past 12 hours, 10 persons have died from fire—several victims were probably children. At least 423 others were injured; some will be scarred and disfigured for life, while others escaped with minor injuries.

Every day, day after day, \$11 million in property goes up in flames across America. That's over \$4 billion a year. When all the costs incurred by this Nation due to fire are tallied, the figure exceeds \$13 billion annually.

America is still burning

The homes we live in, the clothes we wear, the chairs we sit in and the buildings we work in—all can burn. About two-thirds of America's fire deaths occur in the victims' homes, by ones and twos, most often at night.

The men and women who respond to the 2.6 million reported fires each year aren't immune to the hazards of fire, either. Firefighters are members of America's most hazardous profession. Their death rate is staggering. More than half of all reported fire injuries are suffered by firefighters.

Fire is a "Fact of Life" in America

The National Fire Prevention and Control Administration, an agency of the U.S. Department of Commerce, is now three years old and is providing a Federal focus for America's fire problem and the major issues surrounding it:

- (1) The need for safer homes through education and technology.
- (2) The need to protect firefighters from death and injury.
- (3) The need for comprehensive fire prevention and control planning on all levels of government.
- (4) The need to conquer arson.
- (5) The need for a uniform, broad-based pool of data with which to identify America's fire problem.
- (6) The need for improved education and training for the Nation's fire protection community.
- (7) The need for a basic understanding of fire and its effects.
- (8) The need to provide assistance to state and local governments.
- (9) The need to provide a focus for the Federal fire community.

Yet, fire remains a state and local problem. The National Fire Administration's role is to support and reinforce state and local efforts for fire prevention and control.

Helping improve the effectiveness of state and local efforts is the major thrust of the NFPCA. Since the agency began, intensive work has been conducted to identify the priority needs on the state and local levels; develop new and improved fire prevention and control techniques; test those techniques; and provide leadership, incentives and methods to get those techniques into use at state and local levels.

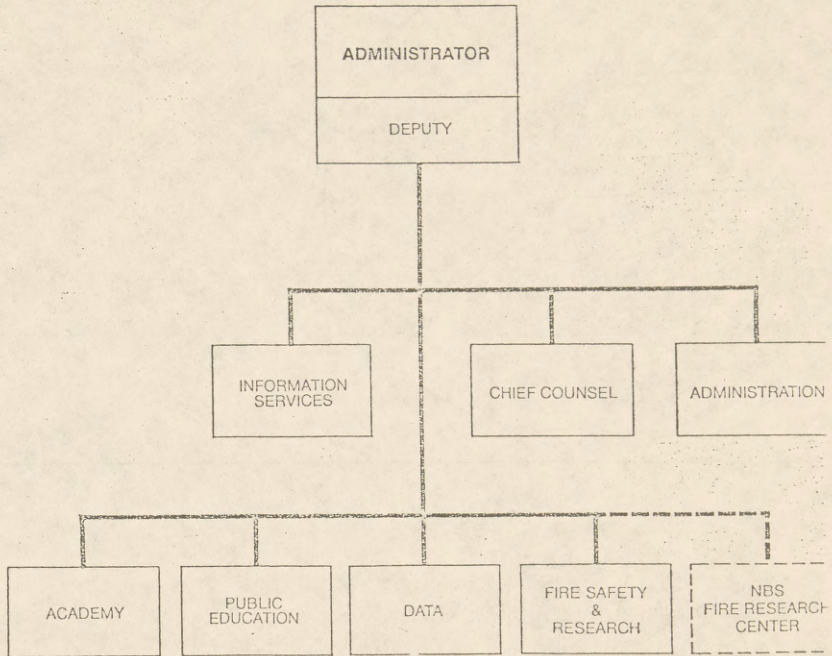
To carry out this work, the National Fire Administration has four divisions: the National Fire Data Center, the National Fire Safety and Research Office, the Public Education Office and the National Academy for Fire Prevention and Control. The programs of the Center for Fire Research (CFR), a branch of the Commerce Department's National Bureau of Standards, are linked to those of the National Fire Administration (See Figure 1, Organization Chart). Since resolving the issues surrounding fire requires a broad-based attack, the NFPC confronts this task as an interdisciplinary team, with each unit contributing its unique resources.

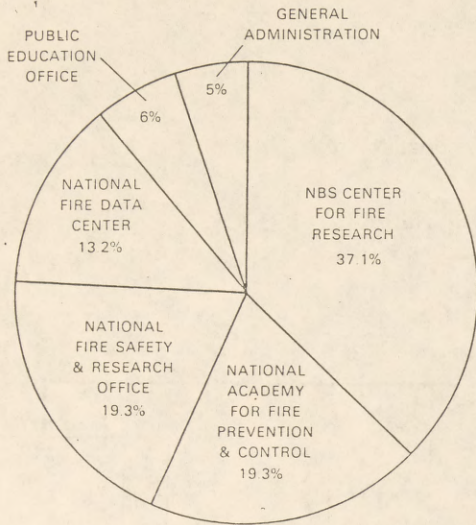
To conduct the programs of the NFPC, a budget of \$13.8 million was appropriated for Fiscal Year 1977. Figures 2 and 3 illustrate the allocation of these funds.

By December 1977, the Administration staff numbered 92 full-time employees. The staff was bolstered by eight individuals during 1977 under the Intergovernmental Personnel Act (IPA), which provides for the temporary exchange of local government employees to the Federal government. The IPA's experts in various areas in which the Administration is working, represented fire departments and other organizations from across the Nation.

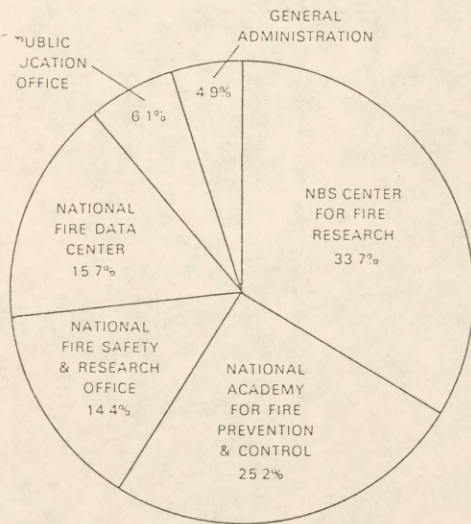
Figure 1

U. S. Department of Commerce
National Fire Prevention and Control Administration





FY 1977
(\$12,339,000)



FY 1978
(\$13,850,000)

Financial Resources Obligated According to Act Sections

Fiscal Year 1978	Millions
SECTION	
7 ACADEMY	3.486
6 PUBLIC EDUCATION	.846
9 DATA CENTER	2.169
TECHNOLOGY & PLANNING	2.003
8 Technology Development	
10 Master Planning	
12 Code Review	
13 Fire Safety Effectiveness Statements	
18 CENTER FOR FIRE RESEARCH	4.664
ADMINISTRATION, COUNSEL, PUBLIC INFORMATION	.682
11 Claims	
14 Annual Conference	
15 Public Safety Awards	
16 Annual Report	
Fiscal Year 1977	Millions
SECTION	
7 ACADEMY	2.376
Academy Site Purchase	2.85
6 PUBLIC EDUCATION	.742
9 DATA CENTER	1.638
TECHNOLOGY & PLANNING	2.383
8 Technology Development	
10 Master Planning	
12 Code Review	
13 Fire Safety Effectiveness Statements	
18 CENTER FOR FIRE RESEARCH	4.578
ADMINISTRATION, COUNSEL, PUBLIC INFORMATION	.622
11 Claims	
14 Annual Conference	
15 Public Safety Awards	
16 Annual Report	

ASSISTANCE TO STATE AND LOCAL GOVERNMENTS

The National Fire Administration cannot act alone to reduce America's fire loss. Nor can states and communities solve the problem independently. Only through a cooperative effort involving Federal support of state and local efforts can a better understanding of the fire problem and a reduction of fire losses be achieved.

During 1977 the Administration targeted several assistance programs at states, benefiting local governments as well. Helping states build their capacity to develop and deliver programs was a major Administration-wide goal.

Four "grants-to-states" programs are in various stages of implementation by NFPCA:

PDAC—Policy Development Assistance Program;

APAP—Academy Planning Assistance Program;

NFIRS—National Fire Incident Reporting System; and

PEAP—Public Education Assistance Program.

These "grants-to-states" are intended to assist and reinforce the efforts of local fire personnel, as well as state level agencies. The more than two million local fire personnel are recognized as the primary manpower for reducing fire loss. For this reason, local fire service participation and involvement of local interest groups are vital to these state grant programs.

The planning chart (Figure 4) illustrates the nine basic steps in the planning process for each state-oriented Administration grant. Each of the four programs discussed here refers to that chart.

DEVELOPMENT OF STATE FIRE PROGRAMS

9	EVALUATE RESULTS
8	TAKE ACTION—IMPLEMENT PLAN
7	DEVELOP PLAN—ORGANIZE
6	WHAT ARE THE BENEFITS?
5	WHAT ARE THE COSTS?
4	WHAT ARE THE PRIORITIES?
3	WHAT NEEDS TO BE DONE?
2	WHAT ARE WE DOING NOW?
1	WHAT IS THE PROBLEM?

PUBLIC FIRE EDUCATION	PEAP	☐	☐	☐	☐	☐	☐	☐	☐
FIRE CODES		☐	☐	☐	☐	☐	☐	☐	☐
FIRE EDUCATION & TRAINING	APAP	☐	☐	☐	☐	☐	☐	☐	☐
FIRE DATA SYSTEM	MFIRS	☐	☐	☐	☐	☐	☐	☐	☐
FOREST FIRE PROGRAM		☐	☐	☐	☐	☐	☐	☐	☐
ARSON CONTROL PROGRAM		☐	☐	☐	☐	☐	☐	☐	☐

Figure 4

The fire prevention and control master planning programs are designed for local governments. However, the principles and techniques of master planning can be applied to state governments as well. By the end of 1977, a program to transfer these concepts to the state level had reached the final planning stages. Under the Policy Development Assistance Program (PDAP), three or four grants will be issued in early 1978. They will test the planning approach as applied to the delivery of state government fire prevention and control services.

Under a PDAP grant, a state will demonstrate how it can analyze its priority needs and integrate the fire prevention and control services of state agencies into a coordinated, well-balanced attack on the state's fire problem. These projects are expected to result in model methods which other states can adopt to their needs.

Steps one through seven of the planning process would be completed under PDAP. The final two steps are the responsibility of the states.

Assisting states develop a systematic educational delivery system is the reason behind APAP—the Academy Planning Assistance Program. This system in each state will also become a vital part of the National Fire Academy's outreach effort.

APAP focuses on fire education and training programs through a two-part grant program. The "organizational design" phase supports state identification and analysis of existing state and local institutions, organizations and agencies able to deliver fire training and education. In addition, states select the responsible entity for planning statewide fire service education and training. These activities encompass steps one and two of the planning process.

In the second phase of APAP, the Administration supports a state's effort to develop a comprehensive Five-Year Plan for fire education and training, outlined in steps three through seven.

Thus far, APAP grants have been issued to 26 states.¹ The Administration expects the APAP program to continue until all interested states and territories have developed their Five-Year Plans for fire education and planning.

The National Fire Incident Reporting System (NFIRS) is another significant Administration effort to assist states and local communities. As under PEAP and APAP, the NFIRS program encourages participation by state interest groups.

The NFIRS assistance program helps states through all nine of the planning steps. However, most of the resources are normally invested in step eight: "Take Action" (implementing the system). The Administration also provides substantial technical assistance, along with financial support for statewide data collection.

The Public Education Office has seen that public education programs can result in a dramatic, measurable impact on fire loss. To assist states in establishing and expanding their public education efforts, PEO designed the Public Education Assistance Program or PEAP.

Under PEAP, the Administration helps build a state's capacity to provide local fire educators with access to programs, materials and technical assistance for planning, implementing and evaluating targeted community fire education programs. The resulting state program should achieve three objectives:

- To make a state public fire education program part of the state fire structure;
- To provide local community educators with fire education program information and materials; and
- To develop the ability of communities to plan, implement and evaluate effective public fire education programs.

As with other state-targeted NFPCA grants, PEAP provides both financial and technical assistance, and is designed to involve a variety of interest groups in the program. The majority of funds allocated for PEAP are aimed at steps eight and nine of the planning process: implementation and evaluation.

Four states—California, Delaware, Illinois and Oregon—are now pilot testing PEAP. At least two other states will be added in early 1978.

RESIDENTIAL FIRE SAFETY

Americans who die from fire most often succumb in their own homes. Most fatal residential fires claim only one or two lives, causing only momentary local interest.

¹ Participating states are: Alabama, Alaska, Arizona, Arkansas, California, Connecticut, Florida, Georgia, Kansas, Kentucky, Louisiana, Maryland, Minnesota, Missouri, Nevada, New Hampshire, New York, North Dakota, Oregon, Pennsylvania, South Carolina, South Dakota, Texas, Virginia, Washington, and Wyoming.

Tragic fires, like the pre-dawn dormitory fire in Rhode Island, December 13, 1977, in which seven coeds perished, receive national notoriety. Yet, this and other major fires do not represent this nation's major fire problem: the residential fire. About two-thirds of all U.S. fire deaths occur where we feel the safest: at home.

Making American homes safer and Americans more fire safe is a major undertaking of the National Fire Administration and involves efforts in several program areas, including the National Bureau of Standards' Center for Fire Research. Education programs are in progress to make Americans more conscious of fire, and technological projects are underway to make America's homes safer.

For the past three years, the Public Education Office (PEO) has concentrated on reducing fire losses through tested public fire education programs. Two such programs—smoke detectors and home safety surveys—are aimed at making homes safer.

Smoke detectors are the most significant technological device available to protect American homes from fire. Data indicates that properly installed and maintained smoke detectors can reduce loss of lives from fire by 40–80 percent. The National Fire Safety and Research Office is conducting major programs on residential fire detection and suppression devices. From June 1976 to June 1977, researchers have investigated 73 fatal residential fires where there were a total of 114 deaths and 119 injuries. After detailed analysis they concluded that 71 percent of the deaths, 85 percent of the injuries, and 72 percent of property lost would have been prevented by the proper use of residential detectors. Another 17 percent of deaths and 7 percent of injuries would probably have been prevented. Astounding results for such minor investment.² These devices, coupled with a practiced home escape plan, are a family's best protection against fire's effects.

With the growth of competitively-priced smoke detectors came demands from the public and fire service for up-to-date information on types of detectors, installation and maintenance. From state and community governments came demands for information on legislation which could make smoke detector installation mandatory. To meet these information needs, PEO began an effective nationwide "smoke detector campaign."

For the consumer, a general fact sheet, "Smoke Detectors Save Lives," and a pamphlet, "Wake Up. Smoke Detectors Can Save Your Life If . . .," were released in late 1976. During 1977, PEO distributed more than 69,000 copies of these publications, primarily to private citizens. More than 300 local organizations requested negatives to "Wake Up." for local reprinting. Other organizations also joined the NFPCO in distributing the "Wake Up." brochure which was developed by PEO, CFR and the Consumer Product Safety Commission. As a public service, Sears, Roebuck & Company distributed more than 4.1 million copies through 121 local fire departments. The Hartford Insurance Company distributed approximately 175,000 copies through its independent insurance agents. The brochures have reached an estimated 5 million Americans during 1977.

To help local fire departments educate their communities about smoke detectors, the Administration published a five-volume series of smoke detector manuals during 1977. One of the manuals, "Smoke Detector Resource Catalog," was mailed to over 30,000 fire departments. Coordinated by PEO, the manuals included input from each NFPC unit. The National Fire Safety and Research Office and Center for Fire Research contributed substantially to separate volumes. The manuals are:

Smoke Detector Resource Catalog, including a fact sheet on smoke detectors, guides to finding materials such as films and brochures, case histories of successful programs, a legislative overview, and techniques with which to evaluate programs;

Smoke Detectors: Moving the Public, a two-part manual on generating support through community organizations and the media;

² Further, results of the research conclude that, had residential suppression systems been installed, 87 percent of the deaths, 96 percent of the injuries and 88 percent of property loss would not have occurred, and that another 5 percent and 1 percent, respectively, would probably have been prevented. Totals of 92 percent and 97 percent probable reduction in home fire deaths and injuries would be expected with systems that engineers believe can be built into new homes for less than \$500 and nearly eliminate the need for proper human reaction to a fire.

Smoke Detector Technology, a detailed description of smoke detector operation, selection, installation and maintenance;

Smoke Detectors and Legislation, an in-depth review of the current status of state and local smoke detector legislation; and

Smoke Detector Training, including practical applications from "Technology" and a suggested curriculum for training members of the fire prevention community to present smoke detector education to the public.

As well as showing fire department personnel how to develop, conduct and evaluate smoke detector programs, the manuals are being used to train state and local fire educators who teach both the fire service and the public. During 1977, the NFPCA developed, pilot tested and launched a year-long smoke detector training program. In September and October 1977, 976 smoke detector specialists from 238 communities were trained. They, in turn, were scheduled to train 16,800 local fire personnel. By the end of 1978, approximately 4,500 smoke detector specialists will be trained across the United States; it is anticipated that they will teach another 72,000 local representatives to work in their communities.

Although smoke detectors, coupled with home escape plans, offer significant life-saving potential, they are not the total answer to residential fire safety. A home inspection, or home "survey," program in Edmonds, Washington, was one of many successful fire education programs identified by PEO. The Edmonds program had resulted in a 67% reduction in residential fire loss in one year. Under a grant from PEO, the Edmonds Fire Department developed a training package for other communities to use in conducting similar programs. In the summer of 1977, the training package was tested in Edmonds with senior citizen "students."

That program was so well received that PEO convinced the National Council on Aging and ACTION/Older American Volunteer Program to adapt it for use by their members. In mid-October 1977, PEO and the National Council on Aging sponsored a pilot training course for senior citizen home surveyors in Huntington, West Virginia. Based on this successful pilot, similar programs are in progress in San Antonio and Orange, Texas; Toledo, Ohio; Bozeman, Montana, and Syracuse, New York. Several other areas are considering the program by the end of 1977.

The Edmonds Fire Department is distributing the training package nationally. By the end of 1977, about 100 fire departments had begun using it as a prelude to conducting their own home inspection programs.

Making American homes more fire safe is not an easy task. With two-thirds of all reported fire deaths occurring in the home, the NFPCA now has several technical studies in progress through the National Fire Safety and Research Office (NFSRO) and CFR. The goal: increased, affordable fire safety in the American home.

Smoke detectors were studied under a major contract with NFSRO by the Aerospace Corporation. The objectives of the study include: identifying manufacturers of residential detectors and noting characteristics of currently available models; estimating current and future sales markets; and, determining the level of consumer awareness and acceptance. The study indicated that 33 million detectors are in place in 16 million American homes.

Home fire suppression systems, particularly those with a remote alarm to alert both the fire department and the occupants, offer major advantages. The fire can be contained more readily in its room of origin, limiting damage and making firefighting "safer" through earlier alert.

During 1977, six major suppression-related studies were conducted by public and private organizations under NFSRO grants. Based on these studies, the NFSRO concluded that it is possible to design an effective, affordable fire suppression system for new homes.

One of the studies, conducted by the Johns Hopkins University/Applied Physics Laboratory, assessed the potential impact of fire protection systems.

Based on another study, Factory Mutual Research Corporation delivered a report on a performance standard for low-cost residential sprinkler systems. Based on this and other studies, the National Fire Protection Association is now reviewing its residential sprinkler standard.

Sprinkler systems were also studied by CFR. In 1977, tests were conducted to study their performance and use of light-duty support systems for sprinkler piping. Tests were also completed on the performance of sprinklers in health care facilities.

Smoke detectors were also studied by CFR, including the development of performance test methods, siting criteria, and the work which lead to the Underwriters Laboratories' adoption of a new smoke detector performance standard.

