

## RESPONSE & RECOVERY

### **Shift to an All-Hazards Disaster Response**

**Describe how your office's mission and functions have evolved since FEMA changed its focus to an all-hazards disaster response. Describe the evolution of your division's mission and functions from 1992-2000.**

#### Mission Shift to All-Hazards Disaster Response

FEMA acknowledged the need to shift its emphasis from national security to an all-hazards approach based, in part, on the end of the Cold War and on the increasing number and severity of natural disasters, such as Hurricanes Andrew and Iniki, and the Loma Prieta Earthquake. These disasters severely strained the organization's limited resources. Critics called for a new and improved federal disaster response. While the national security program assets were available to support disaster assistance, this did not occur seamlessly. FEMA recognized the similarities between civil defense activities and natural hazards preparedness, and began development of an integrated emergency management system, focusing on an all-hazards approach. New emphasis was placed on preparedness and then on mitigation, redirecting more of FEMA's resources from civil defense into disaster relief, recovery and mitigation programs.

After FEMA's reorganization, Director James Lee Witt focused on breaking the disaster cycle of damage and rebuilding and increased the agency's focus on mitigation efforts. FEMA continues to meet its core missions of protecting lives and property, and reducing human suffering and enhancing communities' recovery. However, FEMA is trying to ensure that the impacts of future disasters are minimized, that communities' long-term vulnerability to disasters is reduced and that, wherever possible, people are moved out of harm's way.

Some examples of FEMA's evolution from national security to all-hazards emphasis include:

- Urban Search and Rescue (US&R) – Though established prior to 1993, the Urban Search and Rescue (US&R) task force system (deployed by FEMA for the rescue of victims of structural collapse) did not become fully operational until 1995. The 27 task forces are located throughout the U.S. and encompass local emergency services personnel from 19 states. On April 19, 1995, the US&R system was tested and proved to be fully operational and highly successful in response to the bombing of the Murrah Federal Building in Oklahoma City. This disaster was different from any ever experienced, but FEMA and the US&R task forces brought expert knowledge and skills to support the Oklahoma City rescue workers. Because of their recognized expertise, FEMA's US&R task forces have been asked to respond to several international disasters. Their mission may soon expand to respond to biological, chemical or nuclear events.

#### Y2K

The rollover to the year 2000 (Y2K) presented a unique challenge to FEMA and the emergency management community. FEMA was responsible for increasing awareness of

emergency services providers throughout the nation, and for encouraging them to assess the readiness of the technology-based systems to support operations before, during, and after the clock rolled over to the year 2000. In addition, FEMA focused on the consequence management aspect of Y2K, preparing to coordinate any federal emergency response to Y2K disruptions that exceeded state and local government capabilities to protect life, public health and safety, and property. There were no major Y2K-related disruptions, but FEMA was ready for any potential emergency that might have required federal assistance.

The Response and Recovery Directorate has fully embraced the all-hazards approach. It continues its continuity of government activities, it continues to plan and coordinate the efforts of preparing for and responding to major disasters and emergencies, and it has increased its counter-terrorism activities. Soon, the directorate's mission may include assisting in protecting the nation from additional types of hazards, including those associated with the threat of chemical, biological, or radiological weapons of mass destruction.

#### Management Reorganization

**Describe how your office's senior management was reorganized in 1993. Have major changes in your office's management structure occurred since then? If so, what was changed and why was it changed?**

#### Management Reorganization

In 1993, FEMA was restructured to become a functional based organization. The former organization in charge of disaster response was the State and Local Programs and Support Directorate (SLPS). Major changes took place after Director Witt refocused the emphasis of the agency to disaster mitigation and response and recovery. SLPS and the National Preparedness Directorate were broken up into functional and operational components called the Mitigation Directorate; Preparedness, Training and Exercises Directorate; Operations Support Directorate; Information Technology Directorate; and the Response and Recovery Directorate (R&R)

The Response and Recovery directorate was headed by an associate director and then two deputy associate directors - one for response and one for recovery. Response handled all of the operations and planning such as the Federal Response Plan, information and planning, and development of disaster standard operating procedures. Recovery handled the individual assistance and infrastructure support programs to assist individuals and state and local governments after disasters. The response and recovery functions now come under one deputy.

The newly formed R&R directorate is responsible for the planning, coordination, and execution of the federal government's response to major disasters and emergencies as described by the Federal Response Plan. In addition, it is responsible for the Individual and Public Assistance (Infrastructure) Grant programs authorized by the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288, as amended). As such, R&R strives to develop and maintain an integrated operational capability to respond to and recover from the consequences of a disaster, regardless of its cause, in partnership with other federal agencies, state and local governments, volunteer

organizations and the private sector. Today, R&R accomplishes this mission by:

- Developing, maintaining, and implementing emergency planning and operations procedures for responding to natural, technological, and man-made disasters.
- Developing and improving capabilities to respond to the consequences of chemical, biological or nuclear weapons following a terrorist incident.
- Developing and enhancing technical capabilities and procedures to exchange information between state and federal emergency responders on disaster situations and the status of response operations.
- Ensuring that the public assistance (infrastructure) and individual assistance guidance is available and easily understandable for the states and the individual disaster victims.
- Ensuring the state-administered Individual and Family Grant program administrative procedures are capable of providing assistance expeditiously to victims of disasters.
- Ensuring the public assistance (infrastructure) program provides guidance and assistance to states in a timely manner.
- Encouraging state, local governments, and private non-profit organizations to buy and maintain adequate insurance coverage for their buildings.

### **Customer Service Improvements**

**How has your office implemented FEMA's customer service policy? Please cite specific examples of research and/or surveys conducted by your office related to customer service. Also, cite specific changes that were made in the way your office does business as a result of the research and surveys that were done. Finally, give examples of specific improvements in the way your office has serviced its customers since 1992.**

#### Customer Service Improvements

Beginning with the 1994 design and administration of a large, one-time customer service satisfaction survey in response to Executive Order 12862, "Setting Customer Service Standards", the Response and Recovery Directorate (R&R) has consistently used survey data to guide decisions regarding customer service in all program areas. Customer surveys are administered in every disaster for both human services and infrastructure programs and performance is measured against standards developed on the basis of survey and focus group data. Inspection services surveys customers in every disaster as a means of measuring the effectiveness of human services inspection contractors and uses the results as a basis for determining division of work between the two contract organizations.

Survey projects are underway in other parts of R&R. Community Relations is surveying its customers as a means to review several years of its operations; and the federal

coordinating officer professional cadre is readying a survey of internal customers to find out how this new organization is received by disaster operations stakeholders.

Examples of changes instituted on the basis of customer feedback include:

- implementation of a teleregistration process in response to customer information showing that applicants prefer to be able to register for individual assistance by telephone;
- intensive training for Helpline (toll-free information hotline) staff in response to customer requests that their questions be answered with minimal transfers among staff;
- delivery of special customer service training for human services telephone staff in response to feedback that relationships with FEMA staff make a big difference in the disaster experience of individual assistance applicants; and
- creation of a team of community relations specialists to provide people affected by a disaster with the personal contact they have indicated is so important to them.

### **Results-Oriented Incentives**

**How has your office adapted new ways of motivating employees and improving program performance? Specifically, which methods of reward or accountability practices have been implemented? Cite specific criticism and praise that prompted such changes in your office, if applicable.**

#### Results-Oriented Incentives

The Response and Recovery Directorate (R&R) individual divisions routinely hold monthly birthday parties or celebrations with cake/potluck to get staff together during the lunch hour for informal conversation and camaraderie. On a few occasions, all R&R staff have been given small tokens of appreciation such as FEMA notepad binders. All divisions routinely award staff with time off awards for jobs well done.

In addition R&R has initiated a yearly program to recognize support staff. This event usually occurs in April and replaces the widely known "Secretaries Day". R&R began this initiative after reviewing "secretarial" jobs and realizing that there were very few designated secretaries but many individuals who perform a variety of support functions.

A few examples of how the support staff are recognized include:

- Two directorate-wide receptions were held for all support staff and their respective first and second line supervisors. Each support person was presented a token of appreciation, such as a certificate or special R&R cup.
- A one-day training session for all support staff, conducted by USDA, focused on improving administrative skills, telephone communication skills, and general office management techniques.

## Use of Technological Innovations

**Describe how your office has employed the use of new technology since 1992. Also describe ways in which old technology has been used in a new way, if applicable. How have these technological innovations affected your office's performance.**

### Before 1993

The program performance experienced in Hurricanes Andrew (Florida and Louisiana) and Iniki (Hawaii) and Typhoon Omar (Guam), in the latter part of 1992, were good benchmarks for the performance of the Human Services system at the outset of 1993. When these large events happened, it took FEMA in excess of 25 days to provide housing assistance once an application was filed. FEMA's delivery system was almost entirely paper-based. The disaster registration was a multi-part form. The housing inspection was a two-page, multi-part form. All of the applicant's official records were paper files. Follow-up assistance to victims who needed additional funds for rent, supplemental home repair awards, or who appealed FEMA decisions, was all entirely manual. The database management system that existed at the time (the Automated Disaster Assistance Management System, or ADAMS) was a local area network system established in disaster field offices. This meant that the local network had to be built from scratch after a disaster had occurred, reserve staff deployed, local staff hired, and training conducted before the assistance could begin to flow. Registrations for assistance were taken at Disaster Application Centers established throughout the disaster area, and at one storefront telephone registration center located in Denton, Texas. The maximum capacity of the Denton teleregistration facility was 250 service representatives who took registrations on the same paper forms used in the disaster application centers. All applicant inquiries regarding the status of their applications, or questions about the assistance received, resulted in a callback after the necessary research was done. Very large information management staffs were required. (One thousand FEMA staff were employed in these positions in the four 1992 disasters referenced above, many of them incurring travel expenses paid by the taxpayers.) The system was quite vulnerable to duplicate assistance payments because of the delays and because information sharing between agencies, and between agencies and insurance companies, was slow and awkward. Checking for duplicate applications was time-consuming and not always accurate.

The paper-bound, linear processing system in use at the time developed multiple backlogs and inhibited access to information. FEMA could not routinely give people information about the progress of their applications for assistance. Clearly there was a tremendous need to improve the delivery of human services.

### Since 1993

The "teleregistration" process, whereby people could apply for assistance over a toll-free telephone number, was the first step in improving the delivery of human services programs. Although the Texas teleregistration call center was established in 1989, the 1993 nine-state Midwest floods were the first time teleregistration was used to support such a widespread disaster operation. The use of modern automated call distribution and queuing technology enabled FEMA to accept over 80 percent of the registrations in these

disasters over the phone. Use of traditional disaster application centers began to fade. This change alone reduced cycle time by two days, not to mention being vastly more convenient for people than having to take a day off work, finding a sitter for the children, driving across the county and standing in line for several hours.

The next important step was to automate the home inspection process. FEMA developed the Automated Construction Estimating (ACE) system and used it for the first time in wildfires in Southern California in November 1993. This system, which relied on pen-based, hand-held computers for inspectors to record home damage information, eliminated about half the data entry that had previously been needed in field-office-based processing. The portable computers digitized the information, which was then transmitted back to the local area network in the disaster field office via phone lines. This technology also eliminated the inspector's travel time to deliver completed paper inspection forms and pick up new assignments, which meant the inspector could spend all day looking at houses instead of driving forms from place to place. As it turned out, the ACE system was developed in the nick of time: the Northridge earthquake, the largest disaster FEMA has ever administered, occurred just two months after the initial rollout of ACE. Use of the system in Los Angeles saved approximately \$25 million in administrative expenses and reduced cycle time (between application and assistance) by another four days.

In April 1994 FEMA introduced on-line, automated teleregistration procedures. Now, FEMA's service representatives could follow a computerized script and enter registration information directly into the database, eliminating all paperwork and separate data entry chores, as well as the opportunity for error as information was transcribed. The computer program also performed all the necessary mathematical calculations and automatically made all assistance referrals, based on the data entered by the telephone service representative. Modern technology was really starting to pay off in terms of speed, efficiency and quality.

Improvements to the ACE home inspection system, as well as innovative contracting approaches, continued after Northridge. The record for the number of inspections done in one day jumped from 6,000 in 1994 to 11,700 four years later when Hurricane Georges struck Puerto Rico. Sustained rates of production went from less than 3,500 per day to 7,500.

By 1994, FEMA had also determined that setting up a local area computer network in the disaster area was no longer the best way to meet its customers' needs. The startup problems and the costs were too great. Several of FEMA's regional offices had been experimenting with regional processing centers, and Director Witt approved a staff proposal to take this concept one step further and establish national processing centers. What made this concept possible was FEMA's aggressive exploitation of modern data transmission technology. Since the establishment of the first (in 2000 there are three) National Processing Services Center in 1994, FEMA's wide area network has become increasingly more robust and reliable. During 1999 the processing centers were able push the technology to the point where facilities in Texas, Virginia and Maryland could operate as a seamless single unit, exchanging large amounts of data as necessary to balance workloads and achieve optimal efficiency. There are no more backlogs in one place and idle workers in another.

A 1996 study showed that use of central processing centers reduced processing expenses from \$101 per application to \$27 per application through elimination of travel and

repetitive equipment purchase costs, and improved efficiency from more experienced staff. Customer service ratings have been consistently improving since FEMA moved to using national processing centers in lieu of field-based processing.

The most recent major improvement in providing assistance to individuals and families affected by disasters is the implementation the human services module of the National Emergency Management Information System (NEMIS). The computer system features inclusion of a comprehensive set of business rules. After a human services application is received, the information in the application and the information in the subsequent home inspection are compared to these rules and an automated eligibility determination is made. Whether the applicant is eligible, and, if so, the type and amount of housing assistance is literally determined in an instant.

The Maryland national processing center serves as the central mail facility for all disaster processing activities. All incoming mail, faxes and documents are received in the Maryland center and scanned into NEMIS. The scanned document is attached to the applicant's computer file. Since the conversion to NEMIS in 1998, the Maryland processing center has scanned over 245,000 documents.

The benefits of the linked processing centers include:

Applicant cases can be reviewed and worked by a caseworker in any of the three centers. Previously only the center designated to process a disaster had access to the case files. Anyone with access to NEMIS and Internet Explorer can view all incoming correspondence from the applicant.

Faster retrieve of documents. Under the previous processing system, a caseworker had to request a file, and then wait for the records management staff to locate, retrieve and deliver the file.

Electronic files are more secure than files stored in file cabinets. Only NEMIS users have access rights to scanned documents.

In the several NEMIS disasters that have been implemented since the first use of the system in late 1998, FEMA has achieved an automatic eligibility determination rate of 85 percent, handily exceeding the design goal of 80 percent. In combination with an automated payment process that is also incorporated into NEMIS, the elapsed time from the point the inspection is completed to the ordering of the assistance check from Department of the Treasury is usually less than two hours. No staff time is involved, no manual review necessary for this 85 percent. Having the complete case history on line (paper files are now a thing of the past) and having an integral imaging capability permits FEMA service representatives to resolve victim inquiries at the first point of contact. No matter what disaster area a person might be calling from, or which processing center service representative they reach, their complete file is accessible in a few moments on the service representative's computer terminal. Or, put another way, any part of the business process can be conducted by any employee in any processing center for any customer. Time is saved, cost is reduced and, most importantly, customer service is vastly improved. At the end of 1992 it took over 25 days to provide assistance during the response to the devastation of Andrew, Iniki and Omar, which generated 240,000 applications. In late 1998 it took an average of 15 days to assist the 625,000 victims of Hurricane Georges. In the first three months of the Georges disaster, three times as many people had been assisted than in the Northridge earthquake, just four years earlier. In disasters that have occurred in 1999, victims have been assisted in less than one week on

average.

### **Readiness Coordination Division**

The national emergency management information system (NEMIS) includes other features as well. For example, the declaration process in NEMIS provides a global view of a disaster. The life cycle of a major disaster or emergency declaration can be tracked in NEMIS from the initial incident report to actual close out of the declaration. In addition, declaration information is available on a real-time basis to FEMA headquarters and field users. Using the NEMIS application to report the results of the joint federal, state, and local government preliminary damage assessment has helped standardize the information provided on the disaster-related impacts and amount of damage sustained in the affected area.

Another technological innovation that was recently developed by the strategic planning and review unit of the Readiness Coordination Division is a database that tracks and reports on training agency-wide. Use of this database has enabled regions to manage their cadre effectively, ensuring all staff are qualified for the positions they are deployed to fill. FEMA's aggressive pursuit of technological solutions since 1993 has drastically reduced costs and cycle times while significantly improving the service it provides to people affected by disasters.

### Operations Division

In 1998, FEMA met with the National Imagery and Mapping Agency (NIMA) disaster support team to discuss methods of accelerating the delivery of information. The disaster team supports certain FEMA disaster response operations by providing analysis of remotely sensed imagery; much of it obtained using classified intelligence community satellites. At the time, the period of delivery from imagery analysis to delivery of usable information often exceeded 8 hours, primarily due to a tortuous data relay process. That process required the team's imagery analysts to:

- obtain and analyze satellite imagery of a disaster area,
- annotate, by hand, areas of damage on paper maps,
- fax those map products to a second location, where
- they would be re-annotated, by hand on digital maps using geographic information system software, and finally
- the maps would be sent to FEMA.

To help speed up the process, FEMA procured two flat-screen personal computers for use by NIMA, which allowed the disaster support team imagery analysts to annotate their analysis directly on the flat-screen using a stylus. Essentially, these computers enabled the support team to completely bypass steps (2) and (3) in the original delivery process. NIMA calculated that this innovation virtually halved the time required to deliver products to FEMA. As a result, FEMA was able to receive high-quality, highly reliable impact analyses of disaster areas more than twice as fast as was previously possible, a capability that has, among other benefits, permitted the agency to render quicker and better resource allocation and response decisions.

