

DOCUMENT RESUME

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Report to Juanita M. Kreps, Secretary, Department of Commerce; by Henry Eschwege, Director, Community and Economic.

Issue Area: Science and Technology: Applying Science and Technology to State and Local Government Problems (2006); Data Collected from Non-Federal Sources: Accessibility and Use (3102).

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Budget Function: General Science, Space, and Technology (250).

Organization Concerned: Department of Commerce: National Fire Prevention and Control Administration.

Congressional Relevance: House Committee on Science and Technology; Senate Committee on Commerce, Science, and Transportation.

Authority: Federal Fire Prevention and Control Act of 1974 (15 U.S.C. 2201).

The National Fire Prevention and Control Administration was established in 1974 to provide assistance to State and local communities in the areas of data collection, training, public education, and research concerning fire prevention. About \$44 million of the \$46 million appropriated for the Fire Administration for fiscal years 1975 to 1978 was allocated to these four areas. The Fire Administration has not performed sufficient studies and analyses of the fire problem to provide assurance that the most effective programs are being developed. In order to obtain a better understanding of the dimensions and characteristics of the fire problem, more accurate fire data and program measurement techniques are needed. The Fire Administration's data center is developing a data base which is designed as a fire-loss data collection and analyses system to serve as a management tool for States and local communities. Although fire statistics are collected in most States and local communities, incompatible forms, coding systems, and terminology make the information difficult to consolidate and interpret. The Fire Administration estimates that it will take 3 or 4 more years to fully implement the data system. As of November 1977, only 19 States were involved and only 5 States were reporting standard data on a regular basis. While it is too soon to expect the Fire Administration to make an impact on the Nation's fire problem, now is an appropriate time to lay the groundwork for a long-range plan to provide a structured basis for development and assessment of programs and a sound basis for budgeting.

(RRS)

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UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

COMMUNITY AND ECONOMIC
DEVELOPMENT DIVISION

JUNE 21, 1978

B-160998

The Honorable Juanita M. Kreps
The Secretary of Commerce

Dear Madam Secretary:

We recently completed a review of the National Fire Prevention and Control Administration. We examined the Fire Administration's management of its programs and plans intended to fulfill its long-range goal of substantially reducing the Nation's fire losses.

The Fire Administration has made progress in identifying ways it plans to help States and local communities reduce their fire losses through fire prevention and control. Some programs have been developed which may prove useful; however, we believe that the Fire Administration should expedite its data collection and improve its long-range planning.

Our review was conducted at Department of Commerce and Fire Administration Headquarters in Washington, D.C. We reviewed pertinent policies, procedures, and practices for planning, managing, implementing, and appraising programs intended to reduce fire losses. We also obtained the views of various fire service organizations concerning the impact of Fire Administration programs on the Nation's fire problem.

BACKGROUND

The National Commission on Fire Prevention and Control was established to study the Nation's fire losses (currently estimated at 7,500 fatalities, 300,000 injuries, and property losses of \$4 billion annually) and to recommend ways to reduce those losses. In 1973 the Commission reported that the fire problem was primarily a State and local community responsibility but noted that a Federal focal point was needed. As a result of the Commission's recommendations, the Congress enacted the Federal Fire Prevention and Control Act of 1974 (15 U.S.C. 2201 *et seq*) which established the National Fire Prevention and Control Administration. The Fire Administration is to provide assistance to State and local communities in the

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areas of data collection, training, public education, and research. Of the \$46 million appropriated for the Fire Administration for fiscal years 1975-1978, about \$44 million has been allocated to these four areas.

The Act directed that a National Fire Data Center be established. The Data Center is to (1) provide an accurate nationwide analysis of the fire problem, (2) identify major problem areas, (3) assist in setting priorities, (4) determine possible solutions to problems, and (5) monitor progress of programs to reduce fire losses. The Data Center has received \$5.4 million for fiscal years 1975-1978.

The Act further directed that an academy be established for training fire service personnel and others engaged in fire prevention and control activities and that a site be selected within two years after its enactment. The National Academy for Fire Prevention and Control was established as an operating unit of the Fire Administration. The former Marjorie Webster College in Washington, D.C., was selected to be the site of the Academy. Currently, the Academy staff is developing training programs and a system for delivering courses and related assistance nationwide. The Academy has received about \$10.9 million for fiscal years 1975-1978.