The combination of residential furnishings and smoking materials accounts for 27 percent of home fire deaths, according to a 1976 study of the 14 most common fire death scenarios conducted by CFR and the National Fire Protection Association (NFPA). This created an interest in upholstered furniture. During 1977, a proposed cigarette test for upholstered furniture, developed for the Consumer Product Safety Commission, was submitted to the NFPA for review.

In other CFR efforts to make American homes safer, the flammability of insulation used in remodeling attics, walls and basements was studied. Fire growth in rooms, the role of furnishings in room fire development, and the fire endurance levels of basement ceiling construction and interior finishes of mobile homes were also investigated.

Finally, the Fire Administration has cooperated with the National Science Foundation (NSF) in the interest of increased residential fire safety. NSF, through its Research Applied to National Needs (RANN) program has funded fire research projects for a number of years. Since its beginning, NFSRO has worked closely with this program. This working relationship was strengthened in December 1977 when the Foundation transferred administrative and programmatic responsibility for six ongoing projects to the National Fire Administration. Each of these projects—on fire detection technology, low-cost residential sprinkler systems, scheduling fire service personnel, the effectiveness of municipal fire protection, equipment technology and fire alarm assignment systems—has a bearing on residential fire safety.

FIREFIGHTER SAFETY

Firefighting is America's most hazardous profession. The statistics are grim :

Half of all reported injuries from fires attended by the fire service are suffered by firefighters.

In the last 10 years, firefighters have averaged an annual 88 deaths per 100,000, compared with the 58 deaths for every 100,000 policemen.

In a study of 101 line-of-duty firefighter deaths, 45 were caused by heart disease, three times the rate of the second largest cause of death.

The hazards of other occupations—mining and police work—receive far more public attention than those threatening firefighters. Increased occupational safety for firefighters is urgently needed, both for the protection of the firefighters themselves and for increased firefighting effectiveness.

To better protect America's firefighters, the NFPCA conducted programs designed to provide better protective clothing and equipment, to improve the physical fitness of firefighters, and to reduce firefighter burn injuries.

Americans may think firefighters are well protected when they enter a burning building. All too often they are not. Their clothing is not as resistant to fire as it should be: some helmets actually melt and some turnout coats and pants can melt and burn. The weight and bulkiness of firefighters' clothing and equipment can severely limit mobility and contribute to the strain on the firefighter, whose body is already working under the most severe of environments.

The National Fire Safety and Research Office began a major jointly-funded program with the National Aeronautics and Space Administration (NASA) called Project FIRES (Firefighters' Integrated Response Equipment System), for the design and development of an integrated protective system or "envelope." The thrust of the program is to use modern technology, often the result of NASA's space technology, in a systems approach for providing improved clothing and equipment for firefighters. This cohesive approach contrasts sharply with the "piecemeal" approach of the past.

Understanding the fire environment within which a firefighter works is critical to establishing a protective envelope. To understand the occupational hazards of firefighting, NFSRO sponsored a study which resulted in the report "The Thermal Environment during Structural Fires." This study provided an onsite appraisal of the thermal exposure firefighters face. The results, that firefighters endure mostly radiative heat, not convective, will be used in designing improved protective equipment.

In another project, the air contaminants of actual structural fires were sampled and measured. Knowing the toxic contaminants in the fire environment will help define the respiratory protection requirements of the firefighters' protective envelope, as well as contribute data on fire's deadly effects.

The NFSRO, in close cooperation with the Nation's fire service, has also placed emphasis on developing new performance criteria upon which equipment and clothing can be designed and manufactured. Helmets were one of the first pieces of equipment to be studied critically. In August 1977, "Model Performance Criteria for Structural Firefighters' Helmets" was published. The research for the criteria was conducted by the Institute for Applied Technology, NBS, which published a supporting study, "Considerations in Establishing Performance Criteria for Structural Firefighters' Helmets."

Firefighting is strenuous work, requiring above average strength and endurance. Heart disease causes a high percentage of firefighter line-of-duty deaths. To meet their job demands and guard against heart disease, firefighters must be physically fit.

The Administration's work in the area of firefighter physical fitness was discussed in two reports published in 1977. "Development of a Job-Related Physical Performance Examination for Firefighters" highlights results of the first study to measure in detail the physiological effects of firefighting on the heart, lungs, and muscles. The report concludes that the successful completion of firefighting tasks requires a physical performance profile "reflecting youth," and that two-thirds of all firefighters do not meet this profile. The study was conducted by the University of Maryland under a grant from the NFSRO.

Regular exercise can be the most effective method for remaining fit. More than 1,000 fire departments responded to a study conducted by the International Association of Fire Chiefs Foundation for the NFPCA's Data Center to identify fire departments with on-going physical fitness programs, and to recommend which types of programs seem to succeed. Only 18 percent reported some type of active physical fitness program. Many of these programs are short-lived. Another 11 percent reported they had discontinued their physical fitness programs. The study results, published as "Fire Service Physical Fitness Programs," concluded that the fire service must begin to upgrade its in-service physical fitness training, and offers suggestions on how to do so.

Physical fitness was also spotlighted in the Fourth Symposium on Occupational Health and Hazards of the Fire Service, held in April 1977, and co-sponsored by the NFPCA and the International Association of Fire Fighters' John P. Redmond Fund, a research foundation.

Firefighters compose one of the highest risk groups for burn or inhalation injuries. Correct, prompt emergency burn care treatment can minimize the seriousness of these injuries.

To provide information to the fire service and other fire educators, the Public Education Office (PEO), with the International Association of Fire Fighters (IAFF) held a burn prevention Symposium in mid-1977. It brought together experts from the fire service and burn care profession to draft a document on simple emergency burn care procedures and successful fire/burn prevention programs. The Symposium proceedings will be disseminated in early 1978 through the IAFF and PEO.

PLANNING FOR FIRE SAFETY

The best use of public service dollars, personnel, equipment and facilities is a universal concern in today's economic climate. In an area such as fire protection, which brings together public and private officials and organizations, comprehensive planning can be the key to success. Planning for the effective use of fire prevention and control resources is a local responsibility, since local needs and resources—and risks—differ from community to community.

Although the problems differ, the need for comprehensive Fire Prevention and Control Master Planning is universal. Fire protection master planning is a systematic process for determining how much fire risk a community is willing to assume, how much fire protection it can provide and alternative approaches for providing that protection. It is the development of a total community plan by that community. It looks at today's fire situation, anticipates tomorrow's problems, and designs alternative plans with costs and benefits to meet fire protection needs. Based on a master plan, rational decisions for using public and private resources can be made.

The National Fire Administration's goal in master planning is to provide leaders on all levels of government with the tools needed for comprehensive fire prevention and control planning. At a time when local governments are struggling to maintain or improve the quality of public services, the NFPCA's master planning tools offer a valuable resource.

The Urban Guide for fire prevention and control master planning was officially released on March 29, 1977. The Guide is a step-by-step manual that outlines the procedures for planning and implementing fire protection master plans for urban communities. Since its release, more than 5,000 copies of the Guide have been distributed and at least 150 communities throughout the nation have begun master planning.

The planning process was originally developed under grants to the City of Los Angeles and Mountain View, California fire departments. Prior to the release of the Guide, 13 other communities³ pilot tested and reviewed the planning process, at no cost to NFPCA other than technical assistance.

The International City Management Association (ICMA) and representatives of communities near the validation cities have given a "third party" assessment of the Guide's usefulness. The ICMA formed teams of city administrators who visited the pilot communities to determine the transferability of master planning. Their conclusion: overwhelming support for the master planning concept and the Guide. ICMA also observed that "Master planning's total 're-think' about community fire protection tends to foster a more equitable distribution of responsibilities and costs between the public and private sectors."

While the Urban Guide is a comprehensive document for use in a complex environment such as a large city or metropolitan area, the Basic Guide for Fire Prevention and Control Master Planning, completed in July 1977, is a simplified version of the key concepts and procedures of master planning. Smaller communities and rural areas are targets for the Basic Guide, developed for NFPCA by the Oklahoma State Fire Marshal's Office.

Fourteen communities⁴ around the country validated the original Basic Guide. The communities included counties and regions, and both incorporated and unincorporated areas. Some 30 other rural and small communities are currently field testing the revised Basic Guide.

Training in the use of master planning techniques was an important NFPCA activity in 1977. The National Fire Academy is responsible for this outreach aspect of master planning.

The National Fire Academy developed two master planning courses during 1977. The first, "Overview of Master Planning," introduces course participants to the purpose, language, procedures, and costs and benefits of master planning. In 1977, 980 local fire service personnel and local government officials in 12 states attended this course.

The second course, "Preparation for Master Planning," readies local government planning team leaders to carry out their roles in master planning. The method of training these leaders is a "hands-on" workshop simulating a planning team environment. The course was pilot tested in California in June. By late 1977, student nominations from cities committed to master planning were arriving at NFPCA. These nominations will determine interest centers for selecting locations for course delivery during 1978.

Meanwhile, the Public Education Office continued to train local fire educators in systematic planning techniques for public fire education. Effective education programs, designed for specific target audiences, are the goal of this planning process. During 1977, local fire educators participated in regional public education planning programs held in 11 states. By the end of 1977, Public Fire Education Planning, a step-by-step manual for fire educators, reached the final stages of development.

ARSON

The Symphony Road neighborhood in Boston is known for two primary characteristics: its closeness to the Boston Symphony and arson. In other cities across the Nation, from Seattle to the South Bronx, arson has become an epidemic.

In Ohio and California, the first states to join the NFPCA's National Fire Incident Reporting System, incendiary and suspicious fires are the leading cause

³ Validation communities are Azusa, CA; Covina, CA; Edmonds, WA; Fayetteville, AK; Fremont, CA; Ketchum, ID; Richardson, TX; Springdale, AK; Springfield, IL; Tulsa, OK; Virginia Beach, VA; Washington Township, Gloucester County, NJ; and West Covina, CA.

⁴ Validation communities are Benton County, AR; Clarendon County, SC; Devils Lake, ND; Flagstaff, AZ; Forest Grove, OR; Godfrey, IL; Longmont Fire Protection District, CO; Maderia Beach, FL; Northwest Missouri Regional Council of Governments, MO; Princeton, MA; Seymour, TN; South Charleston, OH; Spring Lake Fire Protection District, CA; and Williamsburg, PA.

of property loss in buildings. These fires cause about 20 percent of the known residential dollar loss and almost 36 percent of the known losses in non-residential buildings in those states. An estimated 25 percent of all fires in the Nation today are the work of the arsonist.

Arson, however, is more than an issue of tremendous scope. It is also an issue of complexity. Criminal involvement, human behavior, social change, business and economic trends and the nature of fire contribute to arson's attack on the cities. The arsonists' motives range from those arising from mental disturbance to arson for profit. Finally, the responsibility for stopping arson does not rest solely with the fire service nor the police. Rather, arson is a crime that crosses organizational barriers and requires broadbased countermeasures for solution.

At the National Fire Administration, arson received priority attention in 1977, based largely on recommendations in "Arson: America's Malignant Crime." Achievements ranged from providing technical assistance, allowing local communities to stop arson before it starts, to coping (through training and information) with arson when it happens.

In October 1977, Boston headlines announced the arrests of 26 alleged members of an arson ring operating in neighborhoods near the Boston Symphony. Information contributing to the breakup of this ring came from a Boston community group, the Symphony Tenants Organizing Project (STOP), with technical assistance from the Fire Administration's Public Education Office. This assistance helped Boston residents take advantage of extensive socio-economic studies performed on urban fire problems by PEO. The result of this effort is an early warning system which monitors factors such as inflated property values, cost to mortgage ratios and property conveyances. The system has been used to forecast arson with a high degree of reliability.

Since the breakup of the Boston ring, the Department of Commerce's Economic Development Administration has agreed to fund a program in cooperation with NFPCA to develop a Boston-style model community program that can be transferred to other communities around the nation. The model program will focus on housing services and insurance rehabilitation; it will begin in 1978.

Adults are not alone in deliberately setting fires, as many fire investigators know. Juvenile firesetters are major contributors to the enormous impact of fire loss. Education programs to prevent juvenile firesetting, coupled with counselling programs for known juvenile firesetters, can measurably reduce this toll.

For example, an education and counselling program developed by the Los Angeles County Fire Department was presented to 196,000 students in 420 schools over a three-year period. The number of fire incidents involving juveniles dropped from 169 at the programs' beginning to 12. There were no repeat offenders. The Public Education Office sponsored a 1977 grant to document and evaluate this and other successful programs for youthful firesetters. The result will be a practical guide for local fire departments to use in dealing with juvenile firesetters in their community.

The NFPCA also concentrated on building the skills of those who confront arson when it happens. For example, the National Fire Academy co-sponsored seminars for practicing arson investigators in two regions of the United States. These seminars reached 350 investigators; courses in an additional 10 locations are planned for 1978.

In addition, NFPCA staff members participated in arson programs sponsored by other organizations. They reached a total of 975 students through these programs.

In another effort, the Fire Reference Service of the Data Center brought the total items in its arson collection to more than 800 in 1977. Gathered from a variety of sources and abstracted for easy reference, this is one of the most comprehensive collections of arson information in existence. Arson investigators can use the collection to learn about the latest investigative techniques and programs. A bibliography of the collection was finished in 1977.

Development of a model fire/arson investigation training course neared completion in 1977. The completed course package will include a job description of the fire/arson investigator, major topic and course outlines, delivery systems, instructor qualifications and evaluation systems for the program. This 80-hour course will be offered beginning in April 1978; a 24-hour course in arson detection will be available in July 1978. The goal: more arson arrests and convictions.

NATIONAL FIRE DATA CENTER

In terms of deaths and dollar loss per capita, the United States has one of the worst records in fire protection in the industrialized world. One of the tasks of the National Fire Data Center is to find out why, and to develop information that can help us reduce the problem.

Objective and purpose

The National Fire Data Center has three major objectives: (1) to accurately define the magnitude and characteristics of the fire problem in the United States, (2) to help state and local governments to do the same for themselves, and (3) to help disseminate information on the fire problem and the solutions to it.

Better information is needed at every level of government to help set priorities among various societal problems, and among fire protection programs. It also is needed to target fire protection programs more accurately for different regions, the different groups of people, and different parts of the problem. It is needed to assess progress over time. And it is needed to identify success stories and help share what works. Of course, our goal is to reduce fire losses and improve the cost effectiveness of fire protection. Data is only a means to those ends.

Because there are never enough resources to do all one would desire in fire protection, it is crucial to have data—and it must be accurate data—to make informed resource allocation decisions. To the extent that the data is not adequate, we will be operating programs in the blind, and there will be some needless loss of lives and property due to mistargeted programs. There is a growing appreciation throughout the fire protection community that this is the case.

National fire data system

The Fire Administration from its inception has tried to use existing data sources to the maximum extent possible. A major drawback has been the lack of compatibility among these sources, such as the various state and local fire data systems. Another major drawback has been the questionable accuracy of much of the existing data.

In spite of the problems, we are working to adapt the existing data sources for use in making meaningful estimates. For example, in making national estimates of fire deaths, we rely heavily on the HEW Center for Health Statistics' data collected from death certificates. And we use data from private sector sources such as the National Fire Protection Association's annual survey of fire departments the insurance industry's estimates of dollar losses, and the International Association of Fire Fighters' estimates of firefighter injuries.

But we are left with the problem that for many types of crucially important information, we need a "core" of key data on individual fires collected in a standardized, accurate way from around the country. So we started the National Fire Incident Reporting System.

National fire incident reporting system (NFIRS)

The National Fire Incident Reporting System collects data needed to make national estimates and provides state and local governments with a means to collect and analyze data for themselves. Rather than create yet another "national standard," we decided to use as a common language the Uniform Fire Coding developed by a consensus standards committee of the National Fire Protection Association. We now serve as an active member of the committee, working to further improve the data collection system.

In those states participating in the system, firefighters record for each fire the type of occupancy, probable cause, number of casualties, and other particulars. The local departments then send their data to the state, usually the State Fire Marshal's office. The state processes the data and returns feedback reports to the local departments. Every three months the state sends us a computer tape with their incidents and casualties on it. We use this data to build our national fire incident data base. We use this data base, along with data from other sources, to prepare our national estimates once a year. We also use this data base for many special reports during the year, often at the request of industry and other Federal agencies.

NFIRS is now operational or under development in the 19 states shown in Figure 5. States participate voluntarily. Thus far, the South Central and

Southeastern States have not participated. This missing region obviously is a source of major concern for those involved in making truly national estimates. We are all the more concerned because many of the missing states have among the highest fire death rates in the country. To help improve this situation, we have reserved the monies available for new states in fiscal 1978 for Southern states ready to come into the system.

We eventually would like to have all states and territories in the system. While only a representative sample is needed for making general national estimates, more detailed questions about specific types of fires require a more comprehensive set of data; and, perhaps most importantly, we want to give every state, local government, and territory—not just a random sample—the opportunity to develop a data system that will allow it to better analyze its own problem and to compare itself to others.

To states willing to participate in the National Fire Incident Reporting System, we offer the opportunity to apply for a small start-up grant (up to \$20,000) and a small second-year grant (averaging \$10,000). These amounts typically cover only a small fraction of state costs. We also provide model forms for collecting data; computer software for processing the data at the state level and for giving local governments feedback reports on their own problems; and technical advice on setting up and running the system, and on analyzing the data from it. We also offer to install and test the software in each state and provide information on it. The National Fire Academy conducts courses to train trainers in each participating state on how to collect fire incident and casualty data. We also provide student handbooks containing instruction on data collection.

We have also helped the states in the National Fire Incident Reporting System to organize themselves into a "users" group, not unlike similar users groups organized by computer manufacturers. The state program managers and data processing experts meet twice a year to exchange information on how to overcome problems and how to cut costs, and to discuss improvements in the system they would like us to make. The state representatives have formed a steering committee to plan these meetings, and the states share the costs with us. As each new wave of states join the system, they are taken under wing by the previous waves. We are also trying to promote communication between neighboring states, so that they can help each other, between national meetings, on a more frequent, informal basis. The users' meetings have, thus far, been a considerable success in the eyes of most state attendees. The states have even begun vying among themselves to see who will host future meetings. From our perspective, it has been a delightful example of Federal-State cooperation.

For local governments in states not yet participating in NFIRS, we offer any of the computer software and printed materials, and whatever technical advice we can afford. Some states even choose to obtain the materials and computer programs without applying for a grant.

There are still problems in propagating the system to the majority of states, in improving the validity of the data being collected, and in providing technical help to the state and local governments in developing their own systems to an acceptable level. But for the first time, there now exists a way to add data from a number of different States, apples to apples. The NFIRS system not only provides the means for making national estimates, which might be made on the basis of a statistical sample, but more importantly, provides a management tool for local and state officials with which they can assess their own circumstances and manage their own programs.

In-depth investigations

The National Fire Incident Reporting System collects a little bit of data on a lot of fires. For many types of questions, it is necessary to obtain more detailed data than one can afford to collect routinely on each fire. For these applications, we use in-depth investigations of carefully selected samples of fires.

At present, we have three major in-depth investigations programs. First, we investigate or charter investigations of major fires such as the recent Southgate, Kentucky, nightclub fire. The National Fire Protection Association just released a report on this fire, prepared under contract to us. We also will be releasing a supplemental report with additional analyses by the Fire Administration and the Center for Fire Research's own staff.

The second major in-depth investigation program, funded by HUD, is on the nature of mobile home fire problems, and the adequacy of the 1976 HUD mobile

home standard with respect to fire protection. In this project, we are working with State Fire Marshals and others in eight selected states to do in-depth investigations according to a protocol we established jointly with HUD, NBS, and NFPA. The mobile home study also makes use of data on mobile home fires from the National Fire Incident Reporting System, the Consumer Product Safety Commission, and State Fire Marshals' reports. We thus make use of an existing network of trained investigators, help broaden their experience, collect data on a vital project for another agency, and explore another piece of the fire problem, all at the same time.

The third in-depth investigation project is our prototype effort for the Consumer Product Safety Commission (CPSC) on fires caused by a few selected types of consumer products. Here we are pilot-testing the investigation procedure. It will be CPSC's option to decide whether to fund additional investigations through us.