### Infrastructure Division

The redesigned Public Assistance (infrastructure) Program has improved customer service through the use of technology to produce a more efficient grant delivery process that is based on applicant-centered management; better information exchange; and more accessible and understandable policy and guidance for participating in the grant program.

The Internet - The goals of the Public Assistance web pages are to clarify and simplify program policies; create new, clear, simple documents; encourage a greater reliance on written documentation of policies; and increase the availability of information through multimedia outlets and the Internet. Several user-friendly resources have been published and are accessible in portable document format (.pdf) from the FEMA infrastructure support web pages located at <http://www.fema.gov/t-n-r/pa/>. These include six standard operating procedures (for the coordinator, kickoff meeting, project formulation, validation of small projects, immediate needs funding, and cost estimating format for large projects). The site also includes applicants' briefing materials, the Public Assistance Applicant Handbook, Policy Digest, Guide, Policy Compendium, and the Debris Management Guide. In terms of regulations, the Final Rule on the redesigned Public Assistance Program was published in the Federal Register on Oct. 12, 1999 and is also accessible from the FEMA web pages.

In addition to providing information related to infrastructure program areas (i.e. People, Policy, Performance, and Process) a reference list is provided for users. Links to applicable laws, Office of Management and Budget circulars, legislative acts including the Stafford Act and the National Environmental Policy Act, are listed. This section also contains the Federal Response Plan and information about each emergency support function. User-friendly items such as a list of FEMA acronyms and FEMA contacts may also be found here. Also, a searchable appeals response database is online, containing FEMA responses to applicant appeals for assistance.

Multi-Media – Computer diskettes (CDs) on Public Assistance Program eligibility, the cost estimating format for large projects, and the National Historic Preservation Act have been developed and distributed. Instructional videos for the new Public Assistance Program, kickoff meeting, project formulation, validation of small projects and special considerations are available in VHS tape format or via the FEMA web pages in streaming video format located at <http://www.fema.gov/r-n-r/pa/brief.htm>. Also see Geographic Information Systems (GIS) below.

National Emergency Management Information System (NEMIS) – The infrastructure module of NEMIS was created to improve on the essential functions necessary to manage, support and administer the infrastructure support program. The major functions include:

- entry of the request for assistance and project worksheet data for applicants,
- case management file for infrastructure applicants (combines applicant information collected throughout the Public Assistance process into one customer file and serves to track information),
- application processing (recording the obligation of funds for infrastructure grants),
- automated allocation worksheets,
- staffing and team coordination,
- on-line project review,

- flexible grant packaging, and
- state grant management.

Training - The Infrastructure Division developed the independent study course IS 630, Introduction to the PA Process. This is a computer-base training course that gives a general overview of the Public Assistance Program to those individuals that do not have the need for more in-depth training. Computer-based training is an alternative to the standard classroom training process. More computer-based courses are being designed and include the Public Assistance Operations I course. The Debris Operations Management course may have some units converted to computer-based training as well. geographic information systems (Gis) - A GIS database containing a listing of National Register for Historic Places properties has been developed for the use of regional environmental officers and is accessible electronically at all disaster field offices.

## Partnerships

**What groups, organizations, companies or contractors are you now working with outside of FEMA. Summarize these partnerships and cite when and why each partnership began and how the working relationships have evolved. Provide insights about the partnerships in terms of how they have assisted your office in carrying out its functions and/or how they have contributed to FEMA's overall mission.**

### Partnerships

The Response and Recovery Directorate (R&R) has a number of partners who help to ensure that the emergency management community is meeting the needs of its customers. Recognizing the expertise that other agencies could offer, FEMA sought out their assistance early in the reorganization process, particularly in the areas of improving the delivery of human services and infrastructure programs. R&R continues to rely on these long-established partnerships, which include the American Red Cross and the other members of the Federal Response Plan. The agency is also forging new partnerships, such as with the community organizations and those dealing with new technology. Our partners also extend beyond U.S. borders. Recently, FEMA has provided support - by drafting national response plans and assisting with development of emergency operations centers - to several countries that have recognized their need to prepare to respond to disasters.

FEMA's supplementary role in disaster assistance naturally fosters relationships with first responders, with voluntary organizations, with states, and with other federal agencies. Many valuable relationships have developed over time. Some of these relationships focus on coordination of delivery of related benefits and prevention of duplication. Others are valuable for their independent programs of assistance, for meeting needs not met by Stafford Act assistance, and for advising FEMA on expectations of victims and work standards.

Below are some of the specific agencies with which FEMA has forged partnership relationships:

### States

Human Services' primary relationship with states revolves around providing technical assistance and training to state agencies administering the Individual and Family Grant program. That program is, by law, cost-shared but state-administered. FEMA assists by sharing emergency management information software, providing training, and working along with state personnel in program delivery. Also, when states agree to participate in the delivery and management of temporary housing resources, FEMA provides funding and technical assistance while states handle land use, permits, and mobile home park management.

#### Voluntary agencies

For years, FEMA's primary voluntary agency relationships were with the American Red Cross, the Mennonite Disaster Service, and The Salvation Army. Those three organizations are named in the Stafford Act as examples of private organizations with which the federal government should coordinate during the delivery of disaster assistance; and they were the most developed in terms of their established programs of disaster relief. Within the last five years, FEMA has also expanded its relationships to include the member agencies the National Voluntary Organizations Active in Disaster (NVOAD), which has emerged as a coordinating body for many voluntary agencies now focusing programs and services on individual disaster victims. FEMA maintains individual memoranda of understanding with the Red Cross, Mennonites, Salvation Army, and NVOAD, and with several other NVOAD member agencies. The agreements acknowledge the expertise of each organization in its disaster assistance niche, provide for non-duplication of services, and encourage information sharing.

#### Community Relations

In community relations an essential component of the strategy is to establish immediate partnerships with major community-based organizations (churches, ethnic groups, professional and labor organizations, chambers of commerce, volunteer fire departments) in the disaster area. These organizations are conduits for information to and from hard-to-reach populations in a disaster, including the elderly, physically and mentally challenged, ethnic populations, and economically disadvantaged persons. Examples of such organizations include agencies on aging, the Corporation for National Services, the Department of Justice Community Relations Service, and the NAACP. These organizations may also facilitate contact with disaster victims through sponsorship of meetings, distribution of printed information, and linkage to community resources.

#### Insurance and home inspection industries

Prohibiting duplication of benefits requires information sharing with insurance carriers. FEMA staff coordinates with the insurance industry to identify coverage and provide event-wide information. Similarly, contract relationships with the home inspection industry are valuable in assisting FEMA to perform inspections of home damage and needs, which determine awards of individual assistance.

#### Federal agencies

While FEMA coordinates the delivery of federal disaster assistance, it is not the only agency that is empowered to deliver benefits. The Small Business Administration (SBA) disaster loan program, for example, is the primary form of assistance for repair of individual homes and personal property, and business property. SBA and FEMA coordinate to ensure that overlapping assistance in some program aspects is not a duplication of benefits. Other partners include the Department of Labor (disaster unemployment assistance), the Department of Health and Human Services (social security help, health services, mental health services in coordination with FEMA, and heating and energy assistance), the Veterans Administration, and the Department of Agriculture (grants and technical assistance to agricultural and rural communities).

#### Federal Response Plan partners

In addition, the 26 federal agencies and the American Red Cross – partners in the Federal Response Plan – coordinate with FEMA to provide overall delivery of federal assistance during large-scale disasters.

#### The National Imagery and Mapping Agency (NIMA)

NIMA's disaster response team provides analysis of disaster-area imagery obtained from intelligence community satellites and other sources. NIMA's assistance is required because this imagery is highly classified, and requires special authority to access and analyze. The analysis provided by NIMA is used to review and evaluate impacts and damages, and directly supports decision-making by FEMA leadership. In this regard, their contributions have been invaluable. The relationship with NIMA officially began in 1997 when NIMA was created from the merger of several different organizations. However, the original relationship with NIMA's predecessor (the National Photographic Interpretation Center) began several years prior to 1997.

#### The United States Geological Survey

The U.S. Geological Survey's Earth Resources Observing Satellite (EROS) data center is FEMA's executive agent for coordinating the acquisition, processing, and delivery of all non-classified aerial and satellite imagery in support of disaster operations. This relationship began in 1999 in a new partnership that will help facilitate regional and field access to disaster-support satellite/aerial imagery, and also establishes the EROS data center as the central archiving facility for all such imagery. It is anticipated that the relationship will be extremely beneficial to disaster response efforts.

#### Y2K

FEMA found that preparing for Y2K (the computer rollover from Dec. 31, 1999 to Jan. 1, 2000) helped strengthen its partnerships with state and local governments, and enhanced its outreach and relationships with the private sector. Y2K gave FEMA the opportunity to emphasize the importance of self-sufficiency, personal responsibility and preparedness for any potential emergency.

FEMA will continue to work with agencies and stakeholders to help ensure the readiness of the emergency services community to successfully meet their mission responsibilities.

Working in partnership, these federal, state, voluntary, and private organizations will continue to look for opportunities to effectively and efficiently deliver disaster assistance.

## **Organizational Culture**

**How did FEMA's mission shift change the agency's organizational culture? (This question refers to FEMA's shift from a focus on National Preparedness to a focus on Emergency Management.)**

### Organizational Culture

When James L. Witt became director of FEMA in 1993, several organizational subcultures existed that made it difficult for all agency employees to share a common goal and to function as an integrated team. These subcultures were primarily divided between disaster operations and civil defense operations.

By late 1993, the time was right for Director Witt to attempt to assimilate the civil defense subculture into the FEMA mainstream. The early 1990s had brought about a general reduction in civil defense programs in Congress and among its constituents. Also, FEMA was receiving congressional and public pressure to respond more quickly and decisively to disasters and emergencies declared by the president. Director Witt saw the possibility of a "win-win" situation by redirecting all FEMA assets toward all-hazards emergency management objectives—specifically, improved disaster response.

One of the more significant organizational changes made by Director Witt was the elimination of the State and Local Programs Support and National Preparedness directorates and the creation of directorates for Response and Recovery; Preparedness, Training and Exercises; Mitigation, and Operations Support. The emergency coordination function (National Emergency Coordination Center), the mobile response assets (Mobile Emergency Response Support - MERS) and mobile air transportable telecommunications system (MATTS) previously managed by National Preparedness were placed in Response and Recovery, along with the disaster recovery programs previously managed by the State/Local Programs Support. This juxtaposition of emergency response equipment and personnel with disaster recovery programs and program managers, was the first step in breaking down organizational barriers between the disaster and the civil defense communities.

Changing an organizational *structure* can be accomplished by a stroke of the pen.

Changing an organizational *culture* can take a generation of managers and employees.

Most of the employees, however, welcomed the opportunity to become more active in disaster response and coordination activities. The basic duties and functions of most of these employees changed little as a result of this organizational transition.

Some program managers in the field believed these newcomers were now performing response functions, e.g., providing emergency communications and logistical support, which were not FEMA responsibilities. Others perceived the new response and recovery group as attempting to take over duties that had belonged traditionally to the field program managers, temporary employees, and other federal agencies. This initial ill feeling resulted in part from Director Witt's increased emphasis on quick and more

supportive FEMA response to disasters, and the fact that the control of all response resources remained with the director and was not delegated to field managers. Director Witt was persistent, however, in his desire to have the agency respond quickly to disasters; to work as a single, unified organization; and to deploy every available resource that might be needed. This caused disaster managers in the field to begin to request FEMA assets more frequently to coordinate, expedite, and enhance response and recovery operations. On Feb. 1, 1995, Director Witt issued a formal policy strongly encouraging regional directors to make use of these resources in their daily operations as well as in disaster response operations.

Director Witt's insistence on strengthening and speeding FEMA's disaster response capability has made the involvement of all agency resources both prudent and necessary. Today, the culture of the Response and Recovery directorate reflects complete acceptance of the agency's all-hazards mission. The attitudes and actions of its employees demonstrate the high level of respect they have for their compatriots, without regard to their organizational ancestry or level of clearance. When Director Witt made clear his expectations of improved disaster response operations and greater customer satisfaction, teamwork and mutual respect among all participants became imperative. While these behaviors can be encouraged through memoranda, success in reaching a common goal together is what has resolved all major organizational cultural differences within Response and Recovery and throughout FEMA.

## **Training**

**Describe any new training initiatives or changes in old training offered by your office to employees since 1992.**

### Training

Since 1993, the Response and Recovery Directorate has worked to fulfill a newly identified training need for federal disaster operations staff while maintaining its commitment to training state and local disaster operations stakeholders.

By the early 1990s, attrition had reduced the number of qualified federal coordinating officers to the point where the remaining few were constantly deployed. Response and Recovery worked with the Preparedness, Training and Exercises Directorate to develop and deliver a 1994 fast-track federal coordinating officer course to 50 regional and headquarters managers. This training increased the size of the federal coordinating officer roster substantially.

The following year, the two directorates worked jointly to develop FEMA's first long-term curriculum for disaster operations management. The Disaster Operations Leadership Program was launched in 1996 for 33 participants selected through a rigorous, multi-level application and selection process. This program comprised three years' training and mentored field deployments and was completed in 1999.

In response to feedback that equivalent attention be paid to the training of other disaster operations managers, Director Witt requested development of training that would help FEMA regional and headquarters staff with disaster assignments to understand and work with all aspects of a disaster field operation. The two-week long Disaster Field Operations Management training was piloted in 1996 and continues to be delivered three

times annually to an audience of carefully selected permanent and on-call response employees.

This disaster operations leadership and management training marks a radical departure from the earlier tradition of focusing disaster training funds on state and local needs and has been hailed by the federal workforce as a much-needed support to those whose vocations revolve around the demands of disaster assistance.

### **Director Witt's Leadership**

**Describe Director Witt's direct involvement with your division or sub-office during and after the major reorganizations took place. How has he been directly involved during major disasters or events since then? How has he been directly involved during non-disaster periods? Please provide specific examples .**

#### Director Witt's Leadership

FEMA's Response and Recovery Directorate (R&R) is responsible for the planning, coordination, and execution of the federal government's response to major disasters and emergencies as described in the Federal Response Plan. In addition, it is responsible for the Individual and Public Assistance (infrastructure) Grant programs authorized by the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288, as amended). As such, R&R strives to develop and maintain an integrated operational capability to respond to and recover from the consequences of a disaster, regardless of its cause, in partnership with other federal agencies, state and local governments, volunteer organizations and the private sector.

Director Witt has worked closely with the Response and Recovery Directorate to foster good relationships with the other federal agencies who serve as partners to FEMA in the Federal Response Plan. His direct involvement has raised the level of participation and attention of FEMA's federal partners before, during and after disaster operations. In addition, Director Witt and R&R Executive Associate Director Lacy Suiter both had served as state emergency management directors prior to working with FEMA, which gave them more credibility with state and local emergency management partners.

Director Witt stays closely involved in the many programmatic issues in R&R and has lent his support and advice in the new initiatives undertaken in the directorate during his tenure

### **Directorate and Office Leadership**

**How did your leadership as director contribute to changes in your office or directorate? What were your primary objectives and how did you attempt to accomplish them? What were your successes?**

#### Lacy E. Suiter, Executive Associate Director

I became the Executive Associate Director of the Response and Recovery Directorate on

Oct. 1, 1996. My primary goals were to enhance our response and recovery capabilities to ensure rapid and effective response to disasters and to make the disaster processes simpler for the states. The directorate reorganization had taken place, however, the disaster assistance programs still needed some streamlining and updating. All of the initiatives we undertook with full participation of the primary stakeholders involved, from the FEMA regional offices to state and local emergency managers. Director Witt lent his support and advice along the way. Following are some of the highlights of the directorate's accomplishments during my tenure:

- **Redesign of the Public Assistance Program:** In December 1996 we directed a major overhaul of the Public Assistance (infrastructure) Program to better address the needs of our applicants. FEMA redesigned the program around the 4 P's: People, Process, Policy, and Performance. On Oct. 1, 1998, FEMA implemented the redesigned Public Assistance Program for all disasters declared on or after that date.
- **Credentialing:** In 1995 a vigorous training schedule began, which has since developed into FEMA's credentialing plan for the Public Assistance Program. In fiscal year 1999, FEMA published the Public Assistance Credentialing Plan which includes 14 positions. The credentialing plan is the first-ever attempt by FEMA to credential its public assistance disaster cadre, and has so far been met with success.

#### Historic Preservation

: At the *National Summit on Emergency Response: Safeguarding Our Cultural Heritage*, Director Witt committed FEMA to work more closely with the cultural community to preserve and protect the nation's heritage in time of disaster. A national task force sponsored by FEMA, the Getty Conservation Institute, and Heritage Preservation, was formed in early 1994 and has produced numerous substantive achievements including:

- a salvage slide chart for cultural institutions
- recommendations on caring for damaged family heirlooms featured on FEMA's web site, radio network, and in *Recovery Times*
- a roster of federal employees with preservation experience who can be mission assigned by FEMA in time of disaster
- model programmatic agreements that streamline FEMA's historic preservation responsibilities in time of disaster.
- **Fire Suppression Assistance Program:** In December 1998, directed a redesign of FEMA's fire suppression assistance program to clarify, simplify, and expand the program in an effort to meet states' needs in applying for and receiving federal assistance. As part of the redesign, on April 15, 1999, FEMA issued the Interim Policy of Fire Suppression Assistance. Included in the policy were: the staging of federal resources; mutual aid; payment of emergency operation center costs; administrative issues of appeals and delegation to the regional director; timing of

the approval. FEMA continues to work with state emergency managers and state foresters across the country on this redesign initiative. We are currently working with representatives from the Office of Management and Budget to complete the interagency regulatory review process so that we may proceed with the publication of proposed regulations in the Federal Register for comment.