Because it is believed that public education has great potential for reducing fire-related deaths and injuries, the Fire Administration established the Public Education Office to carry out this function. At the time of our review, the Public Education Office had developed planning manuals and identified public education programs and the techniques for testing them. About \$2.1 million has been allocated to the Public Education Office for fiscal years 1975-1978.

Fire research and related activities are other means which the Fire Administration plans to use to reduce the severity of the fire problem. The Fire Administration's National Fire Safety and Research Office is responsible for this area. A major program of this office is master planning. The Act authorized the Fire Administration to encourage and assist States and local communities to establish master plans - action plans which allow communities to systematically approach and implement programs for fire prevention and control. The communities assess their fire problems, develop fire protection goals and objectives, consider risk/cost tradeoffs and assess alternative systems. The end result of this process is a community plan. Master planning manuals have been completed for some urban areas and small communities and validation testing of master planning guidelines has been accomplished. For fiscal years 1975-1978, about \$2.4 million has been allocated for master planning and about \$7.6 million for other research.

The Act also established the Fire Research Center in the Department of Commerce with a broad mandate for research. The Fire Research Center is responsible for developing an understanding of the fundamental processes of fire, including its physics and chemistry; its behavior, spread and growth in buildings; the fire hazards arising from transportation of combustible fluids and materials; and construction design concepts for increased fire safety. The Center is also authorized to investigate the various biological, physiological and psychological effects of fire upon victims. Among other things, the Center has developed a research plan and established an Office of Extramural Research. The Center is funded through the Fire Administration and has received about \$15.4 million for fiscal years 1975-1978.

NEED TO EXPEDITE COLLECTION OF RELIABLE
DATA FOR USE IN STUDIES AND ANALYSES

The Fire Administration has not performed sufficient studies and analyses of the fire problem to provide assurance that the most effective programs are being developed. Such studies and analyses, including program cost-benefit analyses, should be done early in an agency's planning to assure that program development is directed towards established major objectives and also to provide a sound basis for justifying budgets.

Because fire is a complex problem having behavioral, social, and physical characteristics, accurate measures of effectiveness for programs designed to reduce fire losses have never existed. In order to obtain a better understanding of the dimensions and characteristics of the fire problem, more accurate fire data and program measurement techniques are needed. In March 1978, the Fire Administration testimony presented to the Consumer Subcommittee of the Senate Committee on Commerce, Science, and Transportation made the following point about the need for fire data.

" . . . 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."

The Data Center is developing a data base referred to as the National Fire Incident Reporting System. It is designed as a logical and systematic fire loss data collection and analyses system, which, according to Fire Administration officials, will also serve as a much-needed management tool for States and local communities. The Fire Administration found that although fire statistics are collected in most States and local communities, they use incompatible forms, coding systems, and terminology, making the information extremely difficult to consolidate and interpret.

The Fire Administration estimates that it will take three or four years more to fully implement the data system. As of November 1977, only 19 States were involved. Fourteen of the 19 States were in various stages of starting up or reporting while only five States were reporting standard data on a regular basis. The Fire Administration reported that, in fiscal year 1977, they had to refuse entry into the system to five States and the District of Columbia and Puerto Rico due to limited resources. Because of the few States which have reported data on a regular basis for more than a 12-month period, comprehensive nationwide analyses of the fire problem have not been possible.

The Data Center is also striving to improve the quality of its data by evaluating its reliability and completeness. For example, a validation study of Ohio's data was performed for fiscal year 1977, and it was concluded that additional verification was needed. The Fire Administration is doing additional validation studies during fiscal year 1978 and will implement improved quality control procedures in fiscal year 1979.

Recently the Data Center published its first "National Estimates" a statistical summary of the fire problems in the Nation. This report is based on the limited data available from the data system as well as data from other sources. According to Fire Administration officials, it gives a fairly reliable but general description of the causes and consequences of fire in the Nation, plus a detailed analysis of the fire problem in the first two States, California and Ohio, for which a year of compatible data was available. The Fire Administration anticipates that, as the data system grows, the quality and completeness of its "National Estimates" will improve.

Extensive policy and program direction could not be formulated from the "National Estimates" because of the limitations on quantity and quality of data. However, based upon the Fire Administration's analyses of the data obtained thus far, some previously-held opinions about fire death rates have been revised. Fire Administration officials reported that the data has given them an improved understanding of the fire problem. They pointed out the following as examples of their findings and tentative conclusions.