NATIONAL FIRE ESTIMATES

The Data Center not only collects data, but also analyzes it and tries to draw policy implications from it. Our major product is a series of annual national estimates reports, entitled *Fire in the United States*, the first of which is in final draft. This report describes the magnitude and characteristics of the U.S. fire problem, compares it to that of other nations and other national problems, and describes the characteristics of the problem in a way intended to be helpful for making fire protection program decisions at various levels of government. The report is also intended to serve in part as a model for other levels of government in analyzing their own data. In developing the report, we paid considerable attention to the quality of the data presented. Wherever appropriate and feasible, data from a number of different sources was presented, and the validity of the estimates discussed.

We really still do not know very much with confidence—that is, with quantitative precision—but there has been a great deal of progress in the last year. Some highlights of the first national estimates report are discussed below. We are following up some of the tantalizing observations and questions in more narrowly focused studies. Unfortunately, we cannot do this as we would like on all fronts, so there is bound to be frustration when we can't say why some of the results occurred.

Fire deaths, injuries, and dollar loss

We estimate that there are approximately 8,000 deaths; 300,000 injuries; and over \$4 billion direct property loss from fire each year in the United States (Figure 6). Total economic costs of fire protection and fire losses are much higher than that—over \$13 billion, possibly much higher.

Males outnumber females almost two to one as casualties. Over two-thirds of civilian casualties occur in the home, usually in ones and twos. The Southgate fire which claimed over 160 lives is a rare exception. Because of the publicity given to a few large non-residential fires, the public probably misunderstands the fire problem, and under-appreciates it. Consider the fact that the annual number of fire deaths is about that which would result from having a Southgate-size fire in every state once a year.

Because of this situation, a major part of the Fire Administration and Center for Fire Research program is being directed toward the residential problem.

The intensity of the fire problem varies a great deal from place to place and between urban and rural areas. Figure 7 shows how the fire death rate varied from state to state in the mid-70's. It is based on data from a variety of sources, including the HEW Center for Health Statistics, State Fire Marshals' reports, and an NFPA survey. The map shows that Alaska and a belt of South-eastern States have the highest fire death rate in the Nation. In any given year, the death rate may suddenly be high in a given state because of one large fire or the laws of chance, but most of the states shown to have a high rate in the figure have had it for at least a five-year period (Maryland was the only anomaly).

To better understand who the victims are in the states with high fire death rates (and some other states for comparison), Figure 8 shows fire death rates for urban and rural blacks and whites. It is well known that the elderly and the very young have high fire death rates. This table gives some additional insights: death rates for blacks are much higher than for whites; rural areas are generally higher than urban; and rural blacks in particular have a disturbingly high death rate. The picture is quite similar from state to state.

Figure 9 shows how fire death rates vary by community population size for the whole country. The curve is roughly U-shaped with high rates for rural areas and large cities, and lower rates for medium sized cities. (As a side note, we have given information on the rural fire problem to the Rural Development Service, U.S. Department of Agriculture, and have helped them write the fire portion of their annual report to Congress on the state of rural America.)

Data from the rural sector is often of lower quality than that from other parts of the country. It is comprised of a small amount of data from a large number of departments; it requires a special effort to verify that the emerging picture is indeed correct, and to find out more about why the rural problem is so severe. Because of the above findings, the Data Center has planned a special project in fiscal 1979 to gather data on the rural fire problem.

What are the leading causes of fires, especially residential fires? Figure 10 shows the leading causes in Ohio and California, the first two states for which we had a full year's data in our National Fire Incident Reporting System. Cooking is the leading cause of fires. Smoking-related fires are the leading causes of deaths and injuries. Incendiary and suspicious fires are the leading cause of dollar loss. But regardless of which loss measure one considers, the same group of causes emerges as important, though in slightly different rank order from one measure to another.

Figure 10 is simply a summary. We can report causes by much more detailed categories, and can categorize them in many different ways with our new data system. When considering flammability standards, for example, we can determine the number of fires which involve various types of home furnishings such as upholstered furniture or bedding.

Figures 11 and 12 show the frequency of different causes for non-residential structure fires in California and Ohio. The charts show that incendiary and suspicious fires lead in terms of frequency and dollar loss. The profile of causes varies from one type of occupancy to another. We can examine cause categories for much more detailed occupancy categories than those shown in Figures 11 and 12. That is, we can get a detailed picture of the problem for particular types of businesses, institutions such as nursing homes or prisons, schools, etc.

U.S. versus other countries

As mentioned earlier, the United States fire problem is among the worst in the world, both in human losses and economic losses. In terms of fire deaths per capita, we are about tied with Canada for being highest among the countries for which we have comparable data, as shown in Figure 13. We are third highest in dollar losses from building fires (the most comparable economic loss statistic). Figure 13 also shows that we are the only country high in both human and economic losses. Canada for example is highest in fire deaths, but in the middle in terms of dollar loss per capita; Norway is high in dollar loss, but in the middle in terms of death rates.

It is difficult to make accurate comparisons, and no one is sure why we have such a relatively poor performance. But a recent study done for us by the Georgia Institute of Technology on the reasons for international fire differences found that these differences were indeed real, though somewhat less extreme than previously thought, after screening the data.

There are many hypotheses for the international differences. There seems to be a high correlation between fire losses and technological and economic development. For example, electrical energy usage per capita correlates with national fire rates, and wealth per capita correlates with fire rates and losses. Crudely stated, the more there is to burn and the more there is to serve as ignition sources, the more fires there seem to be. But this is an oversimplification. Even if we eliminate all U.S. fire deaths resulting from electrical ignitions, we would still be in the same rank for fire deaths. There appears to be another, and perhaps even more important issue, and that is the amount of prevention practiced in the various countries, and the degree of public carefulness. These factors are hard to quantify for statistical analyses, but there seems to be, for example, a greater concern in Japan about the hazards of fire than in the U.S., a greater percentage of fire department manpower spent on prevention in Tokyo than in U.S. cities, and more of a social stigma attached to those in Japan who accidentally cause fires than there is attached to those who cause fires in the U.S. The Germans and several other countries seem to have more highly trained inspectors, and stricter enforcement of their codes.

OTHER DATA CENTER FUNCTIONS: REFERENCE SERVICE AND COMPUTER SYSTEMS

The Fire Reference Service is a small unit in the Data Center, devoted to making information such as the above accessible to the fire service, industry and others. This is true not just of Fire Administration information, but the general fire literature, as well.

Our Fire Reference Service operates in several modes. First, we started Fire Technology Abstracts, which provides substantive abstracts of the applied fire literature, published both in the U.S. and abroad. This publication is made available by subscription through GPO to the fire service and others at a nominal price. These abstracts provide a means for the fire service and the public to become aware of fire-related information, not only in the many fire publications, but also in the occasional articles and reports from organizations and sources not in the fire business day to day. The abstracts also include information on patents, foreign research, and unpublished reports.

Second, the Reference Service answers queries from Federal agencies, Congress, industry, and the public for information on particular fire protection problems. It informs those who request information of relevant documents; it develops bibliographies for them, or researches their questions directly, if possible. At the present, this service is provided by one person.

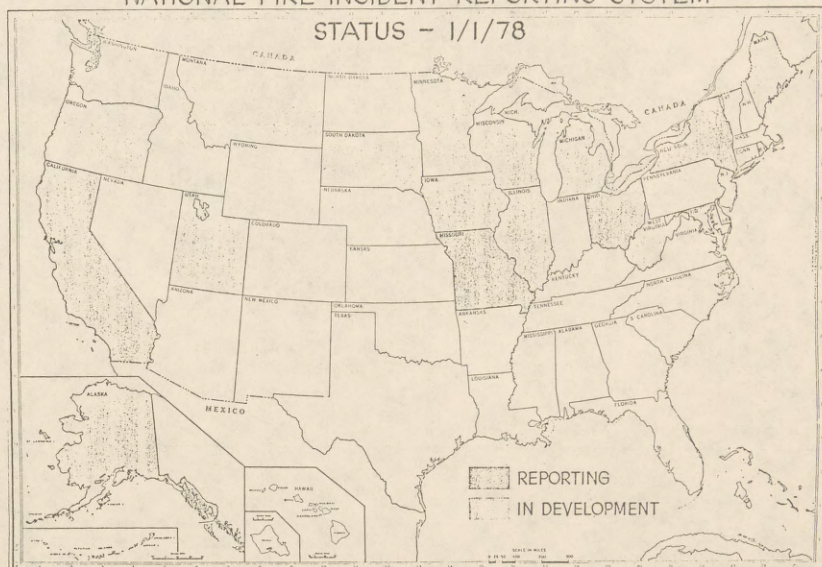
Finally, the Reference Service provides the basic library service for NFPCA, and as time permits develops specialized information collections, such as the one we recently developed on arson.

The National Fire Data Center also provides computer service to NFPCA, using computer terminals that access the main Department of Commerce computers. We have no computers of our own.

We are not doing very well compared to other nations in fire protection, but we are now taking the necessary first step of getting a better handle on exactly what and where the problem is. We hope that this will allow us to make a much better attack on it than was possible before.

NATIONAL FIRE INCIDENT REPORTING SYSTEM

STATUS - 1/1/78



FIRE IN THE UNITED STATES

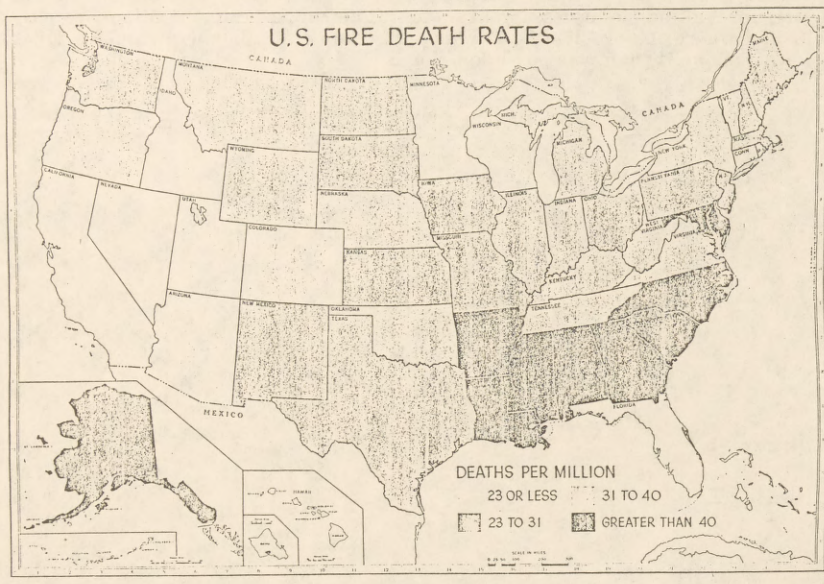
DEATHS	INJURIES	DOLLAR LOSS
7,500	300,000	\$4 BILLION

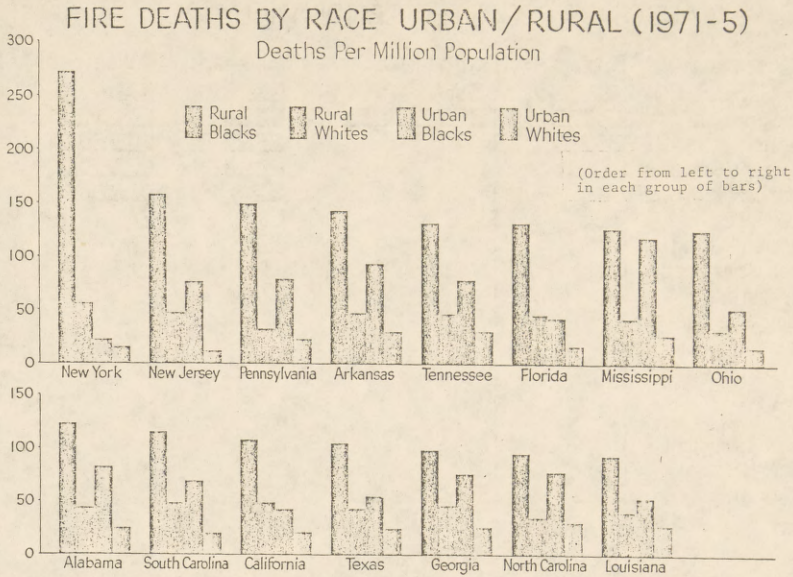
Who:

Men 2 : Women 1

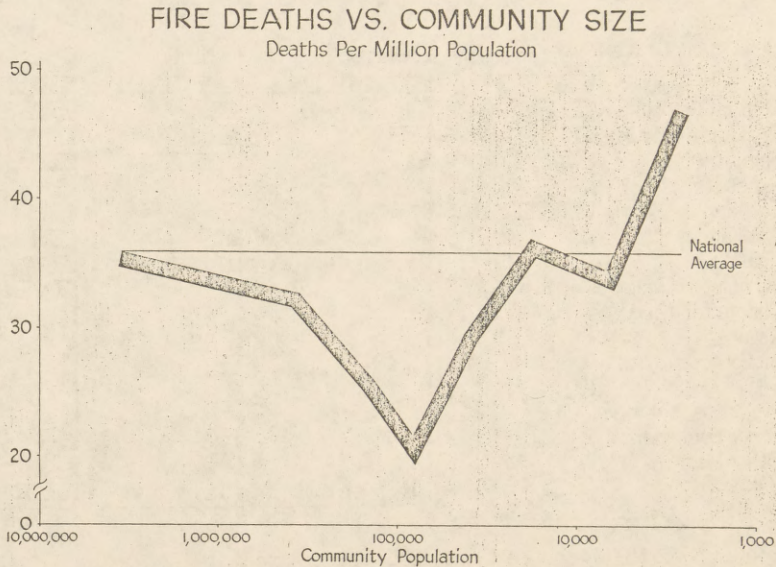
Where:

Home 2 : All Else 1



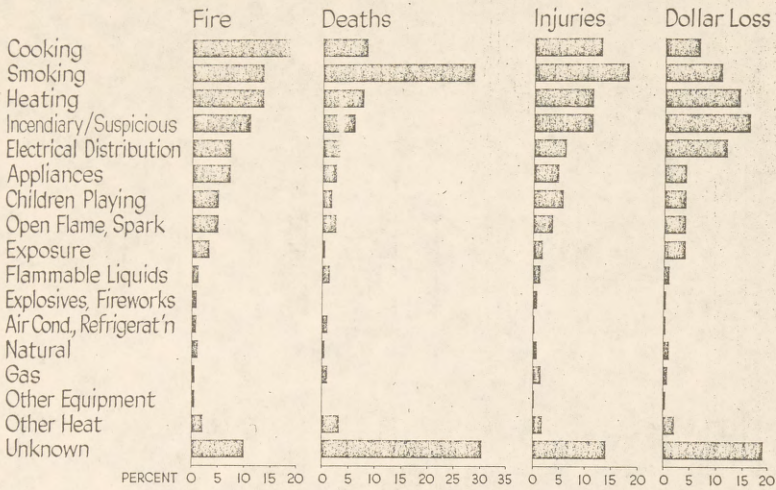


Source: Fire Deaths: National Center for Health Statistics, Population: U.S. Bureau of the Census



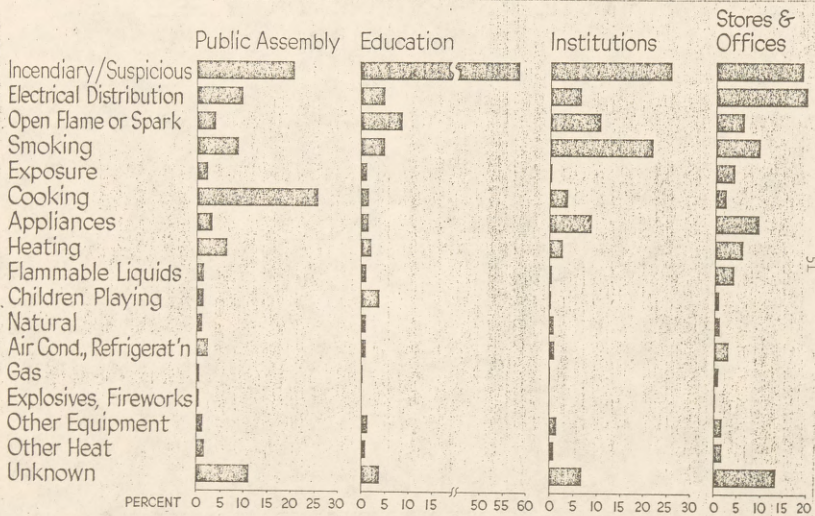
Source: 1974 NFPA Survey

CAUSES OF REPORTED RESIDENTIAL FIRES



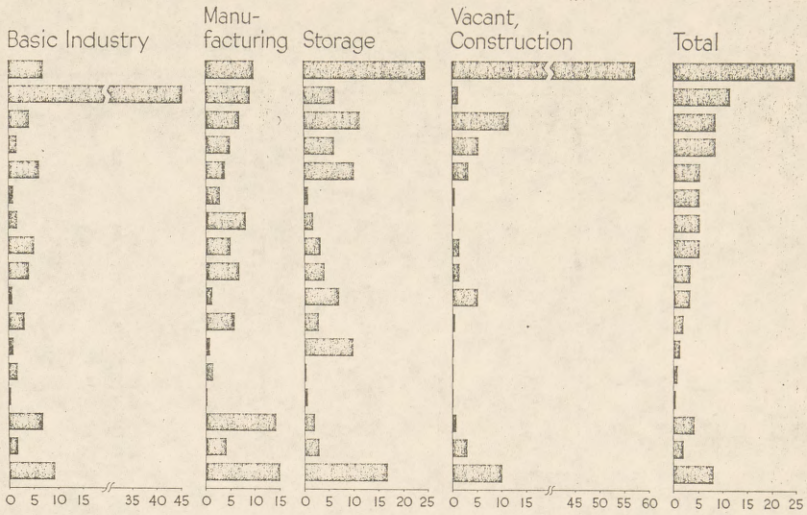
Source: Ohio (1976) and California (1975) data combined