- **Insurance Initiative:** An Advanced Notice of Proposed Rulemaking was developed for our proposed insurance requirements for public assistance initiatives during late 1999 and early 2000. The proposed rule is developed to serve as a means to achieve a nationally consistent level of responsibility among public and certain private non-profit entities for natural disaster risks. FEMA is considering making a minimum amount of building insurance coverage a criterion for eligibility for Public Assistance. The advance notice of proposed rulemaking was published for comment in the Federal Register on Feb. 23, 2000, and we are currently analyzing the comments received (approximately 250) so that we may proceed with the drafting of proposed regulations and the development of an economic analysis for this initiative.
- **Individual Assistance:** Updated the Individual Assistance programs by streamlining the disaster application process through teleregistration centers, computerized application forms, computerized inspection through the use of hand-held computers and centralized processing.
- **Disaster Declaration Packages:** "Stand-by declaration packages" were developed for the states to assist in processing expedited requests as a result of a terrorism event or a Y2K problem
- **Development of the Federal Coordinating Officer National Cadre:** Congress and the Clinton administration approved FEMA obtaining 25 additional positions for federal coordinating officer to provide consistency and continuity of operations in disaster response and recovery
- **Field Operations:** Enhanced Community Relations and Information and Planning field operations by instituting comprehensive training programs; developing standard operating procedures; and establishing a credentialing program.
- **Rapid Response:** Developed and implemented the rapid needs assessment capability. Procured extensive logistical and communications support packages in coordination with the Mobile Emergency Response Systems/MERS and Logistics Division. Conducted comprehensive training program for individuals designated to support rapid assessment operations.
- **Remote Sensing:** Revised and improved procedures for utilizing remote sensing capabilities to support disaster assessment activities.
- **Information Coordination:** Developed concept, obtained approval and established the Information Coordination Unit to enhance the provision of disaster related information to senior management at FEMA headquarters.

- **Liaison Teams:** Established the Hurricane Liaison Team and an Evacuation Liaison Team as a joint effort by Response and Recovery (R&R), and Mitigation directorates. R&R has operational and developmental responsibility, while Mitigation founded the hurricane liaison team and provides team leadership through its regional hurricane program managers. The Hurricane Liaison Team is a vehicle for ensuring that state and local emergency managers have access to the latest and most accurate information on tropical storms and hurricanes.
- **Geographic Information Systems (GIS):** In coordination with the Information Technology Services Directorate, established and implemented use of predictive modeling and geographic information systems (GIS) capabilities to support disaster operations.
- **Regional Operations Centers (ROC):** Developed, researched and implemented ROC Baseline Program. Moving agency from a haphazard "ROC-out-of-a-closet" mindset to a fully equipped, 24-hour availability of regional operations centers.
- **Domestic Emergencies:** Developed and set up Domestic Emergency Support Team Joint Operations Center (DEST/JOC) deployment kit.
- **Total upgrade of the FEMA operations center:** Up-to-date telecommunications and computer capabilities ensure accurate and timely response to any event and allows duty officer to scan the horizon for events/incidents.
- **Streamlined the forms and process of requests for federal assistance.**
- **Initial Response Resources (IRR):** Established the Initial Response Resources program to provide critical goods to victims and all levels of governments responding immediately after a disaster occurs. IRR augments state and local capabilities with such items as emergency generators, refrigerated vans, food, water and personal hygiene items.
- **National Response Teams:** Established national emergency response teams for major disasters, including state representatives on the Urban Search and Rescue Advisory Committee and state representatives as students and instructors in Response Operations Training Course.
- **Established facility space in the National Interagency Emergency Operations Center (formerly the Emergency Information and Coordination Center) for Emergency Management Assistance Compact (EMAC) representatives.** EMAC is an inter-state mutual aid agreement, which supplements state, local and federal response during disasters. Approved by Congress in 1996, EMAC can quickly mobilize the unique resources possessed by states and allow them to help one another.

## **Disaster Operations**

**Describe your office's role on the EST. Summarize an experience your office had working on the EST during one major disaster or emergency since 1992. What exactly did you do and what kinds of challenges did you encounter? Be specific and aim to leave the reader with a good understanding of what function your office fills on the EST, as well as the challenges you face.**

#### Disaster Operations – Emergency Support Team

The Emergency Support Team (EST) was established to serve as the central focal point for coordinating and providing federal resources to state and local governments and victims of a disaster. The EST deploys initial response resources to the field, provides current assessments of ongoing incidents, and responds to the policy direction provided by the leadership of the participating federal departments and agencies.

The EST consists of highly qualified personnel from FEMA and other federal departments and agencies. The EST provides interagency support for the emergency response efforts of the federal coordinating officer, the regional operations center staff, and the emergency response team. The EST consists of three teams (Red, White, and Blue). Each team is on rotation quarterly and is expected to respond within a few hours if activated. The teams participate in exercises and special events to enhance their response capability and help to create a more cohesive operation.

In 1996, subject matter experts in the various program areas, including federal departments and agencies, participated in monthly “brown bag lunch” sessions. These individuals provided a clearer understanding on what disaster response and recovery statutory authorities, experience, and training they bring to the disaster community. The EST leadership meets monthly to discuss priorities, program changes, weather updates - particularly during hurricane season - and EST participation in any upcoming activities or special events. Participation in special events over the past few years included, but were not limited to, the presidential inaugural in 1997, the 17<sup>th</sup> World Energy Council in Houston in 1998, NATO's 50<sup>th</sup> Anniversary Summit in Washington, DC (April 1999), and for the Y2K computer rollover in December 1999.

EST participation during the late 1990s hurricane seasons was extensive. The EST was activated for Hurricane Bertha (July 1996), Hurricane Fran (September 1996), Hurricane Danny (1997), Hurricanes Bonnie, Danielle and Tropical Storm Charley (August 1998). Although the EST was not activated for every hurricane that struck in 1998, the season had 14 named storms. Hurricanes Bonnie, Earl, Georges and Tropical Storm Mitch caused an estimated 4 billion dollars in damage to property and infrastructure in the U.S., Puerto Rico and the U.S. Virgin Islands and kept the EST activated for approximately 3 weeks in 1998. Hurricane Georges cut a devastating swath across the Atlantic Ocean, northern Caribbean Sea and Gulf of Mexico, Sept. 15-29. The storm's path carried it across the U.S. Virgin Islands and Puerto Rico, then across the Dominican Republic, Haiti, and Cuba, hitting the Florida Keys as well as the southern tip of Florida on Sept. 25, 1998. Georges killed up to 500 people, mostly in the Dominican Republic, and caused an estimated \$5 billion in damages along its path.

The EST activated for Hurricanes Bret, Cindy, and Dennis in August 1999; and for Hurricanes Floyd, Gert, and Tropical Storm Harvey in September 1999. On Sept. 16, 1999, Hurricane Floyd came ashore. As it moved up the East Coast, killing nearly 50 people in North Carolina alone, the response and recovery effort stretched the emergency

teams to their limits. Congresspersons and senators visited FEMA daily to get updated information on their home states. U.S. Secretary of Transportation Rodney Slater made several trips to the EST as well, due to the horrendous impact Hurricane Floyd had on bridges and interstate highways. The federal, state, and local involvement in responding to Hurricane Floyd will remain a part of FEMA's history for years to come.

In non-hurricane activity, a mid-level EST was activated in May 1999 in support of tornadoes touching down in Oklahoma, killing 29 people in that state and another 10 in Kansas.

As part of a Response and Recovery initiative, several EST documents were published and available for team members' reference prior to and during disaster operations. These documents include the EST Overview, 9361.1-VW; EST Operations Guide, 9360.1-FG; EST Initial Operations Job Aid, 9361.1-JA (draft); and the Hurricane Initial Checklist for Key Staff, 9340.1-JA.

### **Optional Essay**

**Write about anything else you think would be relevant and interesting from your office's perspective.**

#### The Federal Coordinating Officer Program

Immediately upon the declaration of a major disaster or emergency, the president appoints a Federal Coordinating Officer (FCO) to manage the federal response in the affected area. The FCO serves as the president's representative at the disaster site and is responsible for managing the efforts of all federal agencies as well as all consenting volunteer agencies such as The Salvation Army and the Mennonite Disaster Service. In 1993 FEMA had an ad hoc system of appointing federal coordinating officers. Within the structure of FEMA, FCO was not a primary job title, but rather an additional duty with no formal requirements or standards. At the onset of a disaster, FCOs were selected from FEMA personnel who already had full-time jobs. Often the selection process revolved around who was most readily available versus who was best qualified. This informal system also resulted in a lack of standardization across the 10 FEMA regions that administer federal support to the states. This process was unstructured and had major flaws that impacted FEMA's ability to provide its partners throughout the country with a professional cadre of readily deployable, trained, and competent leaders to manage disasters.

In order to address these concerns, the FEMA director developed a conceptual framework for developing a cadre of full-time professionals to serve as FCOs. The director wanted a highly trained and competent staff and standardization throughout all FEMA regions. The concept was developed and submitted to Congress in the mid-1990s. In the 1998 Congressional Appropriations Conference Report (Report 105-297 of Oct. 6, 1997) Congress authorized the Federal Coordinating Officer Professional Cadre consisting of 25 senior-level positions to manage disaster activities.

This congressional legislation provided the authority and foundation for the establishment of the FCO professional cadre. With this authority and under the director's stewardship, this program was quickly transformed from a concept to reality in 18 months. Normally,

a program of this magnitude and complexity would take several years before reaching fruition.

Within this brief period a program director, Barbara Russell, was hired who set up an office to recruit, screen, hire, train and deploy FCOs. A recruitment program was rapidly developed and over 1,700 applicants were screened in a nationwide search for the most highly qualified 25. In this process 11 assessment centers were conducted in multiple venues throughout the United States to ensure substantive diversity and a representative cross section of the population.

Policy documents, a credentialing plan and a training program were being developed and fielded, concurrent with the hiring process. Several policy and procedural documents were published that established the architecture and standards for the FCO program. The credentialing plan established rigorous requirements and standards involving training, experience, review of demonstrated knowledge and abilities, and professional development. A fast-track training program was quickly instituted to provide a comprehensive education program in a very brief timeframe.

Within a year of the congressional authorization establishing the FCO program, 84 percent of the FCO cadre were deployed during Hurricane Floyd response operations when 13 states became presidentially declared disaster areas.

Through the effective leadership of senior FEMA management, the FCO program was expeditiously conceived and executed. The program strives for excellence, consistency in disaster response operations, and improves federal support to the states and local communities affected by major disasters.

### **National Processing Services Centers**

**Write about anything else you think would be relevant and interesting from your office's perspective.**

#### The Process of Creating the National Processing Services Center

##### Creating the National Processing Services Centers: An Outgrowth of Customer Service

By the end of the 1980s, especially in the aftermath of Hurricane Hugo and the Loma Prieta earthquake, it had become clear that FEMA's procedures for processing applications for assistance under its Disaster Housing Program were not sufficient to assure good customer service, especially in larger disasters. Processing applications in those days was done on a local area computer network that would be set up in FEMA's disaster field offices, temporary offices established in the disaster area to administer the relief effort. Finding office space, building the local area network, recruiting and training local staff and starting production would take at least a week. Working the bugs out of the local network and achieving some degree of efficiency within the processing staff would take another two weeks. Ordering a check from the Department of the Treasury and the time for that check to be delivered meant that no appreciable amount of assistance could be delivered for nearly a month. This was clearly unacceptable from a customer service perspective.

The early 1990s saw the establishment of the National Teleregistration Center, a facility that enabled disaster victims to apply for assistance through a toll-free telephone number instead of standing in long lines at temporary application centers. Although actual data

processing chores were still being done in the local disaster field offices, the idea of using technology to centralize certain functions began to take hold. FEMA's regional offices started the practice of setting up their own "central processing offices" to handle multiple disasters within their respective areas of responsibility. By the start of 1993, eight such offices had sprung up, each doing business in a slightly different way, each competing for the agency's scarce technical and human resources.

With encouragement from newly appointed Director James Lee Witt, staff proposals for national-level processing facilities began to be developed. On Dec. 1, 1993, barely a month after the first comprehensive proposal was submitted, Director Witt went to the Office of Management and Budget with a paper simply entitled "Streamlining". In it, he committed the agency to a variety of objectives in line with the National Performance Review's goal of *better service that costs less*, chief of which was centralizing the processing of applications for disaster aid by making maximum use of cutting-edge information technology.

Three days before Christmas that year, Director Witt announced his intentions to centralize application processing to the FEMA headquarters management team and to FEMA's regional offices. The essence of his message was that FEMA needed to exploit modern technology in the interests of operational efficiency and customer service, and that the agency's disaster field office staffs needed to focus more on working with the people in the disaster area and less on pushing paper. As fate would have it, the Northridge, Calif., earthquake occurred less than four weeks later and long-range development work had to take a back seat to the crisis at hand. FEMA was once again forced into a position where it had to set up yet another temporary facility to process applications for assistance, this time in Redwood City near San Francisco.

Although the earthquake definitely slowed progress for several months, FEMA had been pursuing other initiatives that would ultimately make the centralized processing concept successful. The paper registration and application forms that had been used since the early 70s were being converted to computer-based forms that would permit FEMA service representatives working on the teleregistration phones to enter data directly into the database in a totally paperless transaction. On a parallel development track was the Automated Construction Estimating system that allowed damage inspectors to receive inspection assignments over phone lines, record inspection results on a handheld computer, and upload the finished inspection by phone. These two developments combined to form the core of what would ultimately become the Human Services module of the National Emergency Management Information System, FEMA's principal business tool in the provision of disaster assistance.

The team that was scheduled to develop the concept of operations for the centralized processing proposal on January 19, two days after the earthquake, eventually came together on April 12 of that year at the Redwood City processing center. Two surprising results came from that meeting: First, the interdisciplinary team that was composed primarily of front-line managers from FEMA's regional offices recommended that any centralized processing facilities should be under national, not regional, management. Second, contrary to the original staff proposal, the conferees recommended that program eligibility determinations be made at the processing facilities as well. This was in recognition of the fact that different philosophies and operating styles had evolved within the 10 FEMA regional offices, factors that led to inconsistent program administration

from place to place. So, in addition to advancing the agency's goals of improving timeliness, efficiency and quality, the centralized processing concept would ultimately yield needed consistency improvements as well.

"The National Processing Services Centers Concept of Operations" was finally published in July of 1994 and served as the blueprint for establishment and development of the National Processing Service Centers (NPSCs). The original concept proposed that the central processing offices established by FEMA Regions VI and IX in Denton, Texas and Redwood City, Calif., respectively, would serve as interim NPSCs until such time as a permanent site could be located and developed. An additional facility at FEMA's Mount Weather Emergency Assistance Center in Virginia would be established to serve as a training center and a backup NPSC in the event that a very large disaster or series of disasters overwhelmed the primary center.

Events conspired to make the 1994 crystal ball less than 100 percent accurate with respect to the location decisions. There are now three NPSCs: Mount Weather, Va.; Hyattsville, Md.; and Denton, Texas. The three are integrally linked by FEMA's wide area network and, because of this robust and reliable linkage, are able to operate as one seamless enterprise, sharing work when necessary and moving work from place to place as conditions dictate.

Now any disaster victim from any state can call a single toll-free telephone number and apply for assistance. That person's data can be immediately downloaded to the handheld computer of an inspector in the disaster area; the inspector can record all damage data on the same computer and immediately return the finished data to the NPSC. Eighty-five percent of the uploaded inspections can be processed using eligibility rules programmed into the computer system and assistance checks for eligible applicants can be ordered the same day. All the while, any qualified representative at any of the three locations can instantly access the complete record of a person calling from any disaster area to ask a question or inquire about the status of their application.

Trained staffs that do this work year-round assure quality; redundant computer systems supported by full-time maintenance staffs and emergency power supplies assure reliability; permanent facilities and staffs that are ready to go year-round assure efficiency and rapid response to unexpected situations. The contrast between NPSCs and the slow and chaotic scramble to build a processing capacity from scratch for each disaster is truly remarkable. FEMA is indeed proud of the role the NPSCs have played in enhancing service to Americans affected by disasters.

### **Public Assistance Grant Acceleration Program**

**Write about anything else you think would be relevant and interesting from your office's perspective.**

#### Public Assistance Grant Acceleration Program (GAP)

The Public Assistance Grant Acceleration Program (hereafter referred to as the GAP) provided FEMA with a mechanism to expedite the programmatic closeout (i.e., establish final federal funding) of the largest natural disaster in United States history -- the 1994 Northridge earthquake. Estimates are that the GAP may save the federal government

more than \$100 million in administrative costs and reduce FEMA's onsite disaster recovery presence by about ten years.

The GAP provides a fixed level of funding to cover the total cost of eligible scope of repair to damaged facilities and approved mitigation measures. The professionally developed cost-estimating format is the tool used to calculate final settlement offers. The settlement offer methodology includes a pre-established percentage markup to cover industry-standard factors to account for the variations in construction cost and a sub-grantee's budgetary risk.