- Residential fires are responsible for about two-thirds of the Nation's fire deaths and, consequently, priority should be given to developing fire prevention programs to resolve this problem.
- Because the nature and extent of fire losses differ significantly from one location to another, State and local governments should rely more on their own analyses of local fire problems rather than on data from outside sources.
- Males, particularly non-white males, outnumber females two to one as fire victims and should be given special emphasis in developing and administering fire prevention programs.
- The southeastern States have the highest fire-related death rate in the United States, indicating that emphasis should be placed on regional efforts and programs to combat fire losses.

NEED TO IMPROVE
LONG-RANGE PLANNING

The Fire Administration has a "Five Year Plan" covering fiscal years 1977-81 which it uses as a tool in planning and implementing programs and activities. The plan is also to be used in measuring the effectiveness of the Fire Administration in meeting its goals.

The Fire Administration's plan was formulated on the basis of (1) needs specified in the 1974 Fire Act; (2) ongoing Federal and non-Federal fire prevention and control projects; (3) recommendations of the National Commission on Fire Prevention and Control; (4) judgment of experts in the fire prevention field; and (5) consultation with States and local communities. Specific five year plans were also prepared by each division within the Fire Administration. Each division's plan includes project descriptions, justifications, goals, objectives, tasks and schedules. While the Five Year Plan was prepared based on the best available information, the plan's summary recognizes the need for better data and other information.

"It is currently difficult to plan and evaluate a fire protection program because of gaps in our understanding of fire behavior and the lack of a comprehensive, valid fire experience data base. . . ."

The plan is comprehensive because it covers the important aspects of a national effort to focus on solutions to the fire problem. A weakness of the plan, however, is that it does not relate how individual programs will contribute toward the agency's goal of significantly reducing fire losses and it does not provide for evaluating programs developed for States and local communities. Accordingly, procedures to assure that periodic assessments of such programs are performed have not been developed. In addition, the plan does not include cost estimates and related benefits, alternatives, and resource requirements. One Fire Administration official attributed this to the lack of reliable data on fire losses, and limited resources. This information, we believe, would help the Fire Administration develop the most effective programs, provide better direction toward achieving its goal, use its own resources efficiently, and better justify its budgets.

CONCLUSIONS AND FIRE ADMINISTRATION VIEWS

While it is too soon to expect the Fire Administration to make an impact on the Nation's fire problem, we believe that it is an appropriate time to lay the groundwork for a long-range plan. This plan would provide a structured basis for development and assessment of programs and a sound basis for budgeting.

The Fire Administration has been operating on the basis of plans formulated from limited data. Although it has established the long-range goal of reducing human and economic fire losses, it has not formulated a plan which effectively relates to accomplishing its overall objective.

The Fire Administration recognizes the need for better data and how the data can serve in planning its programs as well as assisting States and local communities in local fire protection management. The Fire Administration's Data Center is developing a data base which is expected to provide reliable data for studies and analyses. However, the Fire Administration estimates it will take three to four more years to fully implement the data system. It will take even longer before trends can be determined on fire losses. The issue is whether the Fire Administration is moving fast enough to establish the data system needed in analyzing the fire problem and developing and targeting programs responding to the needs.

We discussed a draft of this report with Fire Administration officials and their comments were considered in preparing this report. Fire Administration officials expressed concern over the possibility that expediting the data system and placing more emphasis on planning would mean diverting limited resources from other projects. They believe they have a well-balanced program, within resources available, in an area where there are many needs.

We believe that the data collection process should be expedited in order to better develop plans and programs which will show a measurable and timely effect in reducing the Nation's fire losses.

RECOMMENDATION

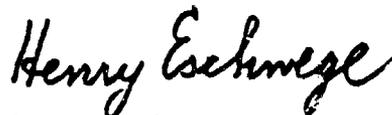
We recommend that you have the Administrator, National Fire Prevention and Control Administration, expedite the development of the data collection and analyses system, begin developing a better long-range plan on how Fire Administration programs are to reduce fire losses, and develop procedures for periodic assessments of programs.

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As you know, Section 236 of the Legislative Reorganization Act of 1970, requires the head of a Federal agency to submit a written statement on actions taken on our recommendations to the House Committee on Government Operations and the Senate Committee on Governmental Affairs not later than 60 days after the date of the report and to the House and Senate Committees on Appropriations with agency's first request for appropriations made more than 60 days after the date of the report.

We appreciate the cooperation extended our staff during this review by officials of the Department of Commerce and the National Fire Prevention and Control Administration.

Sincerely yours,



Henry Eschwege
Director