CAUSES OF FIRES IN NON-RESIDENTIAL STRUCTURES

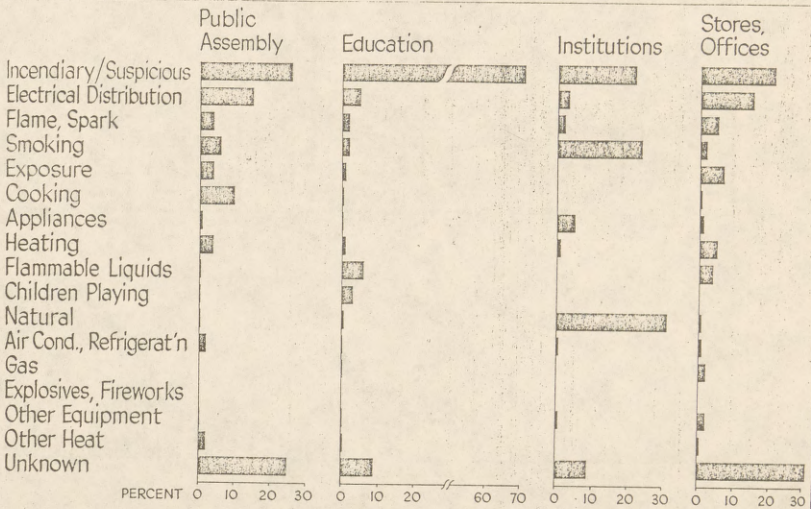


Source: Ohio (1976) and California (1975) data combined

CAUSES OF FIRES IN NON-RESIDENTIAL STRUCTURES

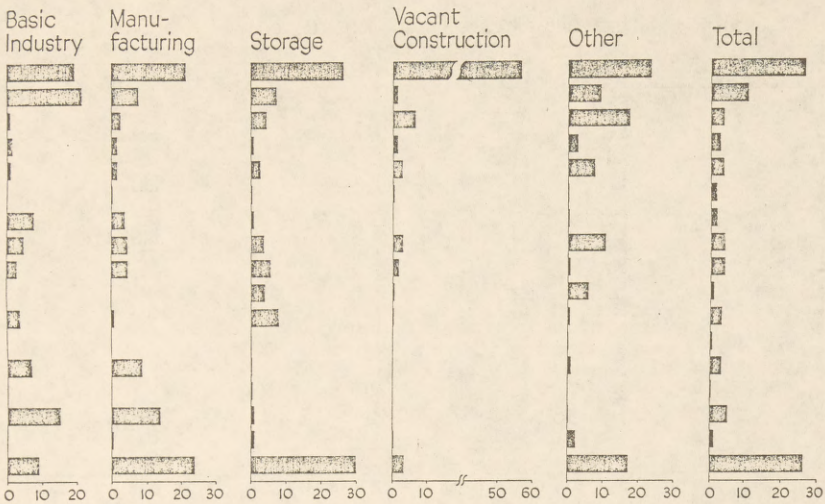


FIRE DOLLAR LOSS BY CAUSE IN NON-RESIDENTIAL STRUCTURES



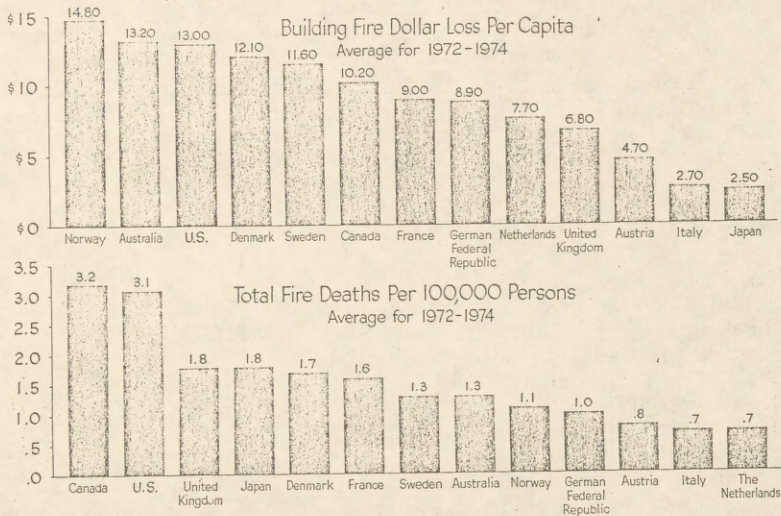
Source: California (CFIRS 1975) and Ohio (NFIRS 1976) data combined

FIRE DOLLAR LOSS BY CAUSE IN NON-RESIDENTIAL STRUCTURES



54

INTERNATIONAL FIRE COMPARISON



55

Source: Rardin and Mitzner, Determinants of International Differences in Reported Fire Loss: Preliminary Investigation (Atlanta, Ga.: Georgia Institute of Technology for the NFPCA, forthcoming)

NATIONAL FIRE ACADEMY

The National Fire Prevention and Control Administration was established by Public Law 93-498 in October 1974 and, from its very beginning, has placed a high priority on the creation of a National Fire Academy. Such an Academy is without precedent in the United States while several European nations have successfully operated such academies for many years. The National Commission on Fire Prevention and Control, in its report to the President and to Congress, strongly endorsed the establishment of an Academy at the earliest practical date.

The NFPCA has developed its entire Academy program around the philosophy that one of the most effective methods of reducing the loss of life and property by fire in the United States is to improve the training and education of those directly involved in fire protection. Leaders in the field concur that a shift in emphasis from one of fire suppression to one of fire prevention is essential if such a reduction is to take place.

PROFESSIONAL, TECHNICAL, EDUCATIONAL, AND FINANCIAL ASSISTANCE

The NFPCA is authorized to provide assistance to state and local fire service training programs through grants and contracts. This financial assistance may not exceed four percent of the total annual authorization for the Administration. In order to assess the best manner in which assistance could be extended, in 1975 the Administration sponsored a national survey of existing fire service training and education programs. The fragmentation and lack of coordination that characterized fire service training and education seemed particularly noticeable at the state level. The survey revealed that ways in which fire service training was organized in the states varied widely, and that the quality of such programs also had great disparity.

Of the states responding to a national fire service training and education survey, 81 percent obtain funds for fire training from state revenues and 45 percent report obtaining these funds from tax revenues. The other 36 percent apparently get it from other state revenue sources.

A full 99.4 percent of the states have full-time or part-time training personnel or both, with 89 percent having some full-time personnel. Training personnel must be certified in 82 percent of the states.

Only two states, Rhode Island and New Jersey, reported having no training facilities of any kind. All other states reported having at least one from the following list—Central Training Facility, Satellite Training Facility, County Training Facility, Other Type. In the area of fire prevention, 62 percent of the states report having training programs, broken down over regions this becomes: North East 44 percent, North Central 54 percent, South 73 percent, West 67 percent.

With respect to arson, 42 percent of the states have specialist training programs, 38 percent hold specialist workshops and 29 percent include arson detection as part of a formal fire prevention program.

Of the four regions, the South appears to have the greatest number of programs in many areas of fire education. Every Southern state has some full-time training personnel, and all but one have some part-time personnel. All but one has state funds for training. In the South 73 percent of the states have a fire prevention training program, the next best being the West with 67 percent having such a program. In each of a large number of fire training areas over 70 percent of the Southern states report having some facility. No other region ranks as high in this respect.

Of the needs that were categorized, curriculum development assistance ranked highest with 74 percent of the states reporting a need in this area. The next most stated need was assistance in facility development or improvement (45 percent).

Seventeen states provide no training in officer development, 24 states sponsor no fire prevention training, 15 states provide no training in the many fire service specializations. Responsibility for such training ranges from voluntary participation by state firemen's associations to designated state agencies such as Department of Education and State Fire Marshal. The funds allocated annually by the state for such training activities range from a high of \$75.46 to a low of \$.88 per individual fire service member. No definable relationship was found between the amounts budgeted for state training programs and the size of the state, either

by population or area. Except for a few states, the entire system of state fire service training seems to have evolved more by the accident of history and relatively unique contingencies in each state than by systematic analysis, planning, and review.

This lack of uniformity has caused a special practical problem for the National Fire Academy. Dealing directly with each of the 27,000 fire departments in the United States would necessitate so large an Academy staff as to be prohibitive in cost. The option of forming a working relationship with 50 state training agencies seemed a far more practical alternative. This option, even though attractive, requires that each state have a designated entity that would adequately represent the training interests of all those involved in fire prevention and control in that state. Our experience verifies that many states lack such a clear identification through which the Academy programs could be routed.

To encourage systematic development of individual state programs, the Academy instituted the Academy Planning Assistance Program in February 1976. This program provides financial grants to states so that they can identify and coordinate their existing education and training resources, assess education and training needs throughout the state, and develop a statewide fire education and training plan to meet the needs identified. Such grants are awarded upon application by the states, and no matching funds are required.

Specifically, programs provide two levels of grant assistance: the first is development of a statewide organizational design and the second is development of a five-year education and training plan for the state by those interests in the state.

The statewide organizational design is intended to be a document that describes the organizational network in the state by which fire education and training is provided. The organizational entities that make up the network are identified and their responsibilities described. The design also identifies the representative entity within the state to be responsible for coordinating improvement of fire education and training. All together, the purpose of the statewide organizational design is to describe, assess, and improve fire training and education by better coordination, more extensive cooperation, reduction of duplication, clearer definition of responsibility, establishment of a common statewide purpose, and a sharpened vision of accountability.

While improved coordination, cooperation, and coherence can achieve a great deal, the development of a five-year education and training plan, which is the second type of grant under the program, is intended to take the move toward improvement one step further. Each plan is envisioned as consisting of five principal parts. The first, the factual overview, describes the state's population, state legislation, local standards, career development of fire service personnel, availability of student subsidies and aid, and the statewide organizational design for fire education and training. The second part consists of an accurate, current description of fire education and training programs in the state. This part of the plan constitutes a comprehensive "where we are" statement. The third part of the plan consists of a comprehensive "where we want to go" statement identifying current and future education and training needs, evaluating relative importance, establishing priorities, and defining long-range goals. These priority statements are intended to serve as unified directional guides for planning and implementation. The fourth part consists of a development strategy in laying out the steps to be taken to accomplish the desired long-range goals.

Finally, the fifth part takes into account the relationship between fire education and training and other fire programs sponsored, it is hoped, by the state such as systematic data collection on the fire problem, promulgation of fire safety regulations, fire and arson investigation services, burn treatment, public education programs, etc.

In its first year of operation in 1976, grants were awarded to 13 states. Nine states received grants to develop statewide organizational designs: Connecticut, Georgia, Louisiana, Missouri, South Carolina, South Dakota, Texas, Washington, and Wyoming. Four states received grants to develop a five-year statewide fire education and training plan: Arkansas, California, Nevada, and Oregon. The total amount appropriated for this activity was \$302,474 with the average grant for organizational design being \$10,000 and the average grant for education and training plans being \$50,000.

In its second year of operation, 1977, grant awards were made to 17 states. Thirteen states were awarded grants to develop statewide organizational designs: Alabama, Alaska, Arizona, Florida, Kansas, Kentucky, Maryland, Minnesota, New Hampshire, New York, North Dakota, Pennsylvania, and Virginia. Four states received grants to develop education and training plans: Connecticut, South Carolina, Texas, and Washington. A total of \$359,179 was expended in this effort.

In planning and development, the National Fire Academy staff has placed heavy emphasis on training and education needs identified in state organizational designs and plans because they contain the most complete information on fire training currently available on a national level. This is a continuing program and tied in very directly with our training and education program in its development of innovative programs of instruction that do not presently exist at the state and local level.

CURRICULA DEVELOPMENT AND DELIVERY

The National Fire Academy is in various stages of development and delivery of 26 courses in fire safety contained in the Academy's current plan that fall into five general areas. The first is an executive development curricula series intended for senior fire service officers. Academy emphasis stems from studies which reveal that while instruction in fire command can be improved, by far the largest gap in current training for senior officers is in the area of modern management techniques.

A second set of courses is being developed for the junior officer ranks and is aligned with the performance standards for these ranks set forth by the Professional Qualifications Board of the Joint Council of National Fire Service Organizations with standards that have already been adopted or are being prepared under the consensus standards development process of the National Fire Protection Association.

A third set of courses is directed toward educational methodology and instructor development. This is the pivot point for the entire Academy system and is based upon the concept of "training for trainers" to transfer the knowledge they learn at the National Fire Academy to their local communities.

A fourth set of courses is concerned with specific technical areas such as maritime fire prevention and control, aircraft control and rescue, fire and arson investigation, and emergency medical services.

Finally, a fifth set of Academy courses is directed toward the allied professions that impact on the quality of fire protection in this nation. These courses are designed for practicing architects, fire safety educators, fire protection engineers, urban planners, and those in similar professions.

The procedures the Academy follows in its curricula development require initial surveys as to where and when a particular subject area may be carried on in the United States. Curricula material already in use are then collected and analyzed, if they exist, and at the same time performance standards and task analyses are consulted if available. A rationale for the course is prepared, as well as its purposes, goals, objectives, contents, and instructional techniques. A workshop conference is convened at which educators, members of the fire service, and other affected personnel are presented with the material and asked for their recommendations. Based on the foregoing, materials are reshaped and the entire course program prepared. Courses are field tested and evaluated to assess achievement of its intended objective. If further revisions are required or additional development is necessary, it is undertaken until a satisfactory final version is reached.

Admittedly, this procedure is long and time-consuming, but the end product is exemplary. At the present time, there are 26 courses comprising programs that the Academy has identified in its Five-Year Plan. Ten will have gone through the entire process in 1978, while others are still very early in the developmental stage. Nevertheless, we expect this sort of intensive curriculum development to reap its rewards by the development of curricula of the highest national standards and quality.

The Fire Administration is currently developing plans for the delivery of Academy training courses in conjunction with the Department of Commerce. The Marjorie Webster Junior College site was purchased in May 1977 to be used for a National Fire Training facility. Before funds are committed for extensive renovation of the Webster site, it is necessary to assess the relative roles of the Federal, state, and local governments in providing the most effective

delivery mechanism. Further, the Academy has studied the structure of fire training and education provided by community colleges, four year colleges, and universities. Our national survey identified 242 colleges that offer fire related educational programs. Of these, 223 are community colleges offering two year associate degrees. The use of community colleges for fire related training has increased dramatically during the last two decades and appears to be the most rapidly expanding sector in the training and education of fire protection personnel.

As is true of any operation that expands rapidly, the community college programs taken as a whole are relatively uncoordinated, lack uniformity, and follow no common standards of excellence. Some are exemplary while others are made of a patchwork in response to varied local demands. The relationship between these programs and the ones to be found in four year colleges is also obscure since no standard exists where a bright and able person, who has completed a two year program can easily transfer to a four year program, since the two programs are frequently uncoordinated. Furthermore, the relationship between education received in the program and the function that the student is expected to fulfill is often ambiguous. Despite these difficulties, the Academy considers colleges and universities a major resource for fire related education and is authorized by law to assist. In fulfilling this responsibility, the Academy has arranged for regional conferences drawing representatives from the affected institutions. Two such conferences were sponsored in 1976 in Regions II and X of the Department of Commerce, and the Academy intends in the future to sponsor additional conferences in the country's other eight Federal regions.

A study which will be completed by April 1, 1978, will provide guidelines for a comprehensive coordinated system for a delivery of fire education courses which will take into account the potential capability of all existing educational institutions, including state fire schools, universities, junior colleges, and technical schools, as well as the potential benefits from a national central Academy facility.

LEGISLATIVE DIRECTION

The Academy's course development has rested on two legislative initiatives. Section 7(a) of Public Law 93-498 states: "The Secretary shall establish, at the earliest practicable date, a National Academy for Fire Prevention and Control. The purpose of the Academy shall be to advance the professional development of fire service personnel and of other persons engaged in fire prevention and control activities."

The Academy conceives this to mean, among other things, that it should plan for, encourage, and/or develop a coherent, consistent, and practical overall training and educational scheme whereby persons in fire services and in fire-related occupations are knowledgeable about and competent in fire prevention and control positions that they occupy. This cannot be left to chance or accumulated practical experience, or to be more or less haphazard supervision on the job. It must be provided by job competency systematically organized prior to or adjunct training or education. An occupation develops into a profession by developing this sort of careful attention to the practical and often unanalyzed contingency that confronts a practitioner on the job and by providing for future effectiveness and efficiency by a prepared and considered education.

A second legislative mandate that the Academy has taken to heart is the national priority given to fire prevention. Section 7(d) of Public Law 93-498 states: "The Superintendent is authorized to: (1) train fire service personnel in such skills and knowledge as may be useful to advance their ability to prevent and control fires, including, but not limited to: (A) techniques of fire prevention, fire inspection, fire fighting, and fire and arson investigation; (B) tactics and command of firefighting for present and future fire chiefs and commanders; (C) administration and management of fire services; (D) tactical training in the specialized field of aircraft fire control and crash rescue; (E) tactical training in the specialized field of fire control and rescue aboard waterborne vessels; and (F) the training of present and future instructors in the aforementioned subjects."

Fire suppression will always be a fundamental task and will continue to have its critical place in every fire department's repertoire. Knowledge of sound command strategy and tactics on the fire ground will always remain important,

but the matter is one of balance. Too little attention has been paid by fire service personnel to the practical benefits that can flow from an equal emphasis on prevention. To correct this imbalance and to fill a large gap in current training and education, participation by the Federal government is necessary. The National Fire Academy must develop programs and courses to lead the nation's fire protection community in the direction of prevention rather than suppression. We are convinced, as are numerous experts who testified before the National Commission, that such an effort will result in significant reduction in the losses of life and property by fire in this country.

The Academy is assessing the feasibility of supplementing its curriculum development with a full set of ancillary services. These would include an instructional materials center that would collect the best curricula materials available on fire service subjects and an information center that would disseminate selective copies of these collections upon request.

COMMITTEE ON TRAINING AND EDUCATION

Section 7(k) of the statute states "The Superintendent is authorized to establish a Committee on Fire Training and Education which shall inquire into and make recommendations regarding the desirability of establishing a mechanism for accreditation of fire training and education programs and courses, and the role which the Academy should play if such a mechanism is recommended. The Committee shall consist of the Superintendent as Chairman and eighteen other members appointed by the Administrator from among individuals and organizations possessing special knowledge and experience in the field of fire training and education or related fields.

"The Committee shall submit to the Administrator, within two years after its appointment, a full and complete report of its findings and recommendations."

Members of this Committee were appointed in January 1977, and their report will be submitted to the Administrator in January 1979. This report will recommend educational approaches in the community college, four year college, and university fire related education areas.

COURSE OFFERINGS

In terms of course offerings, the Academy is operational and in the field in 1978, pilot testing ten courses in each of the ten regional locations of the Department of Commerce. We plan to deliver courses reaching some 2,700 students in 48 of the 50 states this year. This program has been enthusiastically received by the fire community. In 1978, we will pilot test course programs in: fire and arson investigation, arson detection, fire instructor development, fire safe building design for practicing architects, labor management relations for the fire service, an overview of master planning, national fire data and coding format systems, pesticide spill control, and an overview of fire department management for the volunteer fire officer. Further, in 1978, we will develop courses in our executive development series, educational methodology, emergency medical service administration, fire inspection, maritime fire protection, hazardous materials, physical fitness for the fire service, and public education. (Figure 14)

SUMMARY

To achieve a reduction in this nation's scandalously high fire losses obviously requires the cooperative effort of all elements of the national fire community. The National Fire Academy has its role to play in this effort, but fire prevention and control in the United States is and should remain the responsibility of the state and local authorities. The Academy is not authorized by law, nor should it usurp any of these state and local responsibilities. Our legislative mandate is to aid, encourage, and help to extend and improve fire training and education so that the nation's fire losses can be reduced and the first services made more professionally competent in their duties. We are authorized to develop courses and to engage in fire instruction, but given the large number of paid and volunteer fire service personnel as well as other professionals, the conclusion is inescapable that the bulk of fire training and education will continue to be operated by entities at the state and local level. We envision the National Fire Academy as providing a national focus for fire safety for our citizens.

Local and state programs have grown according to the needs of the moment and they are extraordinarily diverse in quality, range, and effectiveness. Agreements on standards of excellence is more notable by its absence than by its presence. As the urbanization, industrialization, and other socio-economic and demographic changes have overtaken American society, so has the fire service been hard-put to adapt itself accordingly. The Congress and prominent members of many organizations and associations that comprise the nation's fire community have concluded that a concerted national effort to improve the existing system of fire protection is needed.

The National Fire Academy has spent its initial years in research, planning, and development to meet the recommendations of the National Commission and the mandate of the Congress to serve as an institution of excellence with advanced education programs of its own while at the same time serving as the hub of a system of fire related education and training for the nation.

	Instructor Development	Management Overview	Labor/Management Relations	Hazardous Materials	Arson Detection	Fire/Arson Investigation
AN	Baltimore, Md.					
EB	Billings, Mt.	New Jersey Iowa				
AR	Shreveport, La.	Rapid City, S.D.	California	Delaware		
PR	Nevada	Oklahoma Washington	Massachusetts	Missouri Indiana		Virginia
W	New York	S. Carolina	Washington, DC Oregon	Texas Montana		Nebraska Massachusetts
AE	New Hampshire Oregon	Connecticut W. Virginia		Idaho		New York Wyoming
JLY				Vermont	New York Pennsylvania	Tennessee
JG			New Jersey Colorado		Alaska Oklahoma	Illinois New Jersey
EP	Wisconsin Nebraska		N. Carolina Texas	New Jersey	Rhode Island Utah	California Oregon
TT		Ohio Arizona			Kentucky California	
W	Florida		Iowa		Michigan	
IC			Ohio	Alabama	Kansas	

FIGURE 14.—National Fire Academy 1978 course schedule.