The rationale of the GAP is to:

- reduce administrative tasks within programs and logistics, thereby saving federal/state/local administrative costs;
- increase grantee/sub-grantee satisfaction by knowing the final settlement for disaster damages in advance;
- free FEMA staff resources for other disasters;
- improve financial planning by FEMA, the grantee, and sub-grantee; and,
- enable overall savings for well-managed projects.

#### GENERAL BACKGROUND OF THE GAP

On Jan. 8, 1997, a project team assembled to develop a program that would enable FEMA to programmatically close out uncompleted repair and hazard mitigation work associated with large building construction projects, thereby reducing FEMA's continuous onsite presence and administrative costs.

The next day, the team met with staff from FEMA headquarters to discuss the cost-estimating format concept. After nearly three weeks of discussions and meetings with FEMA and the state of California Governor's Office of Emergency Services staff, the team produced its first version of the cost-estimating format model and an instructional guide on Jan. 23.

Cost estimating was used to test the settlement offer methodology against the actual costs of completed large building projects from the Loma Prieta and Northridge earthquakes. These test cases provided the project team with actual financial data on completed projects and provided information for refining the cost estimating model. With further honing, pilot testing and adjustments for geographic cost indices, the cost-estimating format (CEF), its instructional guide, and the overall program guide were finished and implemented.

#### GAP SETTLEMENT OFFERS

In June 1997, after much correspondence, numerous meetings, and many discussions between FEMA and the California emergency services staff, FEMA transmitted four pilot settlement offers to the city of Los Angeles, Los Angeles Unified School District, University of Southern California, and California State University, Northridge (CSUN). FEMA requested that the sub-grantees provide feedback on the GAP and its attributes. Most of the feedback was positive and constructive.

Shortly after FEMA received the sub-grantees' feedback, the GAP was offered to 118 eligible sub-grantees (i.e., sub-grantees that were known to have uncompleted, large building projects). GAP briefings for the eligible sub-grantees were held in Pasadena,

Calif., from July 29 - 31, 1997. Representatives from 78 sub-grantees attended the briefings.

The first four official GAP settlement offers were made to CSUN in September 1997. They accepted the offers in October.

By early 2000, FEMA made over 750 GAP offers, of which only two were rejected.

#### GAP SETTLEMENT OFFER CONDITIONS

GAP settlement offers are considered as any normal "improved project," inasmuch as:

- the funds are a capped estimate;
- all funds must be spent on eligible work;
- fund drawdowns will continue on a reimbursement basis;
- accountability of reimbursed expenditures is required of the grantee/sub-grantee in a format that follows applicable federal and state laws and regulations;
- quarterly reports must include the status of each GAP project; and
- construction monitoring is necessary only to verify that the project identified in the GAP damage survey report is carried out and all eligible scope of work is completed, not how much each portion of the project costs.

#### GAP ADVANTAGES TO THE SUB-GRANTEES

The GAP provides the following advantages to the sub-grantees:

- flexibility/autonomy in the execution of design and construction within the eligible scope of work;
- knowledge of exactly how much money from FEMA to include into the project budget;
- reduced FEMA monitoring during construction;
- reduced state emergency management and FEMA administrative/management requirements on a continuous basis; and,
- flexibility to use cost under-runs for cost over-runs on other GAP projects or for hazard mitigation projects, designed to reduce, or prevent future damage to property and to reduce or prevent loss of life or injury.

#### BROADER IMPLEMENTATION OF THE GAP FOR THE NORTHRIDGE RECOVERY EFFORT

As previously noted, the GAP was designed to establish a program to provide fixed-price construction cost estimates for large building projects. However, in early 1998, FEMA's mission shifted more towards programmatic closeout of all uncompleted work. Because of that, an independent assessment team convened to recommend the best possible solution to expedite programmatic closeout of all uncompleted work from the Northridge earthquake. FEMA's standard process of providing final funding using the design/construct methodology appeared to be inappropriate for a disaster of this magnitude. This team recommended a broader implementation of the GAP to expedite programmatic closeout.

After continuous discussions with California emergency management administrators and the sub-grantees, FEMA approved broader implementation of the GAP to include all categories of work.

### ADMINISTRATIVE COST SAVINGS/EXPEDITING THE RECOVERY

Estimates are that the GAP may save the federal government more than \$100 million in administrative costs and reduce FEMA's on-site disaster recovery presence by about 10 years.

The GAP has had a significant impact on FEMA's cost of administering the recovery and closeout phases of the Northridge earthquake. With over 750 projects now in the GAP, administrative savings are expected to exceed \$115 million. Staffing levels, space requirements and other support costs have been reduced to levels substantially below what would have been required under the standard closeout process.

### **Historic Preservation**

**Write about anything else you think would be relevant and interesting from your office's perspective.**

#### FEMA's Cultural Resources and Historic Preservation Program

In recent years, as disasters of unprecedented size and scope have occurred, cultural resources have faced an increasing risk of damage or destruction. Under the leadership of Director James Lee Witt, FEMA has made enormous strides in assisting cultural resources and historic properties damaged by disaster and ensuring that they receive timely and expert support.

FEMA's increased interest in historic preservation concerns can be traced to December 1994 when representatives of the emergency management and cultural communities met for a one-day summit meeting (*video excerpt provided*) to discuss ways they could join together to better assist disaster-affected cultural institutions and the general public. Director Witt delivered the keynote address at the summit and pledged that FEMA would work to improve its ties with the preservation and conservation community. At the same time, Director Witt challenged the cultural community to do likewise in improving its ties with FEMA. The response to the summit was extremely positive. In response to Director Witt's challenge, the National Task Force on Emergency Response: Safeguarding Our Cultural Heritage, was created in early 1995. Sponsored by FEMA, the Getty Conservation Institute, and Heritage Preservation, and comprised of 30 federal agencies and national organizations, this public/private partnership was created to ensure that historic properties and sites, cultural institutions, and the general public, receive timely and appropriate information and expertise in time of disaster.

Since its inception, the task force has accomplished numerous achievements through the individual and coordinated efforts of its respective members to match Director Witt's challenge and commitment. Some notable examples of FEMA contributions to the mission of the task force are:

- FEMA's media outlets now routinely provide expert recommendations, as reviewed and supplied by professional conservators, on caring for books, photographs, textiles and other heirlooms. A variety of articles (*example provided*) on topics ranging from salvaging flood- and fire-damaged family papers to cleaning mold and mildew have appeared in FEMA's "Recovery Times," and are also available on FEMA's Internet homepage. Various

conservators have been featured on the FEMA radio network providing expert guidance on caring for flood-damaged photographs, textiles, books, and furniture. A conservator with the National Archives and Records Administration was featured on FEMA's recovery channel also offering simple steps that a homeowner could use to salvage flood-damaged family photographs.

- In order that technical assistance for preservation and conservation is readily available when disasters damage cultural resources, FEMA utilizes its ability to task other federal agencies in time of disaster to provide expertise. For example, this "mission assignment" process was employed in August 1997 after flooding in Fort Collins, Colo., inundated the Colorado State University, including its library. Within days, the Library of Congress was on-site to assist FEMA in overseeing the salvage and recovery efforts of the library collection. More recently, in order to standardize the deployment process, a roster of federal preservation and conservation personnel was created with the support of the Getty Conservation Institute and FEMA's Mitigation Directorate. The roster is patterned after FEMA's building performance assessment teams.
- FEMA has established a comprehensive policy governing public assistance (infrastructure) funding for conservation of cultural collections in eligible facilities (*copy provided*). The policy broadens the scope of eligible collections and objects beyond "art objects" to include other collections and objects of exceptionally significant cultural value as well as collections in storage or on loan to another institution.
- FEMA contributes to the emergency response information mailed annually by the task force to cultural institutions in anticipation of hurricane season. Included in this year's mailing was the latest task force product, "Resources for Recovery," a pamphlet detailing various federal forms of assistance for cultural institutions damaged by disaster (*copy provided*).

FEMA also works in partnership with the Advisory Council on Historic Preservation and various state historic preservation offices to ensure FEMA compliance with historic preservation laws, particularly Section 106 of the National Historic Preservation Act (NHPA) which requires federal agencies to consider the effect of their actions on historic properties. Since the Midwest floods of 1993, FEMA has executed programmatic agreements with individual states to meet its Section 106 requirements in time of disaster. The agreements clarify the various roles and responsibilities in disaster response and recovery and establish time frames for the review of historic properties. In the end, having these agreements in place ensures that historic properties receive expert assistance quickly and efficiently without hindering the delivery of FEMA's disaster assistance programs.

In support of this goal, Director Witt in 1993 appointed Karen Forbes as FEMA's first federal preservation officer to oversee the agency's responsibilities as mandated by NHPA. Director Witt also created the position of regional environmental officer in 1996, ensuring that each FEMA region has a staff member dedicated to oversee FEMA's historic preservation and environmental compliance activities. Similarly in 1998, as part of the new infrastructure (Public Assistance) program, the position of environmental

liaison officer was created as an adjunct of the federal coordinating officer to ensure that FEMA complies with the necessary environmental and historic preservation laws and regulations during disaster operations.

FEMA's coordinated efforts with the cultural community have resulted in increased preservation and protection of cultural property in time of disaster. At the same time, FEMA's preservation compliance responsibilities have been streamlined, thus ensuring that disaster assistance is delivered expeditiously. FEMA looks forward to continued collaborative initiatives that will extend this successful partnership for years to come.

## **Special Essays**

### **Emergency Response Teams**

The development of the Red, White, and Blue emergency response team concept was a major change in FEMA's response and recovery operations. Prior to 1992, there was only one team designated to respond to all disasters. Alternates were selected from the FEMA telephone directory based on assigned office and position title.

After the Northridge earthquake in 1994, a national emergency response team was created. Director Witt recognized that a national team was needed to respond to a catastrophic disaster or high-visibility incident that could demand the full capabilities of the agency. Currently, there are three national response teams - Red, White and Blue - with a roster of 50 personnel per team that are on call on a rotational basis. Rostered team members are comprised of regional and headquarters personnel who are considered to be among the best in their functional areas.

The response team's organizational structure can be adjusted to accommodate the size of any disaster. In small disasters, some of the positions may not be staffed, and responsibilities might be combined or conducted at a higher level. FEMA's adoption of this overall system has allowed it to apply its response in a standard format across the nation.

The key factor in this improvement was Director Witt's directive that the standardization of the emergency response team organization be based upon Incident Command System principles. Incident command is the model for command, control, and coordination of a response effort and provides a means to coordinate individual agencies as they work toward a common goal of stabilizing the incident and protecting life, property, and the environment. FEMA's emergency response team mirrors the incident command organization in that it is built around five major components: command, planning, operations, logistics, and finance/administration. However, in April 1998, FEMA wanted to emphasize financial management of disaster operations, and separated the financial/administration duties into two separate sections, which are now the comptroller and administration sections.

### **Emergency Support Team (EST)**

FEMA's Emergency Support Team (EST) is an interagency group composed of representatives from FEMA and other federal government agencies. It oversees national-level activities in response to a disaster or emergency.

In times of disaster, prior to the tenure of James Lee Witt, FEMA headquarters contained no pre-determined coordination areas arranged with individual workstations. When emergency coordination and information were required, tables and chairs were assembled in multi-purpose rooms on the FEMA headquarters mezzanine and computers/phones were connected, as needed.

After Director Witt's appointment in 1993, a large portion of the mezzanine was set aside for the emergency support team. The inception of the National Interagency Emergency Operations Center (called the Emergency Information and Coordination Center until June 1999) made it possible to dedicate specific areas to handle information gathering, and it is now a fixed facility that houses the information and coordination unit. The national emergency operations center has pre-identified areas for disaster operations, including space for a movement coordination center, state coordination area, and workstations for executive staff members. The executive information display area is equipped to handle video conferencing with the National Hurricane Center, select regions and states.

In September 1999 President Clinton and Vice President Gore visited FEMA's executive information area to get firsthand information from the governors of the states affected by Hurricane Floyd. The exchange of information provided during these conferences, coupled with the excellent manner in which they were conducted, is proof that the emergency response team has trained well and is eager to serve its customers. The visit by President Clinton contributed greatly toward the morale and dedication of team members.

#### Program Changes and the Effect on Disaster Response.

One of the most salient changes in FEMA over the last several years has been the agency's evolution to a very proactive, response-oriented organization. While the agency is not a first responder – state and local agencies and volunteer organizations handle that – FEMA management recognized the need to proactively administer the supplemental disaster assistance the agency is authorized to provide. The sheer number and magnitude of the events that threaten and cause damage in the U.S., along with increased public expectations, created the need for change.

The evolution from a reactive mentality to a proactive mentality (staging resources in advance of a hurricane, for example) has increased FEMA's ability to serve its customers, but did not happen with the snap of the fingers. Here's an example:

Cleaning out some old files, a FEMA staffer came across a memo from the predecessor of the Response and Recovery Directorate to the National Security office. The staffer was the author of the memo, written in 1992. At that time the FEMA's disaster assistance team had to formally request, in writing, that the FEMA national security office grant access to the agency emergency operations center at headquarters. The disaster assistance team did not have access to its own ops center - a secured facility with locked doors. Eventually, the disaster assistance group increased its access, disaster by disaster, then the locks came off the doors altogether. The need for better communications and computer equipment was identified, and finally the entire facility was renovated and the classified areas were changed into disaster operations space.

This process occurred in FEMA hundreds of times over. Some changes came incrementally and other changes occurred all at once, but slowly FEMA evolved from a Cold War, security-focused agency, to a disaster response and recovery organization better prepared to help the public. There should no longer be local emergency managers frantically asking on national television, "Where's the cavalry?" as happened in the aftermath of Hurricane Andrew in 1992.

In large disasters FEMA has resources - such as generators, ice, and water - pre-positioned or on their way well in advance of an event with warning (such as a hurricane).

Disaster response at the federal level truly evolved in the 1990s. Compare FEMA's response to the Loma Prieta earthquake in 1989 to the Northridge earthquake in 1994, or operations for Hurricane Hugo in 1989 and Hurricane Floyd ten years later, and it is evident that policy and institutional changes in FEMA's programs have resulted in better, more effective disaster response.

### **Revision of the Federal Response Plan**

The Federal Response Plan (FRP), initiated in April 1992, was signed by senior officials of 26 federal agencies and the American Red Cross. It represented several years of work to reach consensus on the basic structure for mobilizing federal resources to assist state and local governments in responding to the consequences of a major disaster or emergency. From August 1994 to February 1997, 11 changes were issued to the FRP reflecting experience gained in disaster operations and lessons learned in exercises. The 11<sup>th</sup> change added the Terrorism Incident Annex to the FRP, describing the federal response to the consequences of terrorism within the United States.

In April 1999, the FRP was updated and reissued. Agency heads and senior officials recommitted to support the federal response concept of operations to ensure the orderly, timely delivery of federal assistance. The update:

- Incorporated previous changes,
- Described the relationships among response, recovery, and mitigation in a new Recovery Function Annex,
- Added four support annexes reflecting new or enhanced activities (community relations, donations management, logistics management, and occupational safety and health),
- Described additional coordination mechanisms being used (National Emergency Response Team, Movement Coordination Center, and time-phased force and deployment list).

The FRP has emerged as much more than a 300-page blueprint for how the government does business in a disaster. It symbolizes the evolution of the extensive interagency/intergovernmental emergency management network that is critical to an integrated response across all levels of government. The FRP has spawned a number of supporting documents, including some 20 overviews, operations manuals, handbooks, and job aids that set forth common procedures to standardize implementation of federal response in the field. These procedural documents address the operations of primary emergency teams (Emergency Response Team, Emergency Support Team, etc.) and other essential functions (notification, remote sensing, incident monitoring, for example).

With publication of the Federal Consequence Management Response Plan for the 1996 Summer Olympics, FEMA began developing operations supplements to the FRP to identify potential requirements associated with special events that merit advance planning. Since then, 13 supplements have been issued for special events including the presidential inaugural (January 1997), NATO 50<sup>th</sup> Anniversary Summit (April 1999), Y2K (December 1999), OpSail 2000/International Naval Review (July 2000), and Republican National Convention (July 2000). The FRP also has been the basis for developing Regional Response Plans in FEMA's 10 regions. Work is currently underway to streamline and redirect regional response plans. They will be supplements to the FRP and will focus on regional execution of the FRP, including specifics on how each region interfaces with its states during a disaster response.

FEMA Coordination with White House and National Security Council on National Security Policy Programs and Plans Related to Terrorism

On May 22, 1998, the president issued Presidential Decision Directive (PDD)-62, entitled, "Combating Terrorism," which announced his intentions to expand the ability to deal with terrorist incidents involving weapons of mass destruction. PDD-62 is a classified supplement to an earlier directive entitled, "U.S. Policy on Counter-terrorism." Out of concern that special events such as the Olympic Games and the 50<sup>th</sup> Anniversary of the North Atlantic Treaty Organization (NATO) Summit are possible targets for terrorism or political violence, PDD-62 provided a mechanism for designating an event as a National Special Security Event. Such a designation divided responsibility for federal counter-terrorism planning and operations between the FBI, U.S. Secret Service, and FEMA. It is in this capacity of planning for special security events that FEMA has established a sound and successful working relationship with White House and National Security Council staff.

FEMA is a member of the White House Task Force on the Salt Lake City Olympics and Paralympics, which is chaired by the vice president and co-chaired by the assistant to the president and cabinet secretaries, and the assistant to the president and cabinet directors of Intergovernmental Affairs. This task force meets quarterly and has the responsibility for the overall public safety of the Olympic Games, which is best accomplished through the shared effort of federal, state, and local public safety agencies and event organizers. In support of the task force efforts, FEMA is preparing a 2002 Winter Olympics operations supplement to the Federal Response Plan (FRP) and FEMA's participation on this task force should significantly enhance the preparation, coordination, and implementation of the planning for this event.