THE FEDERAL FOCUS

Fire protection is a concern many Federal agencies share with the NFPCA. Many of these other agency programs are part of a larger mission (such as improved health care, housing or consumer safety). Nonetheless, there is a need to coordinate all Federal fire safety efforts to assure an orderly program for reduced fire loss. Congress recognized this need by directing the NFPCA to work with other Federal agencies in furthering the objective of reducing fire loss in a cost-effective fashion.

As a result of this mandate, NFPCA has designed its interagency coordination programs to begin meeting three basic needs:

- (1) To provide other Federal agencies with the type of assistance given to state and local governments;
- (2) To avoid duplication among Federal fire programs; and
- (3) To work toward integrating Federal fire programs to meet national needs and implement a national fire policy.

The tool to fulfill these needs is communication. The NFPCA informs approximately 65 agencies of new developments, publications and seminars. Staff members also coordinate the activities of several Federal task groups using multi-disciplinary expertise to attack common problems. NFPCA is also a cooperating member of the National Wildlife Coordinating Group to bridge the gap between structural and forestry interests.

Interagency coordination resulted in significant savings of Federal dollars in 1977.

Mobile fire apparatus represents a significant investment for fire protection on Federal property. Although most agencies need this protection, many do not have the expertise to develop specifications for acceptable units. To assist in standardizing equipment and lowering per unit costs, NFPCA distributed a Navy-developed purchase specification for pumpers and aerial ladder trucks to other agencies in 1977. As a result, NASA, ERDA and the Department of the Interior are "riding" the Navy's purchase order. The delivery time for their new apparatus has been reduced by as much as 24 months; a savings of up to \$10,000 per vehicle has been achieved. Standardization efforts will continue in 1978.

Federal fire reporting also improved as the result of NFPCA initiatives in 1977. Through an interagency transfer of funds to the Department of the Navy, a recommended fire reporting and statistical system for all Federal agencies was developed. At least a dozen agencies have expressed interest in implementing this NFIRS-compatible system during 1978.

In a similar effort, the Department of Housing and Urban Development agreed to rely on NFPCA to collect and analyze fire data needed to evaluate HUD's mandatory mobile home fire safety standard. The results are uniform data collection, more valid statistics, reduced burden on state and local officials and reduced cost. HUD has also funded an inter-agency agreement for the National Fire Administration to establish a system of in-depth investigation of mobile home fires using local officials. Based on loss experience, the mobile home safety standard enforced by HUD can be evaluated.

Staff members provided expert fire safety assistance to roughly a dozen agencies during the year. These consulting efforts ranged from residential fire safety on Indian reservations to mandatory fire protection training for merchant seamen. An agreement to implement close cooperation with the National Institute for Occupational Safety and Health (NIOSH) was also signed during the year and a number of cooperative efforts were undertaken with the Consumer Product Safety Commission. NFPCA plans to intensify its efforts toward closer working relationships among Federal agencies with fire protection responsibilities.

REIMBURSEMENT FOR FIGHTING FIRES ON PROPERTY UNDER FEDERAL CONTROL

Under Section 11 of the Act, the Administration's Office of Chief Counsel is responsible for the reimbursement program for fighting fires on property under Federal jurisdiction. The fire service can claim the direct costs and losses incurred in fighting such fires. After a claim is made and the amount payable determined, the fire organization making the claim is notified. If that amount is considered acceptable, the Administration will request the U.S. Department of the Treasury to make the payment.

On July 18, 1977, the Administration issued the final regulations governing the submission and determination of claims made under this program. To the present, 674 claims totaling more than \$1.3 million were filed. The smallest claim amounted to \$4; the largest was \$650,000.

PUBLIC SAFETY AWARDS

Section 15 of the Act creates the President's Award for Outstanding Public Safety Service and the Secretary's Award for Distinguished Public Safety Service, both to be administered by the NFPCA. Firefighters, law enforcement officers, including corrections and court officers, and civil defense officers are eligible for the awards.

The Departments of Commerce, Defense and Justice issued joint regulations for the two awards on September 30, 1977. Members of a Joint Public Safety Board, responsible for assisting the Secretaries of Commerce and Defense and the Attorney General implement Section 15, were being selected at the end of 1977. On January 1, 1978, the NFPCA began accepting nominations for the awards.

VICTIMS OF FIRE

As you know, the provisions of Section 19 of the Fire Act were directed to the Secretary of Health, Education and Welfare. Those provisions have now been incorporated into the Emergency Medical Services Amendments of 1976. That law authorized \$22.5 million for a three-year burn injury demonstration program to

determine the magnitude of the problem. Funds appropriated to date have been over \$6 million and the FY 79 budget request is \$3 million for this demonstration program.

AUTHORIZATION REQUEST

The President's Budget for 1979 is \$17,826,000 for programs within the National Fire Prevention and Control Administration and the Center for Fire Research at the National Bureau of Standards.

We are also asking that an open-ended appropriation be authorized for 1980 so that appropriations may be made as required or, in the alternative, that a grammatical correction be made to S. 1794 at page 2, lines 2 and 12, to change "years" to "year" in the phrase "years ending September 30, 1979" and on page 2, line 1 and 11 delete words "each of" from the phrase "each of the fiscal years." We also support the provision on page 1, line 7, of S. 1794 deleting the phrase "except Section 11 of this Act" from the Fire Act. This deletion would correct a technical error in the Fire Act clarifying that Fire Administration funds may be used to administer the claims program (Section 11) while the claims themselves will continue to be paid by the Treasury as prescribed in Section 11. The final request is to change the name of the Fire Administration to the United States Fire Administration as prescribed in S. 1794. This will avoid continuing confusion between the name National Fire Prevention and Control Administration (NFPCA) and that of the National Fire Protection Association (NFPA), a private organization which has existed for many years.

We appreciate the opportunity to review our programs with you.

STATEMENT OF FREDERIC B. CLARKE, ACTING DIRECTOR, CENTER FOR FIRE RESEARCH NATIONAL BUREAU OF STANDARDS

Mr. Chairman, I am Frederic Clarke, Acting Director of the Center for Fire Research at the National Bureau of Standards. I appreciate the opportunity to appear before this committee today, and to review with you and your colleagues some of the recent progress made in fire research.

I. BACKGROUND

Established at the National Bureau of Standards by Section 18 of the Federal Fire Prevention and Control Act of 1974 (Public Law 93-498), the Center is charged with "providing scientific and technical knowledge applicable to the prevention and control of fires." The content and priorities of the Center's programs are determined in consultation between the Administrator of the National Fire Prevention and Control Administration (NFPCA) and the Assistant Secretary of Commerce for Science and Technology.

Soon after its establishment, the Center began a planning effort to assure that limited research resources were directed effectively to the overall fire problem. The thrust of the planning was to classify fire losses as scenarios—the chains of events and physical phenomena which comprises actual fire incidents. These scenarios were ranked in order of their importance and strategies to intervene in each type of scenario were identified. The Center produced a five year plan outlining year by year milestones, required resources, and the estimated reduction of fire loss from each strategy. The first version of the plan, which spanned 1976 through 1981, outlined a research program designed to lead to substantial reductions in U.S. fire losses.

A major revision of the plan is now in progress. There are two reasons for this revision. First, new technical developments, and the emergence of new priorities, have led to some redirection of effort. Second, the levels of support required to meet the original objectives on schedule have not been secured, with the result that some projects have proceeded more slowly than planned—or they have been postponed.

The Center's program combines basic and applied fire research. The (basic) fire science programs develop new information for use directly by the fire safety community. Activities in fire science include chemistry, physics, fluid dynamics, toxicology, and the analysis of actual fire incidents. The (applied) fire safety engineering programs carry out laboratory and full-scale fire experiments leading directly to test methods, standards, design specifications, and recommended practices for use by the NFPCA, various voluntary standards-writing organiza-

tions, mandatory standards-writing groups in Federal agencies, model code groups, and State and local authorities. Fire safety engineering programs address the fire safety of consumer products, building construction, furnishings, fire control systems, and building design concepts.

The Center is the principal Federal fire laboratory. It is authorized, and equipped, to carry out research on a spectrum of fire problems. As such, it serves as a resource both for the Fire Administration, with whom programs are closely coordinated, and for the fire problems of other Federal agencies.

Our current support is approximately 60 percent from directly appropriated funds and 40 percent from other Government agencies.

II. HIGHLIGHTS OF ACCOMPLISHMENTS

Mr. Chairman, I am submitting for the record a list of some of the recent accomplishments of the Center's Research Program. Several of these deserve additional comment, either because of their direct significance in reducing fire losses or because of their potential contribution to future reductions.

(1) The Center has developed a prototype test procedure for identifying materials which produce unusually toxic combustion products. While a number of technical difficulties still must be resolved, we are hopeful that 1978 will see the introduction of the NBS-developed protocol to the fire protection community. Its immediate purpose is to provide manufacturers with a method to screen new products before they are introduced into the market place. A longer range objective is to help regulatory officials assess the risk posed by toxic gases in building fires. This will be accomplished by combining newly-oriented toxicity data with the results of fire spread and growth studies also under way at the Center.

(2) The State of Kentucky requested the assistance of the Center for Fire Research and NFPCA in the investigation of the Southgate, Kentucky, night club fire which killed 164 people. Federal investigators' expertise in fire spread and growth helped to reconstruct the probable fire scenario. The Center is actively working with building code officials, private standards organizations and fire service personnel to prevent similar tragedies from happening in the future.

(3) With mushrooming demand for home insulation, the danger of fire associated with flammable insulating materials is an ever-increasing concern. The Center for Fire Research has developed two new test procedures to evaluate the flammability of attic insulation: an improved flame test and a smoldering test. The flame spread test simulates the configuration and heat exposure which may be experienced by insulation laid between attic floor joists. The smoldering test simulates the localized heating of insulation placed too closely around a recessed lighting fixture, a glowing electrical connection or other hot object.

(4) The Center has completed pilot work on the application of a new methodology called "Decision Analysis" to the fire problem. This is essentially a mathematical procedure which allows one to combine fire test results, a knowledge of the fire behavior of room and furnishing materials, fire loss statistics and economics to predict the expected impact of new technology on reducing fire losses. Although still in infancy and handicapped by sparse data decision analysis promises to be an important tool in identifying the best technical routes to improved fire safety.

Efforts have now begun to apply decision analysis to residential fires. It is anticipated that this technique will help identify new cost-effective approaches to solving the Nation's number one fire problem.

(5) The Center has just completed development of a portable device which can be used to test the performance of smoke detectors in the field. Not only will the existence of this technology contribute to our knowledge of real-life detector reliability, but it will also enable local fire officials to test smoke detectors as part of their home inspection program. Several prototype test devices are now under construction at NBS for the State of Pennsylvania and the Veterans' Administration for field testing. The physical principles upon which the device operates are largely the result of fundamental studies of smoke aerosols carried out by the Center for Fire Research.

(6) The Center has inaugurated the development of a handbook for fire investigators. This work was undertaken because the burgeoning incidence of arson has outstripped the ability of fire officials to deal with it effectively. The

handbook will contain technical information on ignition sources, levels of fire buildup, and material behavior useful in the investigation of all fires, but especially those of suspicious origin. This work responds to a small, but important, piece of the problem and could be integrated into a program of improved laboratory detection techniques for arson.

Mr. Chairman, the translation of research output into improved life safety and property protection does not just happen. It requires a continual dialogue between members of our staff and the user community. In this respect, the linkages between the Center and the operating units of the National Fire Prevention and Control Administration are critical. We depend upon the Fire Academy, the Public Education Office, and the Fire Research and Safety Office to help disseminate our results. We rely upon the National Fire Data System to keep us abreast of new problems and changing patterns of fire loss.

In addition, because of its longstanding involvement with voluntary standards organizations and model code groups, the Center is able to play a direct role in improving the fire safety of our environment. As illustration, I am submitting for the record a listing of some of our major accomplishments in this area in the past year.

III. CONCLUSIONS

Mr. Chairman, this concludes my prepared remarks. I shall be happy to try to answer any questions which you or the members of the subcommittee may have.

APPENDIX A

LIST OF ACCOMPLISHMENTS

The Center has developed a portable prototype aerosol generator that can field-test installed smoke detectors to determine their performance and sensitivity under different environmental conditions.

The NBS Flooring Radiant Panel Test has been approved for publication as Federal Standard Test Method No. 372. The test is a procedure for measuring the critical radiant flux of horizontally mounted floor covering systems exposed to a flaming ignition source in a graded radiant heat energy environment in a test chamber. The test method can screen hazardous carpeting before it is used in nursing homes and places of public assembly, thus reducing the possibility of serious fires being spread by carpeting.

Developed a new test method and approach to calculating heat build-up in room fires that allows a simple measure of total rate of heat release from measurements of oxygen depletion. This new method is more accurate, requires less experience to perform and is faster than the previous weight-loss method. The new method enables small industrial, academic, and government laboratories to do heat release work. An industrial scientist working in a CFR laboratory with government scientists prepared the new method.

The Center for Fire Research in cooperation with the National Fire Prevention and Control Administration, assisted the State of Kentucky in the investigation of the nightclub fire at Southgate, Kentucky, which killed 164 people.

The Center has developed a new heat release calorimeter. The calorimeter measures the rate of heat output or how fast a material burns. This measurement is important because even though two burning materials may release the same total amount of heat, one may give off heat at a very rapid rate and significantly add to the fire build-up in a room over a short period of time while the other material could release heat so slowly that it would be relatively unimportant in the overall fire build-up.

The Center has inaugurated the development of a handbook for fire investigators.

CFR research indicates that surface oxidation reactions are important in ignition and flame spread on surfaces of solids. This has led to new insights as to the significance of the oxygen index test and suggests new approaches to the development of more effective fire retardants.

The Center has developed a prototype test procedure for identifying materials which produce unusually toxic combustion products. To date, there has been no procedure to allow manufacturers or regulatory officials to screen new products before they are introduced into the marketplace. The new test method is being evaluated at a number of university and industrial laboratories around the country.

NBS and J. L. Houser, at the time an NBS Research Associate from the Gypsum Association, were awarded a joint patent for a quality control device for gypsum board. Testing laboratories and manufacturers can use this device to determine in advance the fire resistant qualities of gypsum wallboard, a widely-used building material.

The Center has completed pilot work on a new mathematical method, "decision analysis," that allows one to combine fire test results, a knowledge of the fire behavior of room and furnishing materials, fire loss statistics and economics to predict the expected impact of new technology on reducing fire losses.

State and local legislatures cited NBS studies in their laws requiring installation of approved residential smoke detectors. Sales increased from 50,000 in 1971, to 12-14 million in 1977, according to industry sources. The most widely used approval standard for residential smoke detectors, UL 217, is based on technical work of CFR.

The Center for Fire Research has developed two test procedures to evaluate the flammability of attic insulation: an improved flame test and a smoldering test.

Industrial, governmental, and academic scientists around the Nation established, under CFR impetus, an ad hoc committee on mathematical fire modeling. This group is coordinating the U.S. work in this diverse field: avoiding duplication of effort, and building on complementary strengths of individual research units.

The Center assists other Federal agencies whose activities affect fire safety. Recent examples of this interagency cooperation are:

Assessment of the flammability of mining equipment for the Bureau of Mines;

Fire safety evaluation of nursing homes for the Department of Health, Education and Welfare;

Fire safety evaluation of warships for the Navy;

Participation in international maritime treaty organization work for the Coast Guard;

Recommendations for specific changes in the Federal mobile home standard for the Department of Housing and Urban Development;

Fire safety evaluations of commuter trains and people movers for the Department of Transportation;

Standards to improve fire safety in the home for the Consumer Product Safety Commission; and

Recommendation of a standard for safe clothing for flight personnel for the Federal Aviation Administration.

APPENDIX B

PARTICIPATION IN STANDARDS AND CODE GROUPS

Center staff participate in various codes and standards organizations proposing changes to the existing documents. Recent actions include:

Formally proposed code changes to the Uniform Building Code, Basic Building Code, and Southern Standard Building Code;

Supported code changes to the model codes on residential detection by providing technical data;

Cooperated with industry on changes to carpet testing procedures;

Through chairmanship of the Residential Occupancy Committee of the Life Safety Code of the National Fire Protection Association made major revisions to that section of the code; and

Through chairmanship of the National Fire Protection Association Committee on Residential Fire Detectors developed major revisions to the NFPA 74 standard.

U.S. DEPARTMENT OF COMMERCE,
NATIONAL FIRE PREVENTION AND CONTROL ADMINISTRATION,
Washington, D.C., April 10, 1978.

Hon. HOWARD W. CANNON,
Chairman, Committee on Commerce, Science and Transportation, U.S. Senate,
Washington, D.C.

DEAR SENATOR CANNON: Following are answers to the questions posed in your letter of March 29, 1978, supplemental to our authorization hearings.

Question 1. In your statement, you say that "the National Fire Administration's role is to support and reinforce State and local efforts for fire prevention and

control." How do you determine which programs should be left to the States, which programs should be handled on a Federal level, and which programs should be jointly undertaken?

Answer. The National Commission on Fire Prevention and Control, in the course of their study extending over two years, identified a number of problems, which, in view of their national importance, led directly to the creation of the National Fire Prevention and Control Administration (NFPCA). Of major concern was the fact that fire is mainly a local problem and that, while the proposed Federal role was essential, it must not supplant, but rather must supplement, state and local programs. This was clearly stated in the report of the Commission: "America Burning," which has greatly influenced the policy of the NFPCA in determining programs that we will undertake.

Conferences were held with the State Fire Marshals and with the State Directors of Fire Training, at which specific programs were identified where these state officials felt the NFPCA could provide assistance.¹ In addition, regional meetings held in 1977 in the ten Federal regions resulted in advice from state and local officials for ways NFPCA could best assist them.

Our Academy Planning Assistance Program (APAP) provides assistance to states in planning and improving their statewide delivery of fire education and training in cooperation with the Fire Administration. Our Public Education Assistance program and the National Fire Incidence Reporting System are dependent upon state determination of their own level of effort in cooperation with the Fire Administration.

In general, most of our programs fall within the category of "jointly undertaken." Most states have some existing state-level fire protection functions, usually centered in a State Director of Fire Training and a State Fire Marshal. These offices are found to be already engaged in programs of public education, fire service training, fire incident data collection, building inspection and code enforcement. The NFPCA supports the states in these areas through technical assistance and/or financial assistance.

The programs NFPCA is handling on a Federal level fall naturally within that category. The operation of a National Fire Academy and the development and operation of the National Fire Incident Reporting System are two good examples.

Fire suppression is almost totally a local government responsibility. NFPCA does not assist in providing fire equipment or hiring firefighters. However, we are developing better procedures for apparatus purchasing and have several firefighter safety and health programs in progress.

In summary, the determination of specific programs into which NFPCA resources will be committed is generally influenced by the nature and scope of the initiative, plus a basic policy of not competing with the states by mounting parallel efforts. We constantly seek, and are provided, guidance from state and local officials and their organizations through formal committees (e.g., Fire Academy Education and Training Committee and Board of Visitors; National Bureau of Standards' Center for Fire Research Evaluation Panel; research project user committees) and through continuous informal contacts.

Question 2. In your statement, it is stated "the combination of residential furnishings and smoking materials accounts for 27% of home fire deaths according to a 1976 study of the most common fire deaths scenarios." What has been the progress in combating these dangers and what more do you believe needs to be done in this area? Do you believe that the Consumer Product Safety Commission's activities have been sufficient in this area?

Answer. The residential-furnishings-smoking-materials scenario subdivides into two categories. The first is ignition of mattresses and bedding by smoking materials, which accounts for 12% of residential fire deaths. The second is the ignition of upholstered furnishings such as sofas, chairs, and the like, which accounts for 15% of residential fire deaths. In 1972 NBS developed a mattress ignition standard under the provisions of the Flammable Fabrics Act. This standard is enforced by the Consumer Product Safety Commission (CPSC). All mattresses purchased in the U.S. after June 22, 1973, must meet this standard. Eventually,

¹ *State Fire Marshals Conference Report: Recommendations on Federal and State Roles in the Fight Against Fire*, prepared by the Fire Marshals Association of North America for the NFPCA, February 21-24, 1977.