FEMA worked closely with the director of the National Security Council weapons of mass destruction program, in developing the 50<sup>th</sup> Anniversary of NATO Summit operations supplement to the FRP. While planning for the NATO anniversary summit, procedures were established for requesting Department of Defense (DOD) support (technical escort units, chemical/biological incident response force, etc.) needed for other federal consequence management departments and agencies to enhance their capabilities to carry out their respective missions. The process required FEMA to informally work out an agreement for the provision of DOD consequence management support between the requesting agency and DOD. Once the terms of the agreement (reimbursable vs. non-reimbursable cost, for example) were settled and the requested DOD resources were clearly identified, FEMA formally submitted a written request to the National Security

Council for DOD support. Upon approval, the council tasked DOD to provide the requested consequence management support. This process will be used to acquire DOD consequence management support for the 2002 Winter Olympic Games.

### How the Re-engineered Public Assistance Program Affected Disaster Response and Recovery

The Public Assistance (PA) grant program provides supplemental federal disaster grant assistance for the repair, replacement, or restoration of disaster-damaged, publicly owned facilities and the facilities of certain private non-profit organizations. The federal share of assistance is at least 75 percent of the eligible costs for emergency measures and permanent restoration. The state determines how the non-federal share (up to 25 percent) is split with the grant applicants.

To meet the goals of FEMA's strategic plan and the expectations of FEMA customers, management faced the challenge of improving the public assistance grant program – reducing its processing time and solidifying FEMA's partnership with state and local emergency management officials and grant applicants. The improvements in the program were initiated and implemented while FEMA continued to carry out the basic program mission of providing grant assistance for the recovery of public and private nonprofit infrastructure.

To improve the grant program, FEMA redesigned it around its people, its policies, the processes that deliver disaster recovery assistance, and the performance that is needed to meet expectations. The redesigned program was introduced on Oct. 1, 1998. It improves customer service through:

- a more efficient grant delivery process,
- applicant-centered management,
- better information exchange,
- consistent training and credentialing of staff who administer the program,
- continuing performance reviewuations and program improvements, and
- more accessible and understandable guidance for participating in the grant program.

FEMA now has a more efficient, effective and consistent program that incorporates four essential elements – people, policy, process, and performance.

### PEOPLE

The most important component of the redesigned PA program is people. The success of the PA program depends on all the people involved in the process – both the applicants applying for grants and those responsible for awarding grants. It is their understanding of the provisions of the program and their willingness to work cooperatively in disaster recovery efforts that speed the process and make the redesigned infrastructure program possible. Therefore, to ensure that the staff has a higher level of professionalism and skill, FEMA committed itself to an ambitious program of developing staff through mentoring, formal instruction, independent study and on-the-job training.

POLICY: While basic program eligibility criteria did not change with the redesigned PA program, many changes were required in program documentation. This new documentation promotes consistent policy implementation and provides the foundation for training professional staff. The new documentation provides for:

- clarification and simplification of program policies,
- creation of new, clear, and simple documents to meet evolving needs,
- greater reliance on written documentation of policies, and
- increased multi-media availability of program documentation to everyone involved in the PA program, providing a reference for training, self-instruction, and consistent policy implementation.
- The redesigned program did not require changes to the Stafford Act. However, FEMA is monitoring the need for statutory change and will propose changes if required to meet program performance goals.

### PROCESS

FEMA also is committed to enhancing its partnership with state and local officials through improved communication, training and information exchange. The roles and responsibilities of FEMA, state and local governments and private nonprofit organizations have been more clearly defined and responsibilities have been more flexibly based on the capabilities of state and local partners.

FEMA - FEMA's role changed from inspection and enforcement to customer service and assistance. In this re-described role, FEMA provides more information about the program in various media before the disaster strikes and more technical assistance in the development of damage descriptions and cost estimates after the disaster.

State- The state's role as grantee was largely unchanged and the state's financial responsibilities are the same. As grantee, the state still is responsible for administering the federal grant. However, the redesigned PA program does allow the state flexibility in meeting many of its other responsibilities. For example, there is no longer be a need for a federal/state/local team to inspect and prepare damage estimates for most small projects since applicants may choose to do their own estimates. FEMA and state officials meet soon after the declaration to develop a public assistance recovery strategy, which addresses FEMA and state staffing plans. The most recent evolution in roles and responsibilities is the initiative to authorize states to manage small disasters on their own. FEMA will continue to assist the state, in ways mutually agreed upon, in meeting its responsibilities.

Local - The role of local governments and eligible private nonprofit organizations has changed with their taking more control in meeting their own needs and managing the pace of their own recovery. Those applicants who can prepare scopes of work and cost estimates for small projects do so, subject to 20 percent validation by FEMA or the state. FEMA will continue to assist other applicants in preparing their damage descriptions and cost estimates.-

PERFORMANCE: People, policies, and processes form the foundation for PA program performance. And program performance reviewuaton reveals the continuing improvements required in the areas of people, policies, and processes.

FEMA has identified performance measures to reviewuate people and process, ensuring continuous program improvement and compliance with the Government Performance and Results Act of 1993. The 1998 customer satisfaction survey provided baseline information on customer expectations and assessments of FEMA performance. In addition to conducting additional surveys after each disaster, FEMA embarked on a comprehensive qualitative and quantitative reviewuaton program designed to identify

areas for program improvement. Findings can be expected to generate improved program guidance, new regulations, statutory changes, training improvements and process improvements. The bottom line of the performance reviewuation program is to gain the knowledge needed to revise the program as required to better meet customer needs.

#### Mobile Emergency Response Support (MERS): Transfer to All-hazards Operations

The late 1980s and the early 1990s was a period of significant geopolitical change overseas. With the toppling of the Berlin Wall and the breaking up of the Union of Soviet Socialist Republics, politicians began to talk about the end of the Cold War and how best to apply the resulting windfall of resources.

In the late summer of 1989, some Americans were concerned more about landfall than windfall—specifically, the arrival of Hurricane Hugo—the costliest hurricane in terms of damage up until that time. Victims and politicians alike criticized FEMA for what they deemed to be an inadequate response to the “disaster of the decade.”

All of these events combined to create a groundswell of interest in the reinvention of FEMA. The Cold War was over, thus easing the nation’s concern of nuclear attack. The Congress was demanding that FEMA become more proactive and prominent in the federal government’s response to natural disasters. It was time to redirect the focus of agency resources from nuclear attack preparedness toward developing an effective all-hazards response capability and a more streamlined disaster recovery program.

The five Mobile Emergency Response Support (MERS) detachments, replete with state-of-the-art communications, automated data processing, power generation and other logistical support systems, were ready for redirection. By late 1993, Director Witt had abolished the National Preparedness Directorate and placed the management of the MERS detachments under the newly created Response and Recovery Directorate. The MERS groups of highly skilled individuals and emergency response equipment became available for immediate deployment to disaster sites. Their assignment was to provide emergency communications, information processing and logistical services to federal response personnel as required, and to assist in setting up the disaster field office and other facilities needed to support the recovery operation.

Under the new directorate leadership, MERS operations personnel began to participate more frequently in information and planning activities in the field and took on additional after-duty-hours functions in support of regional office operations. MERS technical assistance - in the areas of communications, data processing, logistics, security and safety - was also made available to the FEMA regional directors.

Emergency response teams-Advance now frequently include MERS as well as regional office employees. The agency’s rapid needs assessment technical support capability (now called the Quick Response System), was designed and developed by MERS technicians and logisticians and is currently maintained and staffed by MERS employees. MERS Operations specialists also support the rapid needs assessment/quick response system and augment regional operations center staffing during periods of peak activity.

Under the leadership of Director Witt, and with the full support of Response and Recovery Directorate management, the transition of MERS assets into all-hazards operations was smooth, effective, and welcomed by MERS employees and disaster response managers. It was an excellent example of utilizing an existing resource to improve the agency’s disaster response capability. The emergency communications and

logistical support equipment, and the highly trained MERS operators, have greatly enhanced the agency's rapid response capability. In recent years, the MERS mission has been expanded officially to include responsibility for setting up disaster field offices and other relief facilities. Since the MERS teams have become involved in this activity, the time required to establish an operational field office has been reduced to an average of 35 hours. Today, all but the smallest disaster response operations involve MERS detachment participation.

Director Witt's desire to fully utilize the capabilities of the MERS units has extended beyond increasing their involvement in disaster response operations. Within the past 7 years, MERS equipment and personnel have set up and staffed proactive operations and communications centers for numerous special events, such as the 1996 Summer Olympics, papal visits to the United States, political conventions, World Cup soccer matches, Special Olympics, the NIKE World Games, and Sail Boston. Under the guidance of Director Witt, the state-of-the-art equipment and the highly skilled personnel of the MERS detachments have become the core of FEMA's emergency response capability and today play an integral part in fulfilling the agency's expanding mission.

## USFA

### *Management Reorganization*

**Author:** USFA Staff

**POC /Department:** Clarence White

**Date Written:** July 28, 2000

**Describe how your office's senior management was reorganized in 1993. Have major changes in your office's management structure occurred since then? If so, what was changed and why was it changed?**

The United States Fire Administration (USFA) underwent reorganization in November 1993. The result was a reduction in the layers of supervision consistent with the administration's effort to maintain a 15:1 ratio of employees to supervisors. There was also an effort to empower individuals at all levels and to streamline the organization.

On April 29, 1998, FEMA Director James Lee Witt invited representatives of several fire service organizations to a meeting to express their candid opinions regarding the federal fire programs—specifically the USFA and its National Fire Academy (NFA). Director Witt listened to fire service leaders express their doubts and lack of confidence in USFA. At the conclusion of this historic meeting, Director Witt asked each group to put their concerns to him in writing, outlining major issues and suggestions for improvements. In addition, the director pledged that he would appoint a Blue Ribbon Panel to examine their concerns and “the future role of the USFA to reflect the changes in the fire service, as well as its new needs.” The Blue Ribbon Panel presented their report to the director on October 1, 1998.

Following the delivery of the Blue Ribbon Panel report, an action plan working group was convened. Beginning July 11, 1999, selected fire service professionals met at the National Fire Academy in Emmitsburg, Md., to review the operations of USFA and the National Fire Academy to begin the development of an action plan for continued improvement of the organization. The personnel were divided into review groups to identify their general areas of responsibility during the review/interview process as well as possible areas of concern. The working group met July 11-15, 1999 to complete their interviews, identify specific issues that require attention, and formulate specific recommendations to address their concerns. On October 21-22, 1999, the working group was reconvened. During this meeting, the group reviewed and incorporated pertinent comments and suggestions from the open comment period. The result was development of an action plan.

The Action Plan document represented a continuation of FEMA's efforts to make significant changes within USFA. After the Blue Ribbon Panel released its report, Director Witt asked Chief Richard A. Marinucci of the Farmington Hills, Mich. Fire Department to join the USFA on a temporary basis as the senior advisor on fire issues to Director Witt. Subsequently, Chief Marinucci was named the acting chief operating officer, and the action development working group was created. This group

was convened after careful consideration of the most effective means of devising a flexible yet strong guiding document for the USFA.

The goal of the action plan working group was to provide recommendations to guide the USFA toward its goal of becoming a world-class organization. The major facets of the plan address the core mission, leadership, communication, staff development, advocacy, partnership, and marketing. Success in these areas would set the standard for all federal fire programs and directly influence services at the state and local level. The working group looked to develop leadership and advocacy within the USFA so that the changes begun by the Blue Ribbon Panel would continue and be institutionalized.

The action plan was not a traditional one in that it did not cover monetary recommendations or discuss profit-making initiatives. However, if followed, the plan would help re-establish the USFA as a leader in fire prevention, training, education, and research initiatives. The plan would also help create an organization that is better able to react quickly, lead the fire service in recognizing and addressing new issues as they arise, and to demonstrate creative and innovative problem solving skills.

The USFA adopted a new mission statement that clearly defined the USFA as the umbrella organization of the National Fire Academy, management and technology activities and logistical support. Retired Chief Ken Burris of the Marietta, Georgia Fire Department, who was appointed the USFA chief operating officer in September 1999, and the USFA management team assigned responsible parties for implementing the recommendations of the plan and researching associated costs. USFA staff continues to review the various action plan working group recommendations and provide recommendations for implementation.

### *Customer Service Improvements*

**Author: USFA Staff**

**POC /Department: Clarence White**

**Date Written: July 28, 2000**

How has your office implemented FEMA's customer service policy? Please cite specific examples of research and/or surveys conducted by your office related to customer service. Also, cite specific changes that were made in the way your office does business as a result of the research and surveys that were done. Finally, give examples of specific improvements in the way your office has serviced its customers since 1992.

Customer service is a cornerstone for the United States Fire Administration (USFA). USFA staff has the opportunity to contact a large portion of the public everyday; offering a variety of services and products to its customers, including publications, data, technical assistance, and training. Maintaining a good relationship with the customer and obtaining feedback about products and services are important to meeting the present and future needs of the customer. Continued success and support of USFA depends on maintaining positive customer service and satisfaction.

All USFA staff has participated in customer service training. The benefits of this training are evident in the positive responses received from customers. Staff make an extra effort to be responsive to customer needs, even if it outside their work area. Positive comments on services provided are received through various customer service survey instruments as well as verbal compliments.

Among the areas where changes were made to improve customer service were making publications available electronically, providing online access to the Learning Resource Center (LRC) card catalog file, rewriting documents to make them clearer and easier to understand, creating and operating a web page to improve communications, and making information more readily available. The LRC provides current information and resources on fire and emergency management subjects. With its collection of more than 50,000 books, reports, periodicals, and audiovisual materials, the LRC facilitates and supports student and faculty research and supplements classroom lectures and course materials.

The National Fire Academy (NFA) uses four techniques to improve customer service. The first is a visit to every class by the superintendent during each class cycle to see "how things are going," and to see if there are any emerging issues. The second is a superintendent's lunch, where a representative from each class attends a luncheon to discuss the academic portions of the NFA experience, and suggest improvements. The third is the end of course evaluation, where students evaluate their instructors and learning experiences. The fourth is a survey conducted three to six months after a student returns to his or her job. It solicits feedback from both students and their supervisors to assess their satisfaction with academy training and its impact on the participant's job performance.

The USFA website includes feedback pages for users to comment on USFA programs and the website itself. The website is constantly modified to respond to the customer feedback and requests. Examples include the online ordering of publications, the ability to download publications in a format suitable for reproduction, and the electronic posting of the complete Learning Resource Center card catalog, all of which were initiatives designed to meet the expressed needs of the customer.

### ***Cost Reduction***

**Author: USFA Staff**

**POC /Department: Clarence White**

**Date Written: July 28, 2000**

**Give examples of your office's efforts to reduce costs from 1993 to 2000. Highlight specific successful efforts and be specific about where costs were actually reduced.**

Cost reduction is an important consideration in the United States Fire Administration's (USFA) day-to-day operations. One specific area where cost reduction measures have been instituted is in the area of energy conservation. An energy management system was

installed at the National Emergency Training Center (NETC) to better manage energy consumption.

While it may not be considered a cost reduction measure, every effort is made to maximize the use of the NETC facility. Operating at or near maximum utilization reduces the per capita cost of daily operations.

By making publications available for download from its website, USFA has reduced the need for hardcopy formats and the associated printing and mailing costs. A variety of commonly requested data is posted on the web and can be personally researched by the online user, thereby saving staff time and associated costs.

The staff at the NFA is currently in the process of placing pre-course materials on the web for downloading, to eliminate the need for mailings to course attendees. The staff anticipates implementation in January 2001.

### *Use of Technological Innovations*

**Author: USFA Staff**

**POC /Department: Clarence White**

**Date Written: July 28, 2000**

Describe how your office has employed the use of new technology since 1992. Also describe ways in which old technology has been used in a new way, if applicable. How have these technological innovations affected your office's performance?

Technology has been used in several different areas within the United States Fire Administration (USFA). Among these areas are the classroom, data collection and processing, and office operations. In the classroom, technology has been used in the production of audiovisual products to support classroom delivery. Software, such as Microsoft PowerPoint, enhances the program delivery. Development of a simulation lab has been initiated to provide more realistic training for individuals who may be responsible for emergency incident management and operations. Personal computers have also been made available to assist students in developing course materials and classroom presentations.

The National Fire Incident Reporting System (NFIRS), the system by which USFA collects data from state and local fire departments to quantify and qualify the fire problem, was revised to take advantage of internet technology making the system more complete, relevant, and easy to use.

Technology is utilized in the office environment to operate the admissions and registration system as well as support daily work processes and activities.

In order to improve communications and provide better customer service, USFA has created a web page from which course schedules, publications, technical reports, and

other information can be accessed. In addition, training courses are being developed using CD-ROM technology so that they can be reproduced and distributed in a more economical manner.

**What groups, organizations, companies or contractors are you now working with outside of FEMA. Summarize these partnerships and cite when and why each partnership began and how the working relationships have evolved. Provide insights about the partnerships in terms of how they have assisted your office in carrying out its functions and/or how they have contributed to FEMA's overall mission.**

In order to be effective in accomplishing its mission, the United States Fire Administration (USFA) must rely heavily on partnerships with other government agencies and private organizations. Since its creation, USFA has partnered with organizations such as the National Fire Protection Association, International Association of Fire Chiefs, International Association of Fire Fighters, and National Volunteer Fire Council to name a few. It has also partnered with the Consumer Product Safety Commission on product fire safety, the Department of Justice on anti-terrorism training initiatives, the Department of Transportation on hazardous materials training activities, and the National Institute for Standards and Technology on various research initiatives.

USFA initiated formal arrangements with other federal agencies to improve program coordination and efficiency. The Bureau of Alcohol, Tobacco, and Firearms established a full-time field office at National Emergency Training Center (NETC) -+staffed with two professionals. Their primary responsibility is to work with the National Fire Data Center on the collection and analysis of arson and explosive incident data. The National Institute of Standards and Technology assigned a staff member to work at NETC part-time to enhance coordination of fire research activities. These relationships leverage resources, both fiscal and personnel, to the benefit of both agencies.

It is important to USFA that organizations and agencies that have similar missions or responsibilities work together to maximize resources and support and assist each other.

### ***Directorate and Office Leadership***

**Author: Administrator Carrye Burley Brown**

**POC /Department: Clarence White**

**Date Written: 9/3/00**

***(For Department Heads Only)* How did your leadership as director contribute to changes in your office or directorate? What were your primary objectives and how did you attempt to accomplish them? What were your successes?**

***Written by U.S. Fire Administrator Carrye Burley Brown, September 2000:***

"My biggest challenge on becoming U.S. fire administrator in May 1994 was to implement the Clinton-Gore mandate to balance the federal budget by maintaining a level budget and the United States Fire Administration (USFA). Nevertheless, during the early part of my administration we were able to successfully implement many important changes, such as:

- developing of the first complete budget accountability system, including online tracking for each project;
- participating in fire safety-related public service media campaigns with the Ad Council, Safe Kids, National Sleepwear Association, National Electrical Manufacturers Association, Sesame Street Preschool Project, Consumer Products Safety Commission and others;
- developing a communications system that allowed every USFA staff person to communicate with each other using e-mail and allowed the fire/emergency community internet access to the USFA library;
- developing the smoke teaching model; and
- creating the computer simulated training laboratory.

The level budget trend ended when the federal budget was balanced and I was permitted to request a funding level based on the needs of the fire/emergency community. Consequently, the fiscal year 2000 budget is the largest in the 25-year history of USFA. One of the important projects, based on the number of applications, in this budget is the administrator's first ever pilot grant program with the goal of reducing fire losses in communities with the greatest fire risk.

As the first African-American and the first woman to be administrator, I am especially pleased that I also have the longest tenure of any of the 11 predecessors. Even more gratifying is the drop in fire losses nationwide during my six years as administrator. This could not have occurred without the efforts of the dedicated members of the fire/emergency community, who also work in partnership with USFA.

USFA is in position to reach even greater heights in the 21<sup>st</sup> century in service to our customers, the fire/emergency community and the American people because of the sound foundation established during my tenure as U.S. fire administrator. This could not have been possible without the support of President Clinton, Vice President Gore, Director Witt, the U.S. Congress, the staff of USFA, and especially the fire/emergency community."

#### ***Future Direction***

**Author: Kenneth O. Burris**  
**POC /Department: Clarence White**  
**Date Written: July 28, 2000**

***(For Department Heads Only)*** How do you see your office/directorate evolving in the next ten years?

The United States Fire Administration (USFA) is in the midst of an organizational transformation. At the heart of this transformation is the desire to fulfill its national responsibilities in impacting the nation's fire problem by responding to changing needs in the areas of fire prevention and control and the adoption of a multi-risk approach for our nation's first responders. A new and dynamic organizational structure will provide flexibility, foster improved communications, and create a sharper focus on achieving the maximum benefit from current resources and reaching Government Performance and Results Act goals.

Another component in fulfilling our national responsibility is establishing FEMA and USFA's leadership role within the community of the nation's first responders. This leadership role is essential if the nation is to improve on its record of loss of life and property due to fire and other catastrophic hazards. It takes national leadership to change a culture that places little value and resources toward one of the most important elements of a fire services' mission. FEMA and USFA are leading the way toward that change, hoping to instill a true sense of value in prevention and mitigation that rivals the value placed on response and recovery.

### *Optional Essay*

**Author: Tom Pitotti**

**POC /Department: Clarence White**

**Date Written: July 28, 2000**

**Write about anything else you think would be relevant and interesting from your office's perspective.**

**In March 1979, the United States Fire Administration purchased the former site of St. Joseph's College in Emmitsburg, Md. The real estate deal included 19 buildings on more than 100 acres of land, plus all related site improvements and personal property no longer required by the owners, the Sisters of Charity. The total purchase price exceeded \$3.6 million.**

The Defense Civil Preparedness Agency Staff College was moved from Battle Creek, Mich. to the new Emmitsburg facility that year. As part of the newly created FEMA, the staff college reopened in 1981 as the Emergency Management Institute (EMI) and the name of the facility was changed from the National Fire Academy (NFA) to the National Emergency Training Center (NETC).

NETC is now home to many parts of the FEMA organization. This includes the U.S. Fire Administration and its NFA; the Training Division (including EMI) of the Preparedness, Training and Exercise Directorate, the Field Personnel Division of the Office of Human Resource Management; the NETC Satellite Procurement Office of the Office of Financial Management; and a small element of the Information Technology Services Directorate.

The original facility, as purchased, contained many life safety violations, such as a lack of fire suppression systems (sprinklers), inadequate exit routes, and a host of other problems related to the facility being closed for the better part of eight years prior to the government purchase. In fiscal year 1991, Congress appropriated \$5 million per year for five years, equaling \$25 million for additional renovations. (FEMA contributed another \$3.8 million as needed and when available.) The remodeling job – which was completed in 1997 – included upgrades, full compliance with current life safety standards, and the construction of two new buildings.

### *Optional Essay*

**Author: USFA Staff**

**POC /Department: Clarence White**

**Date Written: July 28, 2000**

**Write about anything else you think would be relevant and interesting from your office's perspective.**

In 1999, FEMA Director James Lee Witt convened a commission to review the “America Burning” report issued in 1973, and to provide an update on the fire problem in the United States. The following report was prepared for this commission in 1999.

## **AMERICA BURNING – AMERICA AT RISK**

### **Introduction**

In May 1973, the National Commission on Fire Prevention and Control released its final report entitled “America Burning.” This report called attention to the fire problem in the United States. The transmittal letter for the report stated that “Over \$11 billion of our resources are wasted by destructive fires each year. Additionally, 12,000 people are killed and tens of thousands of persons are scarred physically and emotionally by fire.” The report contained many recommendations that, if implemented, would significantly reduce this great toll.

The transmittal letter further stated that the recommendations in the report emphasize prevention of fire through implementation of local programs. This was considered in keeping with the very nature of the fire problem that is felt hardest at the community level. The letter also indicated the need for a continuing Federal focus on the fire problem as being a necessity. It closed by stating “It is the earnest hope of the members of this Commission that this report will provide helpful guidelines for local, State, and national efforts to reduce the life and property loss by destructive fire in the United States.”

In April 1998, Federal Emergency Management Agency Director James Lee Witt invited representatives from several United States fire service organizations to a meeting to

express their candid opinions regarding the federal fire programs—specifically, the United States Fire Administration and its National Fire Academy. From this meeting evolved the appointment of a Blue Ribbon Panel to examine concerns and “the future role of the USFA to reflect the changes in the fire service, as well as its new needs.” Later that same year, the Panel released a report of its review of the United States Fire Administration and its National Fire Academy. This review looked at programs, program delivery, resources, and staffing. The report contained various recommendations designed to assist USFA in meeting the intent of the “America Burning” report.

This document is an effort to review the recommendations of the National Commission on Fire Prevention and Control, compare them with the recommendations of the Blue Ribbon Panel (Appendix A), and identify the accomplishments made against the Commission recommendations. *It should be noted that some of the Commission recommendations were aimed at agencies and organizations outside the Federal government. Since the reports were developed for different purposes and different audiences, many of the items in either of the documents may not be addressed in the other. It is also important to note that the passage of the Federal Fire Prevention and Control Act of 1974, which resulted in the creation of the United States Fire Administration, was a direct result of the “America Burning” report. The Blue Ribbon Panel report reviews the organization that was created out of the “America Burning” report and the aforementioned legislation. This report addresses only those within the Federal realm of responsibility.*

The report is divided into four parts—Introduction; Discussion of the Recommendations of the National Commission on Fire Prevention and Control and Blue Ribbon Panel; USFA Accomplishments; and Appendices. The appendices contain a list of the Blue Ribbon Panel Recommendations (Appendix A), a List of National Fire Academy Courses (Appendix B), a Summary of National Fire Academy Program Information (Appendix C), and a List of USFA Publications Currently Available (Appendix D).

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Discussion of the National Commission on Fire Prevention and Control  
Recommendations  
Compared to the Blue Ribbon Panel Recommendations  
and the Activities of the United States Fire Administration

The following list is a brief response to the recommendations made by the National Commission on Fire Prevention and Control. When and where appropriate, the recommendations of the Blue Ribbon Panel are identified with the recommendations of the Commission.

NOTE: The number references are to the National Commission on Fire Prevention and Control recommendations of 1973.

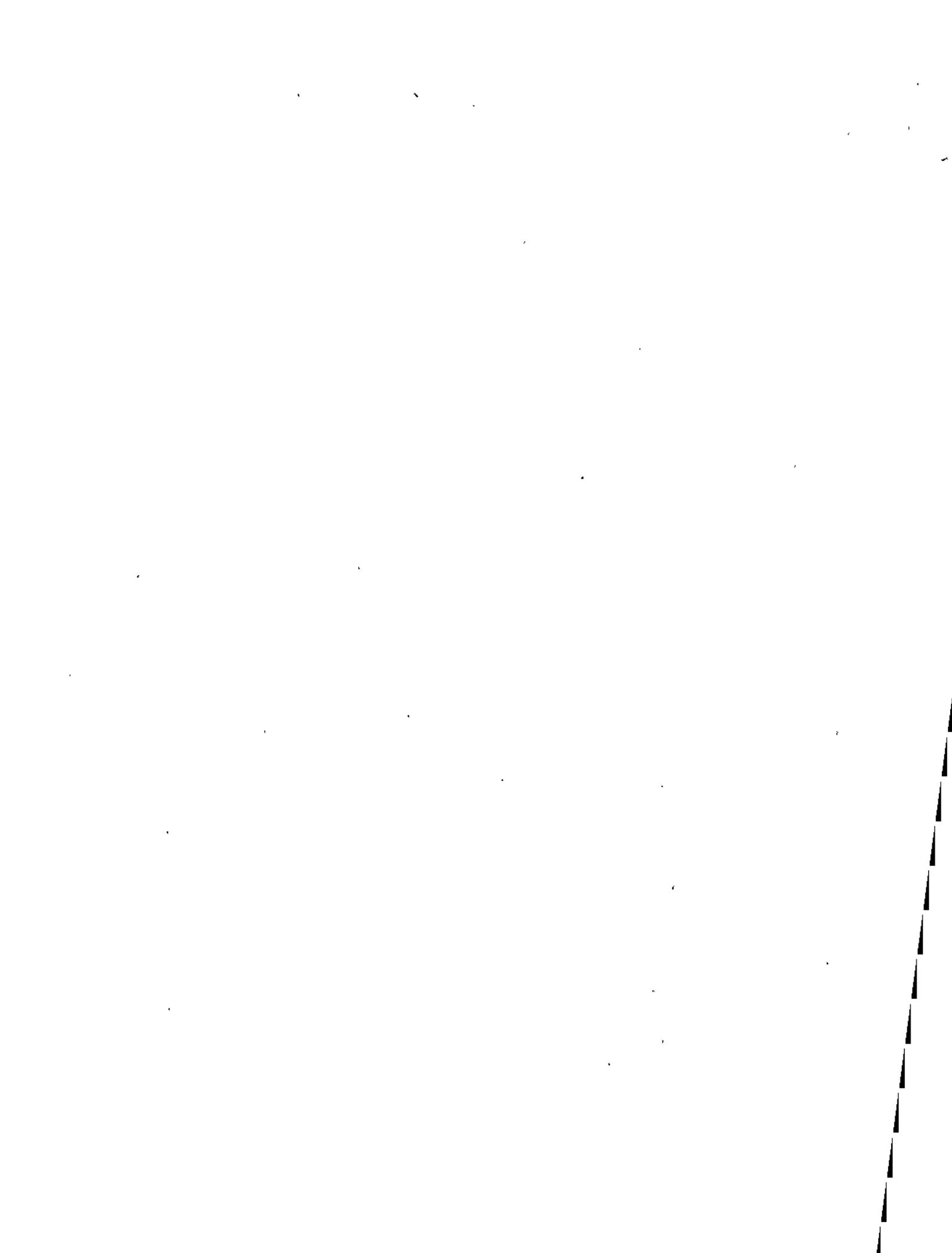
## CHAPTER 1

The Commission recommends that Congress establish a U.S. Fire Administration to provide a national focus for the Nation's fire problem and to promote a comprehensive program with adequate funding to reduce life and property loss from fire. The U.S. Fire Administration was created by the Federal Fire Prevention and Control Act of 1974.

The Commission recommends that a national fire data system be established to provide a continuing review and analysis of the entire fire problem. A national fire data system was addressed as part of the creation of the U.S. Fire Administration. Refer to the National Fire Incident Reporting System section under the accomplishments for more information. Recommendations 7 and 26 of the Blue Ribbon Panel report also addressed this matter.

## CHAPTER 2

3. The Commission recommends that Congress enact legislation to make possible the attainment of 25 burn units and centers and 90 burn programs within the next 10 years. This item is outside the scope of the U.S. Fire Administration.
4. The Commission recommends that Congress, in providing for new burn treatment facilities, make adequate provision for the training and continuing support of the specialists to staff these facilities. Provision should also be made for special training of those who provide emergency care for burn victims in general hospitals. This item is outside the scope of the U.S. Fire Administration.
5. The Commission recommends that the National Institutes of Health greatly augment their sponsorship of research on burns and burn treatment. This item is outside the scope of the U.S. Fire Administration.
6. The Commission recommends that the National Institutes of Health administer and support a systematic program of research concerning smoke inhalation injuries. This item is outside the scope of the U.S. Fire Administration.



## The Fire Service

### CHAPTER 3

7. The Commission recommends that local governments make fire prevention at least equal to suppression in the planning of fire department priorities. This item is outside the scope of the Federal government.
8. The Commission recommends that communities train and utilize women for fire service duties. This item is outside the scope of the Federal government. However, USFA has taken some action in support of this area. Refer to the Women in the Fire Service section under the accomplishments for more information.
9. The Commission recommends that laws which hamper cooperative arrangements among local fire jurisdictions be changed to remove the restrictions. This item is outside the scope of the Federal government.
10. The Commission recommends that every local fire jurisdiction prepare a master plan designed to meet the community's present and future needs in fire protection, to serve as a basis for program budgeting, and to identify and implement the optimum cost-benefit solutions in fire protection. This item is outside the scope of the Federal government. However, USFA has taken some action in support of this area. Refer to the Master Planning section under the accomplishments for more information.
11. The Commission recommends that Federal grants for equipment and training be available only to those fire jurisdictions that operate from a federally approved master plan for fire protection. This item may be outside the legislative authority of the U.S. Fire Administration.
12. The Commission recommends that the proposed U.S. Fire Administration act as a coordinator of studies of fire protection methods and assist local jurisdictions in adapting findings to their fire protection planning. A program to provide technical assistance to communities in fire protection master planning is part of the U.S. Fire Administration. Refer to the Master Planning section under the accomplishments for more information. Recommendation 12 of the Blue Ribbon Panel report also addressed this matter.

### CHAPTER 4

13. The Commission recommends that the proposed U.S. Fire Administration provide grants to local fire jurisdictions for developing master plans for fire protection. Further, the proposed U.S. Fire Administration should provide technical advice and qualified personnel to local fire jurisdictions to help them develop master plans. A grant program to assist local jurisdictions in developing master plans was instituted by the U.S. Fire Administration and technical assistance continues to be available in this area. Refer to the Master Planning section under the accomplishments for more information.

## CHAPTER 5

14. The Commission recommends that the proposed U.S. Fire Administration sponsor research in the following areas: productivity measure of fire departments, job analyses, firefighter injuries, and fire prevention efforts. The U.S. Fire Administration operates a research program to address the emerging needs of the fire service. Refer to the Fire Prevention, Firefighter Death and Injuries, and Physical Fitness sections under the accomplishments for more information. Recommendations 8, 9, and 10 of the Blue Ribbon Panel report also addressed this matter.

15. The Commission urges the Federal research agencies, such as the National Science Foundation and the National Bureau of Standards, to sponsor research appropriate to their respective missions within the areas of productivity of fire departments, causes of firefighter injuries, effectiveness of fire prevention efforts, and the skills required to perform various fire department functions. The U.S. Fire Administration works with the National Institute for Standards and Technology (formerly the National Bureau of Standards) to sponsor research. Refer to the Fire Prevention, Firefighter Death and Injuries, and Physical Fitness sections under the accomplishments for more information. Recommendation 9 of the Blue Ribbon Panel report also addressed this matter.

16. The Commission recommends that the Nation's fire departments recognize advanced and specialized education and hire or promote persons with experience at levels commensurate with their skills. This item is outside the scope of the Federal government. However, USFA has taken some action in support of this area. Refer to the Training section under the accomplishments for more information.

17. The Commission recommends a program of Federal financial assistance to local fire services to upgrade their training. The U.S. Fire Administration provides training to the local fire service at no cost and provides reimbursement of a portion of the expenses of attendance at National Fire Academy courses. Refer to the Training section under the accomplishments for more information. Recommendations 16 and 31 of the Blue Ribbon Panel report also addressed this matter.