Recommendations on the Relationship Between the National Fire Prevention and Control Administration and the State-Level Community: Final Report of a Working Seminar, prepared by State Directors of Fire Training Section, International Society of Fire Service Instructors for the NFPCA, October 4-7, 1976.

therefore, there will be a substantial reduction in the 12% of residential fire deaths now attributable to this circumstance as mattresses meeting the standard replace older, less safe, varieties. A similar standard requiring resistance to a cigarette ignition for upholstered furniture was proposed to the CPSC by the Center for Fire Research (CFR) in October 1974. The proposal is still awaiting action by the Commission. We believe that implementation of these two standards together would eventually eliminate most of the fire deaths due to this scenario, and we are hopeful that CPSC will move forward with the second one as soon as possible.

Residential fire deaths account for about 70% of all the fire deaths in the nation. A major contributor is the role of furnishings which have just been discussed. In addition, however, residences, unlike commercial and institutional buildings, seldom are the product of fire-safe design. We believe that residences can be made more safe by "designing in" fire safety. This approach would tap the life safety potential of engineered fire protection systems. It may be possible, for example, to make use of residential forced-air heating systems for smoke removal. This could be done simply by reversing the circulating fans in the system to exhaust smoke from the home in the event fire is detected. Ideas such as these need to be critically evaluated, both from a technical and cost-effectiveness point of view.

Question 3. Section 2209 of the Fire Prevention and Control Act calls for a report by the Secretary of Commerce by October 29, 1978, of the establishment and effectiveness of master plans in the field of fire prevention and control throughout the nation. Is this report on schedule and what impediments, if any, do you see standing in the way of widespread use of master plans by the localities throughout the country?

Answer. The preparation of the report to the Congress on master planning activities is on schedule. Concerning the development of master plans by jurisdictions throughout the country, we have more and more requests each month for advice in initiating a master planning program. We see no reason why this trend should not continue. Thus far, we have received about 3,000 requests for our master planning manuals from municipal officials, fire organizations, academic institutions and foreign countries. We have given seminars for 1000 local officials to encourage their use of master planning. Possible impediments include the traditional orientation in some communities and the lack of emphasis on prevention and cost benefit planning. However, over all, we feel the prospects for the wide use of master planning are very promising. As the mere progressive communities implement master planning, we expect a multiplier effect on surrounding communities.

Question 4. On page 32 of your statement, you say that the South Central and South Eastern states have not participated in your data-gathering and National Fire Incident Reporting Systems. What do you believe can be done in this area to improve this situation?

Answer. To improve the situation, we reserved the three grant opportunities for new states in FY 1978 to states in these two regions. We are pleased to report that since submitting our testimony, North Carolina and Tennessee have applied to join the National Fire Incident Reporting System. Two out of 13 states is a breakthrough, but no cause for celebration, however.

We are continuing to discuss the importance of better fire reporting with key state and local government leaders in every state in these two regions. And the Associate Administrator of the National Fire Data Center will be giving a major address on the subject at the next (June 1978) meeting of the Southeastern Fire Chiefs Association.

The major problems in getting a state started are usually the lack of commitment of the state legislature to provide long-term funding, and the lack of understanding of the benefits and of the feasibility of the data system.

Question 5. In your statement, you note that there are particularly high rates of fire deaths in rural areas. What do you think can be done to assist rural areas with their major fire problems?

Answer. The first problem is that we do not yet know the precise nature of the fire problem in those rural areas—who the victims are, what the causes of the fires are, and even the number of fires, losses, and injuries. We need to help at least a representative fraction of rural communities collect the data needed to fill this crucial information gap. The 1979 budget of the President includes an

increase of \$95,000 to up-grade the data on the extent and nature of the rural fire problem.

We need to identify effective ways to reach the groups with the highest fire death rates: rural blacks (especially males) and others. The usual types of prevention programs may or may not work for these groups, and we need to find something that does. A careful look at communities which have had "success" stories with prevention programs aimed at these groups would be a good starting place.

Based on the limited information already in hand, we think that public fire prevention education is one approach that offers great promise of reaching many rural families at affordable costs. There have been a few dramatic successes in the past in reducing burn injuries in rural areas by intensive, multimedia grass roots prevention campaigns. What is needed is first to diagnose the problem accurately in each region and then target on it. We will better know how to address the rural fire problem when we better understand its nature.

Question 6. In your statement, it appears as if only two states have provided you with a full year's data on the National Fire Incident Reporting System. How many states do you believe will provide you this information next year, and how many states need to provide you information before you can get a national picture of fire problems? Is there adequate funding in this area in order to assure sufficient statistical reporting from the states?

Answer. It is important to recognize that the first national fire estimates report made use of existing data from all pertinent sources, including the Center for Health Statistics (HEW), the National Fire Protection Association (NFPA), states and others. For the second national fire estimates report, we expect to have data from about eight states, up from two states for the first report. For the third annual report in 1979, we will plan to have a total of 26 states in the National Fire Incident Reporting System and will have data from 19 of those states as well as other government agencies and private sources, including insurance companies. Our best judgment is that we need about 20-25 states, well distributed geographically, and reporting reliably for at least a representative sample of communities of various types and sizes to provide a reasonably adequate national picture. For some questions, however, close to all 50 states may be needed. There really is no precise single answer to the question of how many states is "enough." It depends on the level of detail of the particular question asked, and the variation in the fire problem from place to place: the greater the variation, the larger the sample needed.

States are not the best sampling units, because of their enormous diversity. But we work through them to minimize costs (we could not work directly with the several thousand communities needed for the national estimates), and because the state level of government needs the information developed to carry out its role in fire protection.

We currently are planning to have all 50 states and the territories participate in the National Fire Incident Reporting System in order to help achieve our major objectives of: (1) helping state and local governments improve their own data collection and analysis and thus better manage their own fire problems; (2) improving national estimates; and (3) being able to respond efficiently to the many specific questions that arise from Congress and others on particular aspects of the fire problem each year.

In 1979 the President's Budget proposes a 30% increase in the level of funding for data collection, maintenance, analysis, and dissemination. One thrust of this increased effort is directed toward improving the quality of the data reported. Improvement in the quality of data will go hand-in-hand with entry of new states into the system.

Question 7. The Administration has requested that the National Fire Prevention and Control Administration's name be changed to the United States Fire Administration. Would such a name change create any problems or additional costs?

Answer. There would be the expected problems associated with any change of agency name, i.e., stationery and other printed material would have to be imprinted with the new name, public notice of the change would be required to be published in the *Federal Register*, plus legal notification would have to be made to all persons or organizations with whom we have contracts or grants. However, it is anticipated that existing stocks of pamphlets, brochures and

manuals can be quickly exhausted or rubber-stamped to show the new name so that no waste will result.

Audio-visual slides and films we own can be changed for approximately \$500 to include the new name. Changing portable conference displays will cost \$200. The agency logo, which was approved recently, has not been broadly disseminated in anticipation of the pending change.

Important problems of general confusion, misdirected mail and phone inquiries will be solved by changing the name. The National Fire Protection Association (NFPA), a private non-profit organization, has been in existence for some 80 years and is well known in the fire field, especially through their extensive publications. A great deal of confusion has been caused by similar names of the two organizations. The National Fire Protection Association (NFPA) has stated that they will welcome approval of this request.

In summary, costs are negligible and benefits high.

Question 8. In your publication, "Fire Deaths in the United States," it was stated, "Fire deaths among the young (ages 0-13) and the old (over 60) have accounted for over 50% of the annual fire deaths, although the proportion of these two age groups in the general population was only 34%." What programs have you instituted, and how much of your resources and manpower have you focused on these high-risk groups? What more needs to be done?

Answer. Specific programs directed toward the fire problems of the young and the old have just been started and have been funded at approximately \$50,000 per year for the past two years. Educational materials for preschool children, school children and youthful firesetters have been developed. These materials are being disseminated through the state resource system network. In the future, we plan to carry out field validation of materials, research on specific fire problems such as children playing with matches and assistance to state and local people in widespread implementation of successful programs. Other existing programs of NFPCA, such as smoke detector technology development and installation are expected to have a major positive impact in reducing these losses.

Question 9. In a recent publication of the National Fire Data Center, "Fire Deaths in the United States," it was stated, "Non-whites have accounted for 25 to 27% of annual fire deaths, twice that to be expected from their proportion (12 percent) in the general population. Non-white males have accounted for 15-16% of the annual fire deaths, nearly three times their proportion (6%) in the general population." What is your explanation for these statistics and what, if anything, do you believe can be done to help protect these vulnerable groups?

Answer: The question as posed is precisely what we have been asking ourselves after obtaining the initial results. We will be working for the next few years to get the answers. We are just expanding our knowledge from gross national estimates to death rates by state and then to death rates by population groupings within the states. The fire data systems are not yet developed enough to go to the next level of questions and say why some particular groups have higher risk than others. (We also need to improve our confidence about even the grosser statistics.) Our speculation, and there is some but not much data to support this, is that non-white males have similar kinds of problems as the general population, but suffer the problems more intensely. For example, the already classic leading scenario of fire death worldwide—a combination of smoking and drinking, leading to a smoldering fire in a bed or upholstered furniture—was found to be more common among non-whites than the general population in a small sample of deaths among blacks for which we had data.

The high fire death rate groups also are likely to live in substandard housing, especially in rural areas, and to be less informed on good safety practices (such as care with kerosene-fueled heaters. But, as we discussed in answering question 4 above, we need to obtain the facts before we can efficiently target solutions—and we are working to do just that.

Question 10. Experts have estimated that through the use of good residential smoke detectors all fire fatalities could be diminished by 40 to 50%. Do you believe that this is a reasonable estimate? How much of your money and manpower is directed toward research development and dissemination of adequate smoke detector systems?

Answer. Yes, however available statistical data is inadequate to be certain; but more and more reports of "saves" by smoke detectors are coming to the surface.

We believe that fire fatalities can be reduced by 40% if every dwelling in the United States had a properly installed and maintained smoke detector and the occupants had rehearsed escaping.

Currently, a total of \$300,000 is devoted to research, development and dissemination of adequate smoke detector systems. Of that amount, \$190,000 and one position is for programs carried out by the Center for Fire Research, National Bureau of Standards, for the development of better performance criteria for smoke detectors and for studies on the reliability of detectors. The remaining \$110,000 is for development and dissemination of informational material about smoke detectors.

Public Education Office programs disseminate the latest information on smoke detectors and conduct seminars throughout the nation.

Question 11. In light of the tremendous lifesaving potential of these items, isn't it critical that only safe smoke detectors are sold? What is and can be done to see that only safe smoke detectors are on the market? How large a program do you have in this area? Do you believe the CPSC has carried out adequate activities in this area?

Answer. We believe that the best assurance which a consumer has that a smoke detector will be effective is the appearance of the Underwriters Laboratory (UL) label certifying that the detector meets UL Standard 217 for residential smoke detectors. However, requirements that smoke detectors carry such certification are uneven, and are primarily the responsibility of state and local jurisdiction. There is no present system for policing detectors once they are on the market. It is our understanding that UL has inaugurated a program to spot-check that detectors on the shelf meet their standards. At the Center for Fire Research, we maintain an active program to alert both the CPSC and the manufacturer if an unsafe detector is discovered. While we have no systematic way of examining detectors in the marketplace, we frequently receive information on supposedly faulty detectors and occasionally units for test. Of course, we notify the CPSC if the detector in question is defective. CPSC has the responsibility for the actual identification and removal of unsafe products from the marketplace. This practice has led so far to the recall of over 141,000 detectors by various manufacturers.

We believe that the quality of smoke detectors on the market is very good. Much of this is due to state and local requirements that detectors be only UL listed devices. It can be argued that the mere existence of an agency like CPSC, with the technical support at the NBS Center for Fire Research, is a strong deterrent to the manufacture and marketing of substandard and unreliable detectors.

Question 12. Do you believe that any programs could be developed to assist low-income families to be able to afford smoke detector systems for their homes?

Answer. Yes, we believe that community programs can be established in conjunction with the fire services, to purchase and install smoke detectors in low-income areas. Federal funding made available from a variety of existing programs to aid low-income groups are one opportunity as well as Federal requirements such as current HUD Minimum Property Standards which require detector installation in all new HUD-assisted dwelling units. Community self-help programs through local community services organizations are another opportunity. Public education programs are also helpful, and probably essential, both in encouraging installation, as well as assuring understanding, acceptance and maintenance by low-income families.

Question 13. Research and development is one of the most important programs in our firefighting programs. How much was requested for research and development of the Department and how much did the Department of Commerce request of OMB in this area? How much is allocated for this program in FY 1979?

Answer. Amounts requested for research and development in FY 1979 are as follows:

Request for 1979	Positions	Total amount
Department of Commerce.....	68	\$18,608,000
Office of Management and Budget.....	24	9,088,000
President's budget (1979 allocation).....	17	8,059,000

Question 14. How many personnel slots are allocated to the National Fire Prevention and Control Administration, and how many of these slots are filled? In your request to the Department of Commerce, did you request more slots and, if so, what was the result of these request?

Answer.

Personnel slots allocated to NFPCA for 1978-----	107
Filled as of February 28, 1978-----	93
(Total permanent employment permitted at end of year is 102—all actions on 9 vacant positions in process).	

<i>Personnel request for 1979</i>	<i>Total numbers</i>
To Department of Commerce-----	331
To Office of Management and Budget-----	180
President's budget-----	124

Sincerely,

HOWARD D. TIPTON, *Administrator.*

The CHAIRMAN. We now have a panel consisting of Mr. William Stamm, chairman of the Joint Council of National Fire Service Organizations; Mr. Louis Amabili, president, International Society of Fire Service Instructors; Mr. Charles S. Morgan, president, National Fire Protection Association; and Mr. Harold A. Schaitberger, International Association of Fire Fighters.

STATEMENT OF WILLIAM STAMM, CHAIRMAN OF THE JOINT COUNCIL OF NATIONAL FIRE SERVICE ORGANIZATIONS; ACCOMPANIED BY LOUIS AMABILI, PRESIDENT, INTERNATIONAL SOCIETY OF FIRE SERVICE INSTRUCTORS; CHARLES S. MORGAN, PRESIDENT, NATIONAL FIRE PROTECTION ASSOCIATION; AND HAROLD A. SCHAITBERGER, INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS

Mr. STAMM. Thank you.

Mr. Chairman, my name is William Stamm, fire chief of the city of Milwaukee Fire Department, and also chairman of the Joint Council of National Fire Service Organizations. I am representing the Metropolitan Chiefs Committee of the International Association of Fire Chiefs and the International Association of Fire Chiefs.

Permit me to introduce my associates, representing some of the member organizations of the joint council:

Mr. Louis Amabili, president of the International Society of Fire Service Instructors, and Mr. Charles S. Morgan, president of the National Fire Protection Association.

Other members of the joint council are the International Association of Fire Fighters, Fire Marshals Association of North America, International Association of Arson Investigators, International Association of Black Professional Fire Fighters, International Association of Fire Chiefs, International Fire Service Training Association, International Municipal Signal Association, and the National Association of Fire Science and Administration.

The joint council was organized in 1970 for the purpose of providing a unified voice in matters of common concern to the member organizations.

With your permission, Mr. Chairman, I would like to state the joint council's general position with regard to the reauthorization of

the NFPCA and the presidential reorganization plans for disaster-related programs and agencies.

The members of the joint council have, and continue to support the National Fire Prevention and Control Administration, and the intent of Public Law 93-498. We speak for our Nation's fire service in voicing the following specific areas of concern:

The Nation's fire problem demands a separate and identifiable agency within the Federal Government which will commit its total resources to assisting the existing fire protection community to serve the public needs and interest on a day-to-day basis.

The public interest can best be served only if fire is recognized as a continually occurring problem. Over 20 persons die every day, 150 every week, 8,000 every year. Three hundred thousand are maimed or injured by fire each year.

The day-to-day aspects of this problem, its magnitude, and its effect are vastly different from the problem of intermittent disasters.

It is essential that a national focus on fire be maintained and strengthened; and, that it not be diffused or be subordinated to the disaster aspects of any new agency.

The Council places the highest priority on those programs associated with the National Fire Academy. In his fiscal year 1979 budget, President Carter eliminated funds for the renovation and furnishing of the already existing facility. This cut completely cancels what the Joint Council considers as the single most important program authorized under the act. The Joint Council has expressed its concern to the President and now urges Congress to restore funding for the Academy.

There must be a National Fire Academy and related system, which is the program identified as the most essential and most useful to the persons directly involved with reducing and mitigating the fire problem. These persons include 2 million fire personnel, thousands of building officials, architects, engineers, and hundreds of educators who teach the fire sciences. Through the Academy and its system, new and transferable technology, results of research, and sound practices would be spread nationwide.

The National Fire Academy system must provide: (a) An actual Academy site and core headquarters; (b) substantial direct aid and assistance to State, local, and college fire training and education programs, and (c) quality programs of the outreach and multiplier effect for delivery on matters of immediate concern to the fire community.

The National Fire Academy must not be subordinated to any other part of the agency programs; and, the fire programs should receive the highest degree of priority in keeping with the continuing magnitude of the fire problem and the large, continually operating constituency of some 2 million fire service personnel.

The fire technology programs must be continued with concentration on solving current problems. An example of a project of vital importance and promise that has already been initiated is the development of the "protective envelope" for firefighters.

That the Federal fire agency must not become a regulatory agency with the power to intervene in the functions of State and local government.

With regard to the President's Disaster Reorganization Project, the Joint Council feels:

The national fire focus must deal directly with, and be responsive to, the State and local fire protection community. Regionalization of this fire focus will decrease its ability to deal with the daily fire protection needs in a cost-effective manner.

There is a potential diminution of emphasis on fire safety and prevention in respect to the small fire incident which could occur in a major disaster-oriented agency. It must be fully recognized that it is the home that is cumulatively the most dangerous to human life and is the place where over 6,000 persons die each year. These fires are not spectacular and often property losses are low.

Nevertheless, it is the homeowner and individual family that suffers most and more often from fire and on a 1-by-1 basis. Private residences are at the heart of the fire problem. The priorities needed here are vastly different from those required for a potential hurricane. There, priorities must be kept in proper perspective.

That full recognition be given of the fact that in any disaster there is always an immediate involvement of the fire service, even when fire is not directly involved. The fire service of the United States has 2 million members which are capable of immediate mobilization. They also constitute the primary rescue service. For these reasons, the role of the fire service must be preserved.

The Joint Council of National Fire Service Organizations is resolved to commit all of its collective resources to assuring that the American public receives the benefits of a constructive Federal focus on our Nation's fire problem as originally intended by Public Law 93-498. We, as representatives of the Nation's fire service, will oppose any lessening of this effort.

I appreciate the time you have permitted me to speak on behalf of the Joint Council of National Fire Service Organizations, and I would like to ask Mr. Louis Amabili to speak on behalf of the organization, the International Society of Fire Service Instructors, and any remarks he makes are not necessarily those of the joint council.

Mr. AMABILI. I have not prepared any statement. I would prefer, Mr. Chairman, just to field some questions: since this is a council presentation, I would like to keep it in that vein. I would like to respond to questions.

Mr. MORGAN. While I have a statement which has been submitted, Mr. Chairman, if it is the wish of the committee, and your wish, we are prepared to answer questions directly. Otherwise, I would be happy to present the statement.

The CHAIRMAN. The statement will be made a part of the record.

[The statement follows:]

STATEMENT OF CHARLES S. MORGAN, PRESIDENT, NATIONAL FIRE PROTECTION ASSOCIATION

Mr. Chairman, I am Charles Morgan, President of the National Fire Protection Association (NFPA). I appreciate this opportunity to comment on the continued authorization for the National Fire Prevention and Control Administration (NFPCA).

While we strongly supported the establishment of NFPCA and are still convinced of the need for a continued federal focus on fire, we have a number of concerns that must be expressed.

Before dealing with these concerns we should explain that the sole interest of the National Fire Protection Association is to reduce loss of life and property by fire.

We are not a trade association, our membership of 32,000 is greatly diversified, it includes state, local and federal public safety authorities, architects, engineers, property owners, representatives of industry and insurance. Twenty-five percent of our members are drawn from the community fire prevention and suppression services of this country. No one interest dominates and the Association is financially independent of any interest group.

The National Fire Protection Association has long standing programs which includes development of fire codes and standards, public education and awareness campaigns, collection of data, investigation and analysis of significant fire incidents, dissemination of technical information, publication of educational materials and advisory services on all matters related to fire. Some of these programs parallel those of the National Fire Prevention and Control Administration. Because of these parallel activities, we feel it particularly important that it be understood that our concerns arise from two different aspects; primarily, our overriding interest in achieving safety from fire and secondarily, the need to ensure the continuance of our programs. The following are the areas of concern:

The National Fire Academy.—We are extremely disappointed at the failure to provide funds for completion of the National Fire Academy headquarters in furtherance of steps already taken and authorized by Congress. To require a further study would be merely a repetition of the numerous and detailed studies already made and which clearly established the need for a small core facility and the site already purchased.

We are also very disturbed to see the reduction in the proposed fiscal 1979 funding for other programs of the National Fire Academy. It appears that little or no account is being taken of the fact that this program has been consistently identified by all fire organizations as the most necessary and potentially effective of the federal activities in fire.

Fire Technology and Research.—We consider this aspect of NFPCA's function as one of major importance and one which should be greatly extended. The direction being taken shows promise and generally it can be expected that long term benefits will result.

In particular the Center for Fire Research at NBS carries out research in support of fire codes and standards that is of inestimable value. The Center's contribution to the work of the code development organizations is an example of the best form of federal assistance whereby the Government undertakes research and develops technology that is then put into effective use in the public interest by others.

National Fire Data Center.—We are extremely concerned about what we perceive to be a trend for the development of a large in-house data collection operation. The proposed fiscal year 1979 budget indicated a 54 percent increase over fiscal year 1978 for the Data Center.

We have no argument against collection of fire data; indeed, we at our own expense, have provided the nation with the primary fire data for many years, only limited as far as quantitative and qualitative aspects are concerned, by the restraints of our fiscal resources. We have, however, continued and refined our own information collection and dissemination process to the extent that we are now the prime provider of information on fire behavior and analysis of all significant fires. Our in-depth investigations cover all such incidents and many are carried out under cost-sharing contracts with NFPCA and NBS. An example of this is our investigation of the Beverly Hills Supper Club, Southgate, Kentucky, in May 1977, an incident in which 164 persons died.

We develop and publish over two hundred fire codes and standards, with over 2,000 committee members from every interest group serving this process. These codes and standards require a continuous flow of information on current trends and fire experience, and our data and analysis provides this on a timely basis. All this information is made available to any interested person.

The Federal Fire Prevention and Control Act of 1974, Section 9(a) gave the Administrator a clear option to operate the National Data Center either directly, or through grants and contracts.

What we see, however, in planning of the National Data Center, is the supplanting, in time, of many aspects of our own data and fire information service. We feel this to be unnecessary duplication of effort, competition between

the federal and private sector, and not in keeping with the expressed intent of Congress that the Fire Administration should make full use of existing data gathering and analysis organizations, both public and private.

We expected that as our Association has been so deeply involved in this area for so many years there would have been an Administration Policy to enter into cooperative agreements, as is authorized by the Act, with NFPCA so that support and enhancement of our systems would be given and a shared role in the National Data Center established. This would certainly have provided the most cost effective program. Instead there is a planned in-house program that will duplicate our own efforts.

Public Education.—This aspect of NFPCA's programs has been most effective in that it has concentrated primarily on providing information to those in the field on available methods and materials, rather than seek to rediscover such methods and materials. We do find, however, that some of the advice given in this program has been ill advised and inaccurate and that a greater technical quality control is required. We have also been very surprised by the apparent exclusion of our own public awareness campaign material, from the NFPCA listing of resource for public education materials. Our materials are widely used and cover all forms of delivery including the highly effective T.V. "Learn Not to Burn" campaign which features Dick Van Dyke and which has documented evidence of having saved many lives. There has been no serious attempt on the part of NFPCA to support our programs of public education.

Expansion beyond the scope of the enabling legislation.—We would like to direct the Committee's attention to an area in which the Fire Administration appears to be promoting its own growth and powers instead of concentrating on resolving the critical problems which are already its responsibility. In its Third Annual Report, which has only recently been released, NFPCA proposed that it be given regulatory authority and become, therefore, a regulatory agency.

It seems incongruous that an agency which, by Congressional intent, was provided to support rather than supplant existing efforts by State, local and private fire organizations should be seeking powers that would place it in a supervisory role over functions that are clearly those of State and local government. It is particularly surprising when the agency has not yet demonstrated its ability to fulfill its existing responsibilities.

Although we have not provided unqualified endorsement of all the Fire Administration programs and have been somewhat critical of certain aspects, we believe, nevertheless, that the NFPCA should be given authorization to continue and that it should be encouraged to fulfill its missions in accordance with the intent of the Federal Fire Prevention and Control Act of 1974. It is as essential today as it was when the Act was signed into law, that there be a federal focus on fire and that federal aid and assistance be provided to State, local and private fire organizations in the spirit that Congress intended.

Mr. Chairman, duplication of efforts, and possible unwarranted expansion is not in the public interest and we think they are not in the spirit of the legislation. We are sure also that it was the intent that NFPCA should take advantage of existing organizations in order to be cost-effective and to place quality programs in the field expeditiously with a minimum of bureaucratic growth. We have been ready to be involved for the past four years and have so indicated, we are still ready to cooperate.

The CHAIRMAN. Let me ask you, Chief Stamm, do you believe that the NFPCA in conjunction with NASA is carrying out an adequate program in the area of protective equipment for firefighters?

Mr. STAMM. Yes. They have. At the very outset, I sat in on a user requirement committee, about 2 years ago, and we found that they were coming up with a program of complete fire equipment for a member to wear, that took—they were bragging about being down to 1 minute for donning that equipment for structural firefighting.

In quite a few communications, we now have them requiring to be able to don any equipment within 20 seconds to make it more feasible. They have been trying, but they are spread pretty thin with the moneys that they have been allowed.

The CHAIRMAN. Do you think that more needs to be done by the NFPCA and NASA, or are they undertaking an adequate program in this area?

Mr. STAMM. They are moving in the right direction. Certainly it has to be an ongoing program, unless they come up with the final answer. It is called "Project Fires," and they are working on it as a group, and we think that they are moving along in the right direction.

The CHAIRMAN. Do you think that they have adequate funding to do what needs to be done?

Mr. STAMM. Not with the moneys that are appropriated. Somewhere along the line, there has to be some of these projects dropped. We are concerned about which projects would be dropped. Actually, we are a little bit embarrassed to say that our firefighters do not have the right protection at this time—putting a man on the Moon, and in space, and all that, and we can't get a mask that is capable of lasting more than 18 minutes under duress.

And in firefighting clothing, every time we think we have the answer, we find they do have shortcomings, and some of the men become scared with that type of equipment. We hope when Project Fires is completed to have the final answer and complete protection for our members.

The CHAIRMAN. The NFPCA has said that fire departments often place too much emphasis on fire suppression rather than fire prevention. What do you think can be done to improve that situation?

Mr. STAMM. We are continually working with the NFPCA, advising them from our standpoint as fire chiefs, especially in the metropolitan areas, where we have all of the paid members, 200,000 population, and at least 400 paid members in our metropolitan organization.

We tried to get across to them just where their shortcomings are, and they are listening to us more and more. Of course, the joint council, with all of the members submitting information from all aspects of the fire service, is certainly helping the situation.

The CHAIRMAN. Well, do you think that fire departments place too much emphasis on fire suppression rather than fire prevention?

Mr. STAMM. They certainly do; 95 percent is in fire suppression and 5 percent is in fire prevention, but that is not a necessity. In the city of Milwaukee we have absolutely no fire prevention bureau, we have no arson investigators, nor do we even have fire investigators any more, because the city saw fit to cut down expenses. Even though the fire chiefs in the communities such as ours have fought it, they want to save money in fire prevention, because you can't see an actual saving.

We will never know how many lives are saved by fire prevention, but we do know how many lives are saved doing fire suppression.

The CHAIRMAN. How large a problem is the arson problem for city fire departments, and do you believe that the NFPCA programs are adequate in that area?

Mr. STAMM. They are certainly heading in the right direction. I don't think they have enough funding; I don't think they have enough

staff to put this across. We hoped we would have had classes in the Fire Academy by this time.

In fact, we had hoped that it would start by last year already, but they give us the facility and no funding to expedite the classwork.

The CHAIRMAN. Mr. Amabili, do you believe the public education office in NFPCA is adequately assisting the State and local fire agencies in the development and delivery of a local fire education program?

Mr. AMABILI. I think the public education office is doing a yeoman job. It is our belief, if any division of the administration has made an impact in just the few short years of existence, I would have to say it is that particular office. They have reached into the local areas and are making a tremendous impact on the local community and on the local fire protection services in furthering the public education effort.

I speak not only from an organizational standpoint but from a personal standpoint. Two days ago, Sunday, one of their people came over to our station in Delaware and put on a fire instruction program for 120 instructors, and now we have 120 disciples in our State to reach the public.

The CHAIRMAN. Do you think the funding for the public education office is adequate, and are they doing an adequate job at the present time?

Mr. AMABILI. I think they are doing a good job with what they have, but I personally think they need a higher level of funding if we really are going to make prevention the byword in the fire protection services in the years to come. We feel it is extremely important.

The CHAIRMAN. Mr. Morgan, in your statement you have said that you consider this—and this is with respect to fire technology and research—you consider this aspect of NFPCA's function as one of major importance and one which should be greatly extended.

What did you have in mind when you said it should be extended?

Mr. MORGAN. We were talking at that juncture, I believe, about Project Fires. There are a great many things that the future holds that have not yet been addressed. I can't identify specifically individual projects beyond the ones they are currently involved in. That has already been mentioned in connection with protective equipment for firefighters, but there is a great deal more that they can address with respect to equipment that goes beyond the protective equipment for firefighters—a whole range of facilities the firefighters are using every day, anything that will improve the capability of firefighters.

The CHAIRMAN. You also said in your statement:

What we see, however, in planning of the National Data Center, is the supplanting of many aspects of our own data and fire information service. We feel this to be unnecessary duplication of effort.

Have you discussed that with the NFPCA to try to get a better working relationship there?

Mr. MORGAN. Yes. We have, indeed, Mr. Tipton, earlier this morning, referred to their involvement and their use of the 901 system. The 901 system really consists of a book, a classification of fires and fire causes and factors involved in fire spread, and a set of forms that are used in order to develop uniform reporting.

In our view, their involvement of our traditional services in connection with data collection and fire analysis have been analogous to

throwing a dog a bone in the hope that he will be quiet. We have had a long tradition in the field of fire data collection and analysis for well over a half century, and we have a great many new programs over the last 10 years that are advancing it.

In fact, our limitations in respect of this have only been in the past in terms of financial and personnel resources, and except for a minor contract to analyze NFPA data for their first report on national fire losses the data center has done very little to use the valuable data collection and analysis resources that NFPA has to offer.

I think if I can read a brief statement it may bring the original NBS and NFPA data discussion into some perspective.

We have been working with the concept of establishing a national data system since the late 1960's, when the National Fire Data System was established in the National Bureau of Standards.

NFPA was selected to design and be the development contractor, working with Henry Tovey as the contracting officer and also Ohrbach Associates, who were retained by the NBS to act as project manager and technical adviser.

The gist of this is that the design of the National Fire Data System called for both system design including software and a pilot test, including collection of data, to test and debug the system. These tasks were NFPA's responsibility.

Further, the system design encouraged private sector contracting for the data acquisition and processing, while the basic analysis of the data was to be the responsibility of the Federal Government.

When NFPCA was created and the data system transferred from the NBS and renamed NFIRS, the National Fire Data Center assumed responsibility for the program. If one analyzes the Data Center budget, it is easy to see that the original program concept of private and public sector coparticipation has been recast as a major Federal program with nominal use of the private sector organizations. I think that is responsive to your question, Mr. Chairman.

The CHAIRMAN. Well, have you tried to do something about that by discussing it with—

Mr. MORGAN. We have been ready to cooperate in this area from day 1, and remain so, and have discussed it repeatedly.

The CHAIRMAN. There is just a lack of interest, or lack of adequate response, or what?

Mr. MORGAN. It seems what we are suggesting runs counter to the philosophy that prevails in the National Data Center at the present time.

The CHAIRMAN. Is this resulting actually in a lot of duplication of effort?

Mr. MORGAN. Yes, sir. It is bound to. We see that it also involves an expense against other programs of the administration, on which there seems to be very widespread agreement; other programs deserving a higher level of priority, certainly from the point of view of the Nation's fire service.

The joint council members are unanimous in their support of the Academy. We see Academy programs being diminished in terms of financial support, while the budget proposal for 1979 fiscal shows an expansion of over 50 percent increase in the data activity.

It is not difficult to conclude that one is being expanded at the expense of the other. We think the priorities are backward.

The CHAIRMAN. Well, if as you say the private sector has a lot of data available that is not being used, that certainly would be a deficiency.

Mr. MORGAN. We have a mechanism that has been functioning effectively for a very long time. An opportunity arose at the very outset for a cooperative arrangement whereby the mechanisms that were already in place could be enhanced with participation and support and involvement and interest by the Federal agency.

That option, we believe, was clearly open under the law, but the decision was made rather than to do that, to set up a parallel organization, to start from scratch and duplicate what has been done, and go on from there.

I don't think that is particularly cost-effective or necessarily in the best interest of the public.

The CHAIRMAN. In your statement also, Mr. Morgan, you said, "We do find, however, that some of the advice given in the public education program has been ill-advised and inaccurate, and that greater technical quality control is required."

Can you give us some examples of that?

Mr. MORGAN. Yes, I can. In a booklet on fire education that they published in 1977 in May, and I quote, there is a statement:

Older people, for whom falls are an even greater hazard than fire, may find dropping and rolling if their clothes catch fire creates more problems than it solves. They should learn to quickly remove burning clothes.

I think that is wrong-headed advice, and I suspect that the administration regrets that it was ever said. If you can contemplate elderly people with arthritic hands and palsied fingers learning to take their clothes off more quickly than they can get down on the ground and roll, my imagination doesn't quite do it.

The CHAIRMAN. Did they ask for your advice in preparing this booklet?

Mr. MORGAN. Not that I am aware of. I can assure you that that was not advice that emanated from either of us, nor do I believe it emanated from any other recognized knowledgeable people in fire protection, fire safety field.

In July and August of 1977, the Resource Exchange Bulletin that they published recommended that people, quote, "ask the police to quickly investigate suspected fires to avoid alerting a false alarm in response to a smoke detector."

This is a pretty shocking piece of advice, and it got a considerable amount of publicity.

The CHAIRMAN. Have they made any corrections in that publication yet?

Mr. MORGAN. I can't answer that question except to observe that it is extremely difficult, as we all know, to ever recover from something of that kind. That has had widespread distribution in printed form.

Whether any retraction was made or not, I don't know. It would never catch up with the initial advice, I am sure. There are other examples, things that we think leave a great deal to be desired in

terms of their accuracy and wisdom, but perhaps those two will suffice.

The CHAIRMAN. Chief?

Mr. STAMM. Just so you don't get the idea that we are a splinter group, we are not that anymore. The joint council is now getting to be a joint council as it was set out to be.

As chairman, I have selected a committee of five to delve into operations and workings of the NFPCA, and come up with some recommendations to the joint council on the administration programs. So what we are doing now is getting input from all of our members.

In the past, the administration has gone to the various working groups of our organization, and has asked them individually. This no longer would be the case on matters of common concern. Our committee will report back to us, and we will advise the NFPCA as to what paths we think they should follow on those matters.

As recently as a few days ago, I have had some dialog with Mr. Tipton, and we have agreed to work together on this, to make sure there is no duplication—no reinventing the wheel.

The CHAIRMAN. I hope you would also offer to advise them on any publications, to at least request that they give you a chance to proof any educational materials before they send them out, because some of these examples are reasons for concern.

Mr. STAMM. Yes, sir. We have a wealth of knowledge in our organization. This should be done.

The CHAIRMAN. Thank you very much.

The next witness, Mr. Richard Aaberg, vice president, State Farm Insurance Co.

STATEMENT OF RICHARD E. AABERG, VICE PRESIDENT, STATE FARM INSURANCE CO.

Mr. AABERG. Good morning; I am Richard Aaberg.

I would like to follow the precedent, if it meets with your approval, to have my statement put in the record. I will highlight some of the things that concern me and quickly get to the main reason I am here.

The CHAIRMAN. Fine, sir.

Mr. AABERG. In my prepared statement I do refer to a number of activities involving myself and State Farm Insurance Co., in the arson area. And I did this to qualify myself as some type of an expert in regard to the need for national coordination, and also to allow me to stress the importance of the role that I think NFPCA will play and is playing.

In line with this, it is pretty well established that arson is a serious crime and stands high among other felonies; but it has other implications.

The loss of lives has been well covered here, by arson and fires. It is tragic. It needs to be stopped. We also cannot ignore the economic implications that arise from any type of fire. Not only are valuable buildings destroyed but oftentimes neighborhoods are disrupted, jobs are eliminated, tax rolls are affected, neighborhoods change and on and on.

The economic implications are tremendous.

Another factor that gives State Farm strong interest in the arson situation as well as fire suppression, is the effect that arson specifically, Mr. Chairman, has on insurance rates.

I can only speculate with hundreds of others, as to the full extent of the impact on insurance rates, but certainly it has to be rather substantial, particularly in some areas. With all of these factors in mind, I wish to certify that I have been personally involved with the arson problem at all levels.

Arson is a unique crime in one sense, something that was hard for me to accept for years, but I have never been involved in any of my experience in the law-and-order world with any crime that involves so many different disciplines.

At the fire scene, the first thing that has to happen, of course, is the fire department has to save lives and simultaneously the fire has to be put out.

Then what should happen, but isn't happening in many cases, is that someone with necessary expertise must examine the scene of that fire and determine cause and origin. This is one of the areas that I think NFPCA, particularly the Academy, can play a leading role.

Once that fire is out, if the property is insured, the insurance industry is involved; if it is suspected arson, of course, the fire service, or fire marshal and/or the State arson bureau is involved.

Law enforcement has to be involved in case there are any arrests, and certainly the prosecutor thereafter has to be involved.

All of the various disciplines have to work together.

Our first challenge has been to accept the arson problem. However, even after it is recognized, there are many different people that have to be trained and work together. It is different from any other crime that I know.

Because of the great number of people involved, because of the complexity of the crime, considerable coordination is needed. I am here to certify; based on my experience at the grass roots, that I believe we have waited a long time for the NFPCA and that they are the catalyst or the organization that can coordinate these needs.

Every place I went in the early 1970's, the various disciplines around the country were crying for some type of national leadership and coordination, and when the NFPCA was set up it was recognized and welcomed as a viable force in fighting arson.

Arson has always been recognized as a serious crime and, of course, as I mentioned, it is almost always a felony. What has not happened, and I have talked to probably hundreds of prosecutors, is that it has not received equal time with other crimes, because the expertise has not been available to give to the prosecution a file that really could be properly prosecuted. Having been a judge for 2 years, although not having heard any arson cases, I know many good cases do fail in the criminal system, not because there is something wrong with the criminal system, but because they were not properly investigated or documented. Training is one answer.

The handling of an arson loss either on the civil side, which would be the insurance end, or on the criminal side, does take considerable expertise and education. You cannot take people out of law enforcement or the fire service and say, sir, you are now an arson investigator,

and expect him to have the scientific knowledge to handle a fire scene, to use the sophisticated equipment, or to even process it.