18. In the administering of Federal funds for training or other assistance to local fire departments, the Commission recommends that eligibility be limited to those departments that have adopted an effective, affirmative action program related to the employment and promotion of members of minority groups. This item may be outside the scope of the U.S. Fire Administration.

19. The Commission recommends that fire departments, lacking emergency ambulance, paramedical, and rescue services consider providing them, especially if they are located in communities where these services are not adequately provided by other agencies. This item is outside the scope of the Federal government. However, USFA has taken some action in support of this area. Refer to the Emergency Medical Services section under the accomplishments for more information.

## CHAPTER 6

20. The Commission recommends the establishment of a National Fire Academy to provide specialized training, in areas important to the fire services and to assist State and local jurisdictions in their training programs. A National Fire Academy was established as part of the creation of the U.S. Fire Administration. The National Fire Academy provides assistance to State and local jurisdictions in their training programs. Refer to the Training section under the accomplishments for more information.

21. The Commission recommends that the proposed National Fire Academy assume the role of developing, gathering, and disseminating, to State and local arson investigators, information on arson incidents and on advanced methods of arson investigations. The National Fire Academy and research elements of the U.S. Fire Administration develop, gather, and disseminate arson information. Refer to the Training and Arson sections under the accomplishments for more information.

22. The Commission recommends that the National Fire Academy be organized as a division of the proposed U.S. Fire Administration, which would assume responsibility for deciding details of the Academy's structure and administration. The National Fire Academy is a division of the U.S. Fire Administration.

23. The Commission recommends that the full cost of operating the proposed National Fire Academy and subsidizing the attendance of fire service members be borne by the Federal Government. The cost of operating the National Fire Academy is borne by the Federal government and a stipend program is available to offset a portion of the expense of attendance.

## CHAPTER 7

24. The Commission urges the National Science Foundation, in its Experimental Research and Development Incentives Program, and the National Bureau of Standards, in its Experimental Technology Incentives Program, to give high priority to the needs of the fire services. The U.S. Fire Administration works with the National Institute of Standards and Technology to identify research items. Refer to the Chemical Protective Clothing, Firefighter Death and Injuries, Infection Control, Personal Protective Clothing, Physical Fitness, and Training sections under the accomplishments for more information. Recommendation 9 of the Blue Ribbon Panel report also addressed this matter.

25. The Commission recommends that the proposed U.S. Fire Administration review current practices in terminology, symbols, and equipment descriptions, and seek to introduce standardization where it is lacking. This is a continuing initiative of the U.S. Fire Administration. Refer to the Fire Codes section under the accomplishments for more information.

26. The Commission urges rapid implementation of a program to improve breathing apparatus systems and expansion of the program's scope where appropriate. This was a

research program of the U.S. Fire Administration and the results of that research are evident in the protective clothing and breathing apparatus now being used. Refer to the Personal Protective Clothing section under the accomplishments for more information. Recommendations 8, 9, and 10 of the Blue Ribbon Panel also addressed this matter.

27. The Commission recommends that the proposed U.S. Fire Administration undertake a continuing study of equipment needs of the fire services, monitor research and development in progress, encourage needed research and development, disseminate results, and provide grants to fire departments for equipment procurement to stimulate innovation in equipment design. This is a continuing initiative of the U.S. Fire Administration. Refer to the Personal Protective Clothing section under the accomplishments for more information. Recommendations 8, 9, and 10 of the Blue Ribbon Panel also addressed this matter.

28. The Commission urges the Joint Council of National Fire Service Organizations to sponsor a study to identify shortcomings of firefighting equipment and the kinds of research, development, or technology transfer that can overcome the deficiencies. This is outside the scope of the Federal government. However, USFA has taken some action in support of this area. Refer to the Personal Protective Clothing section under the accomplishments for more information. It should be noted that the Joint Council of National Fire Service Organizations no longer exists.

#### Fire and the Built Environment

#### CHAPTER 8

No recommendations.

#### CHAPTER 9

29. The Commission recommends that research in the basic processes of ignition and combustion be strongly increased to provide a foundation for developing improved test methods. This is part of a continuing research program of the U.S. Fire Administration. Refer to the Fire Ignition/Fire Growth section under the accomplishments for more information. Recommendations 8, 9, and 10 of the Blue Ribbon Panel report also addressed this matter.

30. This Commission recommends that the new Consumer Product Safety Commission give a high priority to the combustion hazards of materials in their end use. This is outside the scope of the U.S. Fire Administration.

31. The Commission recommends that the present fuel load study sponsored by the General Services Administration and conducted by the National Bureau of Standards be expanded to update the technical study of occupancy fire loads. This is part of a continuing research program of the U.S. Fire Administration. Refer to the Fire

Ignition/Fire Growth section under the accomplishments for more information. Recommendation 9 of the Blue Ribbon Panel report also addressed this matter.

32. The Commission recommends that flammability standards for fabrics be given high priority by the Consumer Product Safety Commission. This is outside the scope of the U.S. Fire Administration.

33. The Commission recommends that all States adopt the Model State Fireworks Law of the National Fire Protection Association, thus prohibiting all fireworks except those for public displays. This is outside the scope of the Federal government.

34. The Commission recommends that the Department of Commerce be funded to provide grants for studies of combustion dynamics and the means of its control. This is outside the scope of the U.S. Fire Administration. However, USFA has taken some action in support of this area. Refer to the Fire Ignition/Fire Growth section under the accomplishments for more information.

35. The Commission recommends that the National Bureau of Standards and the National Institutes of Health cooperatively devise and implement a set of research objectives designed to provide combustion standards for materials to protect human life. This is part of a continuing research program of the U.S. Fire Administration. Refer to the Fire Ignition/Fire Growth section under the accomplishments for more information. Recommendation 9 of the Blue Ribbon Panel report also addressed this matter.

## CHAPTER 10

36. The Commission urges the National Bureau of Standards to assess current progress in fire research and define the areas in need of additional investigation. Further, the Bureau should recommend a program for translating research results into a systematic body of engineering principles and, ultimately, into guidelines useful to code writers and building designers. This is part of a continuing research program of the U.S. Fire Administration. Refer to the Fire Ignition/Fire Growth section under the accomplishments for more information. Recommendation 9 of the Blue Ribbon Panel report also addressed this matter.

37. The Commission recommends that the National Bureau of Standards, in cooperation with the National Fire Protection Association and other appropriate organizations, support research to develop guidelines for a systems approach to fire safety in all types of buildings. This is part of a continuing research program of the U.S. Fire Administration. Refer to the Fire Ignition/Fire Growth section under the accomplishments for more information. Recommendation 9 of the Blue Ribbon Panel report also addressed this matter.

38. The Commission recommends that, in all construction involving Federal money, awarding of those funds be contingent upon the approval of a fire safety systems analysis

and a fire safety effectiveness statement. This is outside the scope of the U.S. Fire Administration.

39. This Commission urges the Consumer Product Safety Commission to give high priority to matches, cigarettes, heating appliances, and other consumer products that are significant sources of burn injuries, particularly products for which industry standards fail to give adequate protection. This is outside the scope of the U.S. Fire Administration.

40. The Commission recommends to schools giving degrees in architecture and engineering that they include in their curricula at least one course in fire safety. Further, we urge the American Institute of Architects, professional engineering societies, and State registration boards to implement this recommendation. This is outside the scope of the Federal government. However, USFA has taken some action in support of this area. Refer to the Training section under the accomplishments for more information.

41. The Commission urges the Society of Fire Protection Engineers to draft model courses for architects and engineers in the field of fire protection engineering. This is outside the scope of the Federal government.

42. The Commission recommends that the proposed National Fire Academy develop short courses to educate practicing designers in the basics of fire safety design. The National Fire Academy has developed a course on fire safe building design and recently revised it. Refer to the Training section under the accomplishments for more information.

## CHAPTER 11

43. The Commission recommends that all local governmental units in the United States have in force an adequate building code and fire prevention code or adopt whichever they lack. This is outside the scope of the Federal government.

44. The Commission recommends that local governments provide the competent personnel, training programs for inspectors, and coordination among the various departments involved to enforce effectively the local building and fire prevention codes. Representatives from the fire department should participate in reviewing the fire safety aspects of plans for new building construction and alterations to old buildings. This is outside the scope of the Federal government. However, USFA has taken some action in support of this area. Refer to the Training section under the accomplishments for more information.

45. The Commission recommends that, as the model code of the International Conference of Building Officials has already done, all model codes specify at least a single-station early-warning detector oriented to protect sleeping areas in every dwelling unit. Further, the model codes should specify automatic fire extinguishing systems and early-warning detectors for high-rise buildings and for low-rise buildings in which many people congregate. This is outside the scope of the Federal government. However,

USFA has taken some action in support of this area. Refer to the Smoke Detectors and Residential Sprinklers sections under the accomplishments for more information.

## CHAPTER 12

46. The Commission recommends that the National Transportation Safety Board expand its efforts in issuance of reports on transportation accidents so that the information can be used to improve transportation fire safety. This is outside the scope of the U.S. Fire Administration.

47. The Commission recommends that the Department of Transportation work with interested parties to develop a marking system, to be adopted nationwide, for the purpose of identifying transportation hazards. This is outside the scope of the U.S. Fire Administration.

48. The Commission recommends that the proposed National Fire Academy disseminate to every fire jurisdiction appropriate educational materials on the problems of transporting hazardous materials. The National Fire Academy has developed, delivered, and distributed several courses that address the problems associated with the transportation of hazardous materials. Refer to the Training section under the accomplishments for more information. Recommendations 16 and 31 of the Blue Ribbon Panel report also addressed this matter.

49. The Commission recommends the extension of the Chem-Trec system to provide ready access by all fire departments and to include hazard control tactics. This is outside the scope of the Federal government. However, USFA has taken some action in support of this area. Refer to the Training and Firefighter Safety Study Act sections under the accomplishments for more information.

50. The Commission recommends that the Department of the Treasury establish adequate fire regulations, suitably enforced, for the transportation, storage, and transfer of hazardous materials in international commerce. This is outside the scope of the U.S. Fire Administration.

51. The Commission recommends that the Department of Transportation set mandatory standards that will provide fire safety in private automobiles. This is outside the scope of the U.S. Fire Administration.

52. The Commission recommends that airport authorities review their firefighting capabilities and, where necessary, formulate appropriate capital improvement budgets to meet current recommended aircraft rescue and firefighting practices. This is outside the scope of the U.S. Fire Administration.

53. The Commission recommends that the Department of Transportation undertake a detailed review of the Coast Guard's responsibilities, authority, and standards relating to marine fire safety. This is outside the scope of the U.S. Fire Administration.

54. The Commission recommends that the railroads begin a concerted effort to reduce rail-caused fires along the Nation's rail system. This is outside the scope of the U.S. Fire Administration.

55. The Commission recommends that the Urban Mass Transportation Administration require explicit fire safety plans as a condition for all grants for rapid transit systems. This is outside the scope of the U.S. Fire Administration.

## **Fire and the Rural Wildlands Environment**

### CHAPTER 13

56. The Commission recommends that rural dwellers and others living at a distance from fire departments install early-warning detectors and alarms to protect sleeping areas. This is outside the scope of the Federal government. However, USFA has taken some action in support of this area. Refer to the Smoke Detectors section under the accomplishments for more information.

57. The Commission recommends that U.S. Department of Agriculture assistance to [community fire protection facilities] projects be contingent upon an approved master plan for fire protection for local fire jurisdictions. This is outside the scope of the U.S. Fire Administration.

### CHAPTER 14

58. The Commission recommends that the proposed U.S. Fire Administration join with the Forest Service, U.S.D.A., in exploring means to make fire safety education for forest and grassland protection more effective. The U.S. Fire Administration works with the Forest Service to make fire safety education for forest and grassland protection more effective. Refer to the Wildland section under the accomplishments for more information.

59. The Commission recommends that the Council of State Governments undertake to develop model State laws relating to fire protection in forests and grasslands. This is outside the scope of the Federal government.

60. The Commission urges interested citizens and conservation groups to examine fire laws and their enforcement in their respective States and to press for strict compliance. This is outside the scope of the Federal government.

61. The Commission recommends that the Forest Service, U.S.D.A., develop the methodology to make possible nationwide forecasting of fuel buildup as a guide to priorities in wildland management. This is outside the scope of the U.S. Fire Administration.

62. The Commission supports the development of a National Fire Weather Service in the National Oceanic and Atmospheric Administration and urges its acceleration. This is outside the scope of the U.S. Fire Administration.

## Fire Prevention

### CHAPTER 15

63. The Commission recommends that the Department of Health, Education, and Welfare include in accreditation standards fire safety education in the schools throughout the school year. Only schools presenting an effective fire safety education program should be eligible for any Federal financial assistance. This is outside the scope of the U.S. Fire Administration.

64. The Commission recommends that the proposed U.S. Fire Administration sponsor fire safety education courses for educators to provide a teaching cadre for fire safety education. This is a continuing initiative of the U.S. Fire Administration. Refer to the Fire Prevention Programs section under the accomplishments for more information. Recommendation 13 of the Blue Ribbon Panel report also addressed this matter.

65. The Commission recommends to the States the inclusion of fire safety education in programs educating future teachers and the requirement of knowledge of fire safety as a prerequisite for teaching certification. This is outside the scope of the Federal government. However, USFA has taken some action in support of this area. Refer to the Fire Prevention Programs section under the accomplishments for more information.

66. The Commission recommends that the proposed U.S. Fire Administration develop a program, with adequate funding, to assist, augment, and evaluate existing public and private fire safety education efforts. This is a continuing initiative of the U.S. Fire Administration. Refer to the Fire Prevention Programs section under the accomplishments for more information. Recommendation 13 of the Blue Ribbon Panel report also addressed this matter.

67. The Commission recommends that the proposed U.S. Fire Administration, in conjunction with the Advertising Council and the National Fire Protection Association, sponsor an all-media campaign of public service advertising designed to promote public awareness of fire safety. This is a continuing initiative of the U.S. Fire Administration. Refer to the Fire Prevention Programs section under the accomplishments for more information.

68. The Commission recommends that the proposed U.S. Fire Administration develop packets of educational materials appropriate to each occupational category that has special needs or opportunities in promoting fire safety. This is a continuing initiative of the U.S. Fire Administration. Refer to the Fire Prevention Programs section under the accomplishments for more information. Recommendation 33 of the Blue Ribbon Panel report also addressed this matter.

## CHAPTER 16

69. The Commission supports the Operation EDITH (Exit Drills In The Home) plan and recommends its acceptance and implementation both individually and community-wide. This has been incorporated the EDITH program into U.S. Fire Administration public fire safety education materials.

70. The Commission recommends that annual home inspections be undertaken by every fire department in the Nation. Further, Federal financial assistance to fire jurisdictions should be contingent upon their implementation of effective home fire inspection programs. This is outside the scope of the U.S. Fire Administration.

71. The Commission urges Americans to protect themselves and their families by installing approved early-warning fire detectors and alarms in their homes. This is outside the scope of the Federal government. However, USFA has taken some action in support of this area. Refer to the Smoke Detectors section under the accomplishments for more information.

72. The Commission recommends that the insurance industry develop incentives for policyholders to install approved early-warning fire detectors in their residences. This is outside the scope of the Federal government.

73. The Commission urges Congress to consider amending the Internal Revenue Code to permit reasonable deductions from income tax for the cost of installing approved detection and alarm systems in homes. This is outside the scope of the U.S. Fire Administration.

74. The Commission recommends that the proposed U.S. Fire Administration monitor the progress of research and development on early-warning detection systems in both industry and government and provide additional support for research and development where it is needed. This is part of a continuing research program of the U.S. Fire Administration. Refer to the Residential Fire Sprinklers and Smoke Detectors sections under the accomplishments for more information. Recommendations 8, 9, and 10 of the Blue Ribbon Panel report also addressed this matter.

75. The Commission recommends that the proposed U.S. Fire Administration support the development of the necessary technology for improved automatic extinguishing systems that would find ready acceptance by Americans in all kinds of dwelling units. This is part of a continuing research program of the U.S. Fire Administration. Refer to the Residential Fire Sprinklers section under the accomplishments for more information. Recommendations 8, 9, and 10 of the Blue Ribbon Panel report also addressed this matter.

76. The Commission recommends that the National Fire Protection Association and the American National Standards Institute jointly review the Standard for Mobile Homes

and seek to strengthen it, particularly in such areas as interior finish materials and fire detection. This is outside the scope of the Federal government. However, USFA has taken some action in support of this area. Refer to the Fire Ignition/Fire Growth section under the accomplishments for more information.

77. The Commission recommends that all political jurisdictions require compliance with the NFPA/ANSI standard for mobile homes together with additional requirements for early-warning fire detectors and improved fire resistance of materials. This is outside the scope of the Federal government. However, USFA has taken some action in support of this area. Refer to the Fire Ignition/Fire Growth, Smoke Detectors, and Residential Sprinklers sections under the accomplishments for more information.

78. The Commission recommends that State and local jurisdictions adopt the NFPA Standard on Mobile Home Parks as a minimum mode of protection for the residents of these parks. This is outside the scope of the Federal government.

## CHAPTER 17

79. The Commission strongly endorses the provisions of the Life Safety Code which require specific construction features, exit facilities, and fire detection systems in child day care centers and recommends that they be adopted and enforced immediately by all the States as a minimum requirement for licensing of such facilities. This is outside the scope of the Federal government.