There are many good training programs around the country, but there are not enough. Some States are badly in need of training programs, of education, and funds for equipment. Chromatographs are excellent tools for investigation. It is relatively easy in many, but the most sophisticated cases, to determine that it was arson if you have the right equipment, because you can detect accelerants in various ways.

The tough job, of course, is who did it, if in fact it was a set fire. Therefore, it would be helpful, based on my experience, to strongly support the legislative goals of the NFPCA and we strongly urge proper funding.

I heard the discussion today about the Academy. I am thoroughly impressed with the people that Mr. Tipton has surrounded himself with, that I have worked with. They are knowledgeable people in the arson field, which is a select field. We feel that they are on their way to doing an excellent job. I think it fulfills a need in this country. We do need the Academy in the worst way, not only from the arson standpoint in training, but for everything else that was covered in earlier testimony.

I just think at this time, when we are all striving to protect our resources, that we do have to work together to stop this destruction of property and life, regardless of the type of fire or disaster it is. I think we can do this through a nationally coordinated effort and we feel very strongly NFPCA is the facility to accomplish this.

Thank you, Mr. Chairman.

The CHAIRMAN. Thank you for a fine statement.

Do you think enough is presently being done by NFPCA?

Mr. AABERG. The area I am working with them on are sophisticated seminars around the country. That is where we must start. I would like to see them do more of this.

At the end of this year, I will have taught in five of them. They are usually 3-day, higher-level, law enforcement seminars. Until we educate the fire marshals, fire investigators, and law enforcement people, we will not see results.

The CHAIRMAN. I take it from what Chief Stamm said that the major emphasis as far as the fire department is concerned is putting out the fires or suppressing the fires and, therefore, they don't believe that they can adequately fund these types of programs.

Mr. AABERG. You have brought me to a most controversial issue. Who should handle the arson investigation: fire or police? As a matter of fact, I have been able to escape taking a position on that because I have found that both work, if you train the arson investigator, whatever department he is in. If it is going to be the fire department, they do need more funds in many areas to get the trained investigators.

And if it is going to be in the police department, as are many fine arson squads, then they need the training, too.

The CHAIRMAN. Why do you say you believe that arson appears to be increasing in the country?

Mr. AABERG. Figures are available at the drop of a hat. I feel arson has increased in the past 10 years with the changing economy and the sophistication of fraud that exists in some areas.

We are finding arson from the rural areas to the suburbs, to the inner city, but I would also agree that better detection—it is still not good, but we are doing a much better job of detecting arson fire—also makes it look like it is increasing. I think it is both.

The CHAIRMAN. That is what I was wondering. Actually, as we become more aware and provide means for better detection of the arson fire, certainly the statistics on these types of fires would appear to go up.

Mr. AABERG. No question about it.

The CHAIRMAN. Whether it actually has increased in numbers or not.

Mr. AABERG. We really don't know. All outside studies show about a third of all fires across the board are arson. Of course, it varies greatly, but we will never know until we take a 90- or 120-day period and put an expert arson investigator on every fire that happens in this country.

The CHAIRMAN. Do you have any kind of statistics to make a judgment as to how much of the arson problem is economically motivated?

Mr. AABERG. As far as fraud, arson fires, I would say almost all fraud arson fires are economic—someone may want to clear an area, or want to overinsure a building, or want to remove the contents and destroy a building that has little market value but a high replacement cost. On this definition of economic value, we feel about 60 percent of all arson fires are fraud.

The rest being to cover a crime, emotional, pyromaniacs, sexual problems, social unrest, and what have you.

The CHAIRMAN. Thank you very much, sir.

Mr. AABERG. Thank you. I enjoyed it.

[The statement follows:]

STATEMENT OF RICHARD E. AABERG, STATE FARM INSURANCE CO.,
BLOOMINGTON, ILL.

My name is Richard E. Aaberg and I am vice president of claims, State Farm Fire & Casualty Co., Bloomington, Ill. State Farm is the world's largest writer of homeowners insurance and is also growing rapidly in the commercial property insurance area. I have held this position for the past seven years and have a total of twenty-five years experience in claims and related legal areas.

State Farm has supported the initiative to establish a fire prevention administration for quite some time. Our company provided input into the deliberation of the National Commission on Fire Prevention and Control, and we are in support of its recommendations. Moreover, we worked hard for the enactment of the Federal Fire Prevention and Control Act of 1974. It gives me great pleasure to appear here today in support of your efforts to resolve the serious fire problems facing our nation.

We, at State Farm are in total agreement with the legislative purpose of this act. We are committed to assist in reducing the unacceptably high rate of death, injury and property loss caused by fires in the United States. We encourage you to adequately fund the Fire Prevention and Control Administration, so that they can effectively develop the crucially important research, educational and training programs required.

Of special concern to us in recent years has been the problem of arson losses. During the past six years, we at State Farm have devoted a high percentage of our time to fighting arson on a nationwide basis. Our company has attempted to establish itself as a focal point for uniting all of the various disciplines in the war

against arson. In our opinion, coming to grips with the arson problem will materially assist us in meeting the overall legislative purposes of this act.

The serious arson problem in this country is just now beginning to come out in the open and public awareness is, thankfully, increasing. It is often said that arson is America's most malignant crime and it may, as well, be its fastest growing evil. Most insurance experts tend to agree that on a nationwide basis, approximately thirty to thirty-five percent of all fires are intentionally set.

No one can say for certain, but it is significant that as the insurance industry and law enforcement people become more aware of the problem, the figures tend to increase. The percent of intentional fires varies greatly around the country, depending on conditions and many other related circumstances. As time goes by and the various disciplines become more proficient in detection and examination of fire scenes, the projection may increase substantially.

State Farm has committed itself to do something about the arson problem. The entire insurance industry is now working together as never before, and we think that real progress is being made. State Farm has taken specific action as follows:

(1) We have trained our field claim staff to detect arson, and to establish immediate contact with professional investigators;

(2) We have organized committees in over 25 states to fight arson. These committees are made up of the various disciplines involved in fighting arson, such as insurance, law enforcement, fire fighters, prosecutors, fire marshals and educators.

(3) We have prepared a great deal of training material; developed and put on seminars to hundreds of State Farm people. In addition, all of this material has been made available to the insurance industry.

(4) We have helped train other segments of the insurance industry.

(5) We have participated in several of the states in helping them reorganize their Fire Marshal Department or strengthen their laws as the need may be.

In the last four years, public awareness of the arson problem has dramatically increased. We see evidence that the problem of arson is understood by more persons. Our experience has shown that it is possible to convict arsonists and also to defeat fraudulent insurance claims. We are convinced that strong but reasonable laws, plus more vigorous law enforcement is beginning to take the profit out of arson. The National Fire Prevention and Control Administration plays a vital and significant role in this fight against arson. I personally feel the existence of NFPCA is absolutely necessary to the future success of the war against arson. There was a crying need for many years for a federally funded organization dedicated to these crucial objectives:

(1) Develop a model arson task force concept.

(2) Reclassify arson as a part 1 crime to stress its importance to law enforcement persons.

(3) Creating public awareness.

(4) To develop better reporting, data collection and analysis of fire loss data.

(5) To promulgate uniform laws and regulations.

(6) To identify and develop sources of funding to combat arson at all levels.

(7) To conduct research and development on tools for arson investigation and to study behavioral causes.

(8) To develop uniform terminology.

(9) To educate all of the various disciplines not only in arson but in fire prevention. Certainly, a Fire Academy so highly recommended by Congress should receive the highest priority.

The NFPCA is just beginning to carry out the intent of Congress. Success is starting to show; optimism is replacing pessimism. Proper funding of the NFPCA is absolutely essential to continue this critical war on the crime of arson. Beyond question, NFPCA has already accomplished important tasks and objectives and State Farm enthusiastically endorses these efforts. We feel that funding of a national fire academy is important and could have a dramatic effect, not only on the problem of arson, but, even more importantly, in the fire prevention area.

The cooperation of NFPCA with all the various disciplines involved has been excellent. The people that I have met in NFPCA are knowledgeable, dedicated and extremely cooperative. National coordination is badly needed. We urge proper funding and authorization to proceed on the well defined goals that can only be carried out by a dedicated and efficient nationwide organization.

The CHAIRMAN. That concludes the hearings for this morning.

The committee will stand adjourned.

[Whereupon, at 11:15 a.m., the hearing was adjourned.]

ADDITIONAL ARTICLES, LETTERS, AND STATEMENTS

U.S. SENATE,
Washington, D.C., March 13, 1978.

Hon. WENDELL H. FORD,
Chairman, Consumer Subcommittee, Senate Commerce, Science and Transportation Committee, Dirksen Senate Office Building, Washington, D.C.

DEAR MR. CHAIRMAN: This is to advise you of my strong support for establishment of the National Fire Academy and Fire Prevention Center. I am hopeful that the Congress will soon approve legislation which will allow this important program to proceed promptly.

Numerous fire chiefs throughout Indiana have contacted me regarding this issue, and I have respectfully submitted copies of some of their letters for consideration during hearings before the Consumer Subcommittee on Tuesday, March 14, 1978.

Thank you for your attention, and for keeping me apprised of any decision which is made.

Sincerely,

RICHARD G. LUGAR.

Enclosures.

CITY OF INDIANAPOLIS, IND.,
January 30, 1978.

Senator RICHARD G. LUGAR,
*Russell Office Building,
Washington, D.C.*

DEAR SENATOR LUGAR: The International Association of Fire Chiefs has received information indicating the possibility of a serious delay in the opening of the National Fire Academy.

The indications are that the administration of President Carter has made the decision to delete funding for the renovation and refurbishing of Majorie Webster College in Washington, D.C., the location chosen by the Academy's Site Selection Committee.

The President's budget, for fiscal year 1979, had contained \$7.3 million for the work on the Webster site, but, according to the information received by the IAFC, that money has been removed from the budget by the Office of Management and Budget which also has made several accompanying recommendations.

It should not be necessary to point out that the fire service has been through this already. To go back to the beginning and start all over again would mean a lengthy delay in the opening of the Academy and may well indicate the eventual cancellation of plans for a National Fire Academy.

As a member of the American fire service, I am outraged at the decision to delete funding for the Academy. I urge your support to help the funding be restored immediately. Future fire service support for his administration depends on his support for the National Fire Academy.

Respectfully,

WILLIAM J. PATTERSON,
Chief, Indianapolis Fire Department.
CITY OF LAFAYETTE, IND.,
February 1, 1978.

Senator RICHARD G. LUGAR,
*Dirksen Senate Office Building,
Washington, D.C.*

DEAR SENATOR: Recently the Presidents budget recommended not to fund the National Fire Academy for 1979. The countrys Fire Fighters have fought long and hard for this academy and it would be a dark day for the Fire Fighters of this country if this program was not funded.

We would appreciate any assistance that you could give us towards changing the Presidents budget recommendation.

Thank you for your consideration to this matter.

Sincerely,

ROBERT E. TAYLOR, *Fire Chief.*

CITY OF CARMEL, IND.,
February 3, 1978.

President JIMMY CARTER,
United States of America,
Washington, D.C.

DEAR PRESIDENT CARTER: I have recently completed 42 years in the Fire Service, 12 as a Fireman and the last 30 as a Fire Chief and I am very disappointed to say the least that you are considering the deletion of funds for the renovation or operation of the National Fire Academy.

Congress concurred with a N.F.P.C.A. concept to support State and Local Fire prevention and control efforts. Your immediate restoration of the \$7.3 million is very urgent in fiscal year 1979.

Mr. President, the people we serve depend upon us to protect them and their property from fire and I feel it is our responsibility to do so. However, we must have the knowledge and means.

Again, please restore this vital funding for the National Fire Academy.

Respectfully requested,

DONALD SWAILS, Jr., *Fire Chief.*

INDIANA FIRE CHIEFS ASSOCIATION,
Hobart, Ind., January 17, 1978.

President JAMES CARTER,
United States of America,
Washington, D.C.

DEAR PRESIDENT CARTER: On behalf of the Indiana Fire Chiefs Association, please know that the entire American Fire Service is being disappointed by the proposal to cut the funding for the operation of the National Fire Academy.

The U.S. Congress concurred with a N.F.P.C.A. concept to support State and local fire prevention and central efforts.

Your restoration of the \$7.3 million is urgent in the fiscal year of 1979.

Sincerely,

Chief H. RICHARD HARRIGAN, *Secretary.*

UNIVERSITY OF NOTRE DAME,
North Dame, Ind., February 2, 1978.

President JIMMY CARTER,
White House,
Washington, D.C.

DEAR MR. PRESIDENT: I regret very much the decision by the Office of Budget Management not to provide funds in the forthcoming national budget for the National Fire Academy.

To conquer the national fire problem will require that we develop leadership in the fire service that will be second to none in the nation. The awesome devastation of life and property by fire in our country is unbelievable and unnecessary.

We must not assign this important matter to the bureaucratic dung heap, but move onward from the Wingspread Conferences and America Burning to some solid action.

The establishment of the National Fire Prevention and Control Administration was a positive step and beginning. Please take another step and establish the Academy.

Very truly yours,

JACK R. BLAND,
Assistant Fire Chief, University of Notre Dame.

BRAZIL CITY FIRE DEPARTMENT,
Brazil, Ind., February 7, 1978.

DEAR PRESIDENT CARTER: "You have disappointed the entire American fire service. Congress concurred with a N.F.P.C.A. Concept to support state and local fire prevention and control efforts. Your immediate restoration of the \$7.3 million is urgent in fiscal year 1979."

Sincerely,

RONALD D. WEESE,
Chief, Brazil City Fire Department.

PERU FIRE DEPARTMENT,
Peru, Ind., February 17, 1978.

To: President Jimmy Carter, White House, Washington, D.C.
Subject: National Fire Academy funds.

DEAR PRESIDENT CARTER: You have disappointed the entire American fire service. The Congress concurred with a N.F.P.C.A. concept to support state and local Fire Prevention and Control efforts. Your immediate restoration of the \$7.3 million is urgent in fiscal year 1979.

Respectfully yours,

CHARLES E. WOLF,
Chief, Peru Fire Department.

STATEMENT OF AMERICAN INSURANCE ASSOCIATION

(Submitted by W. D. Swift, Vice President, Property Claims Service; Property Insurance Loss Register; and American Insurance Association)

This statement is submitted on behalf of the Property Claim Services and the Property Insurance Loss Register of the American Insurance Association.

Most of the 170 subscribers to the Property Claim Services write one-half of the fire insurance nationally and are vitally interested in the subject of the Subcommittee's Hearings. AIA is grateful for the opportunity to present our views and would like to express a few related thoughts. Whereas we recognize that the scope of activities of the National Fire Academy (NFA) far exceeds the more limited area of our direct interest the subject of arson has been high on their priorities and it is our experience that the only way the diverse interests working on the arson problem are going to be effective is through a coordinated approach. The National Fire Prevention and Control Administration and its National Fire Academy are the logical catalysts for bringing all of those concerned together and assisting in charting coordinated programs.

It has been said that arson is the costliest act of violence, except war, and yet the dramatic rate of increase in this ghastly crime is appreciated by very few people. AIA addressed the problem about four years ago, when the Property Claim Services Committees of the American Insurance Association started asking questions about the apparent increase in arson crimes; we wanted to know how bad the problem was, what was being done about it; what more needed to be done. We were appalled at the answers. Nobody really knew what was burning, or why it was burning, but the consensus of knowledgeable fire investigators was that at least 20 percent of the national building fires were deliberately set and, due to the use of accelerants, intentionally set fires tend to do more damage than accidental ones.

We believe, but cannot prove—that last year, incendiary fires, which are thought to be increasing at the rate of 20 to 25 percent per year, caused more than 2,000 deaths and direct insured losses of over one and one-half billion dollars. The indirect or consequential losses, neighborhood deterioration, loss of job opportunities, increased costs of police and fire protection, loss of ratables and the irretrievable loss of badly needed national resources may be costing this country \$12-\$15 billion per year.

During our investigation, we concluded that no one was really doing very much because responsibility was poorly defined, resources were and are limited, and everyone thought someone else was doing more than they were.

Concurrent with our investigation, the National Fire Prevention and Control Administration, which was established in 1974 in response to the report of the

National Commission on Fire Prevention and Control, was also seeking direction for its National Fire Academy. Our industry and the country as a whole should be grateful to the National Fire Academy for its initiative in bringing together 36 representatives of concerned groups, the National Association of Chiefs of Police, the International Association of Arson Investigators, insurance representatives, etc.—at Battelle Memorial Institute for an effort to articulate what could be done about arson. They were seeking guidance for the Academy and the National Fire Prevention and Control Administration in general, through a consensus of those outside the federal government. It was the consensus at those seminars, extending over a five day period that several significant actions are necessary if arson is to be contained.

We are sure that most of you are aware of the final report of those seminars entitled "Arson—America's Malignant Crime". There is not time at these hearings to delve deeply into the conclusions, but we would like to submit a copy of the report for inclusion in the record.

From the Battelle meetings, and interviews our staff has had with firemen, policemen, fire marshals and insurance executives during the past four years, it is apparent that while some of the organizations have well-trained personnel and good educational programs, there is a complete void with regard to these facilities in a substantial number of fire departments throughout the country. In many jurisdictions, responsibilities by the firemen and policemen are poorly defined and there still exists a serious lack of communication, cooperation and coordination among insurance companies, adjusters, firemen, policemen and district attorneys. Regrettably, the general public who, in the final analysis, are footing the arson bills, are generally unaware that we really have a problem.

The American Insurance Association has been aggressively implementing all insurance-related recommendations stemming from the Battelle seminars. We have developed extensive educational material designed to assist insurance adjusters and firemen in becoming better fire observers. The printed material, copies of which are also available to this Committee, has been widely distributed to insurance interests and firemen. We have a number of audio visual one-half day seminars which last year reached an audience of over 4,000 in 160 cities. Many of our subscribing companies have developed fine programs on their own.

In spite of our determination to expeditiously pay the vast majority of people who have sustained accidental fires, we have a responsibility to our other policy holders and the public at large to take the profit out of arson for those who are willfully setting fires to defraud insurance companies. Upon learning that one of the major difficulties confronting investigators, both private and public, was the absence of a national fire loss history, the American Insurance Association, after seeking guidance from representatives, knowledgeable investigators, etc., is in the final systems design of a Property Insurance Loss Register, which will be a computerized register of property insurance loss claims to inform subscribers of other recorded claims and information which bear similarities to a current claim. About 380 companies writing approximately 80 percent of the national fire insurance have voluntarily subscribed to the Property Insurance Loss Register. When the system becomes operational later this year, the output will be shared by insurers with constituted public authorities.

We recognize that certain disincentives tend to prevent insurers from aggressively resisting arsonists, such as the unduly restrictive libel, slander, punitive damage and other problems. Also, well-intentioned unfair claim practices acts designed to protect the public sometimes are utilized as shields behind which criminals hide. Because of that, the American Insurance Association is working with others to develop legislative regulations which will fully protect the public and expose those perpetrating the fraud.

The National Fire Protection and Control Administration has shown great concern for these difficulties and we believe that an impartial, official organization such as the National Fire Prevention and Control Administration could be instrumental in formulating remedial action.

Additionally, the training and detection of arson is hindered by the fact that about 85% of the estimated 2½ million firemen in 26,000 departments, do not have the time, motivation or resources to train themselves in arson detection work. Not only do they lack trained personnel, but very frequently are not backed up by the equipment and understanding of local government, district attorneys, etc.

The Investigator, the firefighter, the police officer and others are soldiers in the war against arson; they need a commanding officer to function effectively. We believe that the National Fire Prevention and Control Administration and its National Fire Academy must prepare guidelines on how to cope with this problem. These guidelines then can be used by communities and states to fix responsibilities and can serve as bases for statutory actions.

We urge that the National Fire Academy be adequately funded and given an opportunity to demonstrate its ability to perform this vital service. Thank you.