80. The Commission recommends that early-warning detectors and total automatic sprinkler protection or other suitable automatic extinguishing systems be required in all facilities for the care and housing of the elderly. This is outside the scope of the U.S. Fire Administration. However, USFA has taken some action in support of this area. Refer to the Residential Sprinklers section under the accomplishments for more information.

81. The Commission recommends to Federal agencies and the States that they establish mechanisms for annual review and rapid upgrading of their fire safety requirements for facilities for the aged and infirm, to a level no less stringent than the current NFPA Life Safety Code. This is outside the scope of the U.S. Fire Administration.

82. The Commission recommends that the special needs of the physically handicapped and elderly in institutions, special housing, and public buildings be incorporated into all fire safety standards and codes. This is outside the scope of the U.S. Fire Administration. Refer to the Fire Codes and Smoke Detectors sections under the accomplishments for more information. Recommendations 11 and 28 of the Blue Ribbon Panel report also addressed this matter.

83. The Commission recommends that the States provide for periodic inspection of facilities for the aged and infirm, either by the State's fire marshal's office or by local fire departments, and also require approval of plans for new facilities and inspection by a

designated authority during and after construction. This is outside the scope of the Federal government.

84. The Commission recommends that the National Bureau of Standards develop standards for the flammability of fabric materials commonly used in nursing homes with a view to providing the highest level of fire resistance compatible with the state-of-the-art and reasonable costs. This is a continuing initiative of the U.S. Fire Administration. Refer to the Fire Ignition/Fire Growth section under the accomplishments for more information. Recommendation 9 of the Blue Ribbon Panel report also addressed this matter.

85. The Commission recommends that political subdivisions regulate the location of nursing homes and housing for the elderly and require that fire alarm systems be tied directly and automatically to the local fire department. This is outside the scope of the Federal government.

### Programs for the Future

#### CHAPTER 18

86. The Commission recommends that the Federal Government retain and strengthen its programs of fire research for which no non-governmental alternatives exist. This is a continuing initiative of the U.S. Fire Administration. Refer to the Chemical Protective Clothing, Firefighter Death and Injuries, Fire Ignition/Fire Growth, Personal Protective Clothing, Residential Fire Sprinklers, and Smoke Detectors sections under the accomplishments for more information. Recommendations 8, 9, and 10 of the Blue Ribbon Panel report also addressed this matter.

87. The Commission recommends that the Federal budget for research connected with fire be increased by \$26 million. This is outside the scope of the U.S. Fire Administration. Recommendation 10 of the Blue Ribbon Panel report also addressed this matter.

88. The Commission recommends that associations of material and product manufacturers encourage their member companies to sponsor research directed toward improving the fire safety of the built environment. This is outside the scope of the Federal government. However, USFA has taken some action in support of this area. Refer to the Fire Ignition/Fire Growth section under the accomplishments for more information.

#### CHAPTER 19

89. The Commission recommends that the proposed U.S. Fire Administration be located in the Department of Housing and Urban Development. The public law that created the U.S. Fire Administration placed it in the U.S. Department of Commerce. In 1979, it was transferred to the newly-created Federal Emergency Management Agency.

90. The Commission recommends that Federal assistance in support of State and local fire service programs be limited to those jurisdictions complying with the National Fire Data System reporting requirements. This may be beyond the legislative authority of the U.S. Fire Administration.

#### CHAPTER 20

No recommendations.

## SIGNIFICANT ACCOMPLISHMENTS

NOTE: The following is a summary of the significant accomplishments of the United States Fire Administration (USFA) (formerly the National Fire Prevention and Control Administration or NFPCA). Many of these are on-going in order to keep pace with the changing fire prevention and control environment. There are others that are also important to fire prevention and control but have been omitted for the sake of brevity. The items have been grouped by topical area for ease in reading.

As you read through the accomplishments you may note some fluctuations in program activity. This is due in part to a major funding cut that took place in 1983 affecting the USFA. The budget request submitted to the Congress for 1983 included funding for only the National Fire Academy portion of USFA. In 1982, USFA spent \$6,060,000 in program funds and 46 workyears for non-training activities. When the 1983 budget was approved, USFA was provided \$3,300,000 in program funds and 20 workyears. This caused some redirection in program effort in addition to rebuilding an organization that was in the process of being abolished.

### Arson

A pilot project on defining ways to predict and cure arson behavior was conducted. A comprehensive survey report was prepared early in 1977 and laboratory work began on developing improved methods for the detection, by local authorities, of arson incidents.

In 1978, development of the model task force concept was completed and transferred to public and private fire investigation and arson detection organizations.

In 1981 and 1982, USFA developed technical arson detection methods for use by state and local governments to improve arson prevention, detection and control; programs for public education on the extent, cause and prevention of arson; and management tools to assist federal, state and local fire and law enforcement personnel in arson detection and conviction.

In 1981, USFA developed and implemented a national strategy for coordinating Federal, state and local public and private sector efforts to attack one of the nation's fastest growing crimes, which accounts for more than \$1.5 billion a year in direct losses and nearly a quarter of all fires. Starting with the USFA's Report to Congress on Arson, the USFA's program addressed all but one of the report's 67 recommendations, established Arson Task Forces in more than 250 communities, and initiated a Federal Arson Task Force which coordinated the initiatives of 12 Federal agencies involved in arson.

The Arson Early Warning System collects information that can be used to analyze key housing, insurance code financial and commercial indicators to determine if a building is being set up for arson. The System was packaged for use in municipalities. In 1980, alternative approaches to the development structure and management of municipal level anti-arson campaigns (including methodology systems for the identification and analysis

of specific arson patterns) was evaluated and synthesized into an arson manual. In 1981, this arson manual was validated and distributed to the state and local organizations for implementation along with extensive technical assistance.

In 1981, USFA disseminated a manual on the use of anti-arson resources by city managers and conducted a workshop on its use. USFA field-tested and documented the manual's effectiveness in helping to reduce a community's incendiary fire losses. USFA documented and published the results of the "unknown caused fires study."

In 1989, USFA initiated a unique interagency partnership with the Department of Justice. Through the guidance of a national advisory committee of fire, police, justice, health, mental health and others, a comprehensive juvenile arson intervention and control model program was developed.

In 1988, USFA completed three juvenile firesetter handbooks, 0-7 years of age, 7-13, and 14-18, for use as counseling manuals by fire departments and local counselors.

In direct response to input from arson professionals, USFA produced several targeted publications for state and local use:

- Arson Prosecutor Guidelines (1988)
- Field Index Guide for Investigators (1993)
- Arson Strike Force Manual (1989)
- Arson Resource Directory (1993)
- Vehicle Fire Investigation Guidelines (1989)

A publication on the organization and management of arson units in fire departments was distributed in 1989 and offered with technical assistance.

Beginning in 1985, for several years, the USFA funded 45 community-based anti-arson projects nationwide. The preliminary information, gleaned from a new evaluation instrument, indicated that many of these programs were having a significant impact on their arson problems.

Since 1991, the Arson Information Management System (AIMS) version 5.0 is being used throughout the United States by fire investigation units. The program was well received and numerous requests for additional modules have been received from the field. AIMS is an integral part of a second USFA project, the Arson Organization and Management Unit program. The program continues to be highly successful and; as a result, a close working relationship has been developed with the Insurance Committee on Arson Control; who also developed a management program. AIMS was expanded to the Juvenile Firesetters Program in 1983 and completed its second stage (7-14 years).

During 1991, a joint effort with the Bureau of Alcohol, Tobacco, and Firearms (BATF) was initiated to jointly develop an Expert Witness Testimony Course for fire investigators. This important area addressed how fire investigators should conduct

themselves when testifying as an expert witness. This joint program involved working closely with the National Association of District Attorneys and the International Association of Arson Investigators.

In 1994, the Arson/Fire Investigation Unit Technical Assistance Program provided management/operations assessments of state and local investigative units. It identified program strengths and replicable anti-arson initiatives as well as recommended ways to improve unit capacity and effectiveness. Specific recommendations were provided to the Unit's leadership and those recommendations were intended to help improve their performance. Assistance is still provided as needed.

In 1995, convened a "National Symposium on Training in Arson Prevention and Control" involving government agencies, arson investigators, prosecuting attorneys, insurance leaders, and fire chiefs. This symposium helped establish priorities and new directions for arson prevention instruction.

Provided expert management evaluations/audits in 1997 for ten fire investigation units to analyze how they conduct investigations and how they could better utilize existing resources to address their respective arson problem.

Working with the Department of Justice and the BATF, in 1997, revised the National Arson Prosecutors course to include new approaches and techniques to assist prosecutors.

In partnership with the fire investigation community, continue to develop program of technology transfer resulting in standardization of Arson Investigation Unit operations started in 1998. The Transportation Rapid Information Package (TRIP) encouraged field, supervisory, and regulatory arson investigative personnel to process crime scenes, conduct follow-up investigations and pursue litigation in a fully standardized manner.

The National Arson Prevention Initiative (NAPI) was created in June 1996 by President Clinton to coordinate Federal resources to support the development of community-based arson awareness and prevention activities. The impetus for the program was the burning of churches in thirteen southern states. NAPI began as a cooperative effort in partnership with the Federal Emergency Management Agency, Department of Housing and Urban Development (HUD), Department of Justice, and the Department of Treasury to raise public awareness about how arson fires can be prevented and to provide resources to assist these efforts. The NAPI program has been expanded to integrate all fire prevention activities including arson awareness. A new video entitled "Firefighting Church Arson" was completed in 1997 and distributed to churches in the Southeast United States. Improved communications with their target groups through the Internet via a web page, [www.usfa.fema.gov/napi](http://www.usfa.fema.gov/napi). NAPI is utilizing the Internet for press releases, training announcements, and the timely dissemination of arson prevention information.

In 1998, conducted six workshops across the country on "Juvenile Firesetter Counseling" to develop intervention skills for police, educators, social workers, and fire service personnel. These workshops were designed for people who work directly with identified

firesetters. The program covered counseling and referrals to other agencies including mental health and educational disciplines.

USFA co-produced with BATF, National Fire Protection Association (NFPA), and the American Re-Insurance Company, a state-of-the-art CD-ROM/virtual reality arson investigation training program in 1998.

In 1998, developed two new brochures for dissemination: Protecting Structures from Arson and Board-up Procedures.

In 1993, USFA and the Department of Justice worked on projects addressing the problem of juvenile firesetters as part of a 5-year project. These materials assisted communities in setting up juvenile firesetter prevention programs and help in addressing the juvenile firesetting problem in their areas.

NOTE: The prevention and control of arson has been on the forefront of USFA's program initiatives since its creation. While some fire and rescue subjects surface and are satisfied, arson has been and continues a major USFA initiative in both the program and instructional areas. USFA has addressed arson head-on through a variety of program initiatives and courses directed at specific target audiences.

### **CHEMICALS IN SCHOOLS (CHEMIS)**

Schools use chemicals not only in the teaching/learning process, but also for maintenance of the school plant. Chemistry labs, photography departments, vocational technical buildings, science classrooms, art rooms, transportation and maintenance departments are areas of potential hazards if chemicals are improperly stored and handled. The school personnel must have knowledge of the chemicals, and have in place appropriate safety equipment and procedures to minimize any risk to the students, faculties, and to the community at large.

In cooperation with the Western Missouri Fire Chiefs and the Kansas City Area School administration, USFA completed and implemented a unique program entitled, "Chemicals in Schools Project (CHEMIS)." With corporate participation, the USFA implemented this in a nationwide effort during 1992.

CHEMIS is a national model that serves both schools and the fire service, serving as a risk management program, and making the school environment safe for students, teachers, and communities. The reporting capability of the CHEMIS enables better prepared fire companies to respond in case of an incident, while reducing the possibility of firefighter injury due to unknown compounds.

CHEMIS is a comprehensive management software program designed to enable schools to address potential chemical hazard accidents. Training for this software program was provided through the State Fire Marshal's office. The program allows schools to manage the inventory, storage, and disposal of chemicals.

## **Chemical Protective Clothing**

USFA supported research and development of equipment in 1989. USFA, through an Interagency Agreement with the U. S. Coast Guard, prepared specifications for and obtained prototype chemical protective suits for hazardous materials responders. USFA then field-tested the suits with several fire departments located throughout the country with the results provided to the Coast Guard for consideration in updating the suit specifications. In addition to suit performance, physiological responses of the participating firefighters were recorded for analysis and recommendation to the fire service. As the suits were being evaluated in the field, USFA also had an American Society for Testing and Materials (ASTM) Standard for the quantitative testing of chemical protective suits evaluated. The results of this evaluation were provided to the ASTM with recommendations for changes to the standard.

USFA is a member of the Federal Workgroup on Chemical Protective Clothing and Equipment Research and Development. Another of the participating agencies, the Environmental Protection Agency (EPA) had done developmental work on a portable field test kit for evaluation of the permeability of chemical suits and needed to have the test kit field tested. USFA was able to include field-testing of the kit with the same fire departments that were participating in the other evaluations and report back to the EPA. As a result of these tests the test kit is now available commercially.

USFA sat on a number of NFPA and ASTM committees and subcommittees that prepared standards for chemical protective clothing and equipment. USFA continued to look for opportunities to provide the documentation necessary for the preparation of emerging standards for hazardous chemical protective clothing and equipment and other issues related to firefighter health and safety at hazardous materials incidents.

## **Driver Training**

Accidents involving emergency vehicles are one of the leading causes of firefighter death and injury. Since 1979, over 179 firefighters have died in emergency vehicle accidents. This Emergency Vehicle Driver Training Package was developed in 1996 by an innovative public-private partnership with the Volunteer Firemen Insurance Services of York, Pennsylvania. This allowed USFA to develop the package to enhance firefighter safety. By utilizing existing information as opposed to USFA paying to have a separate manual developed, over \$100,000 in tax dollars was saved. This package contains both an Instructor and a Student Manual.

## **Emergency Medical Services**

NOTE: The original legislation creating USFA did not include reference to emergency medical services (EMS). Much of the mission for it appears to lie with the Department of Transportation. USFA, however, has been and continues to be involved in EMS since most of the EMS first response is provided by the fire service. It is important the USFA

be the conduit to share EMS information with the fire service and share the fire service's EMS concerns to the appropriate Federal agency.

EMS, an integral part of most fire departments, has unique stress-inducing characteristics. Research to identify causes and develop solutions to reduce the level of stress in EMS providers was continued; an educational program addressing this problem was field tested during 1991, and completed in 1992. This project resulted in the publication of a manual that identified the problem of stress in the EMS work environment, and recommended methods that EMS managers could use to reduce or eliminate these stressors. A second product of this project was a method to evaluate the efficiency of a pre-hospital EMS system based on the outcome of patients served by that system.

Starting in 1991, USFA worked toward increasing the efficiency and effectiveness of the EMS part of fire service management. A project to identify a means of evaluating the effectiveness of a department's EMS delivery system based upon the outcome of patients was undertaken. This research led to a management tool to assist fire departments in managing their EMS system more efficiently.

Initiated a national media campaign on EMS public awareness similar to USFA's public fire education campaigns, with the theme being EMS specific. The campaign, released in mid-1992, addressed what EMS is, how the system should (and should not) be used, and what to do if an emergency is encountered. The fire department's role in EMS was a part of this campaign. The U.S. Department of Transportation/National Highway Traffic Safety Administration (NHTSA) EMS Division jointly funded and managed this project.

The EMS Public Information, Education, and Relations (PIER) program is underway as a joint effort between USFA and the NHTSA. These efforts, began in 1994, include a National media campaign and the development of a "how-to" manual for fire and EMS departments. Similarly, USFA worked with the American College of Emergency Physicians in promoting National EMS week in May of each year.

Initiated in 1992, Make the Right Call, the national public education campaign turned its focus to teaching children about what EMS is, when and when not to use EMS, and what to do until help arrives. In addition to USFA involvement, other sponsors included the American College of Emergency Physicians, American Ambulance Association, Emergency Nurses Association, International Association of Fire Chiefs, National Association of Emergency Medical Technicians, National Association of State EMS Directors, National Council of State EMS Directors, National Council of State EMS Training Coordinators, National Association of EMS Physicians, NHTSA, and the Maternal and Child Health Bureau of the Department of Health and Human Services.

USFA chairs the Federal Interagency Committee on Emergency Medical Services subcommittee on ambulance design. This represented a cooperative effort on the part of several Federal agencies to prevent duplication of effort and provide greater expertise for the development of a voluntary consensus standard on improved ambulance design for emergency responders.

Distributed the Guide to Funding Alternatives for Fire and EMS Departments in 1993 that identified innovative funding sources for local emergency service organizations. This project drew great interest from fire and rescue departments throughout the United States. This was one of the most requested USFA documents in recent history.

Developed and distributed the EMS Safety Techniques and Applications Manual in 1994 that described techniques to enhance the occupational safety of EMS responders

Initiated programs to address issues unique to the fire service delivery of EMS including:

- A Fire and Emergency Medical Services (EMS) Risk Management Planning Manual in 1995 to assist fire and EMS departments in developing risk management processes and plans.
- An EMS Recruitment and Retention Manual in 1995 for local volunteer and career EMS departments.
- Completed the manual detailing Safety and Health Considerations for the Design of Fire and Emergency Medical Services Stations in 1997. This manual alerts and provides information on the effective mitigation of occupational hazards in the local-level fire and EMS station.

Developed programs to address issues unique to the fire service delivery of EMS including a manual and accompanying video on Implementation of EMS in the Fire Service in 1997. This material provided information to local level fire departments on how they can initiate and expand the life-saving delivery of emergency medical care.

Completed development of the manual Strategies for Marketing Your Fire Department Today and Beyond in 1998 that provided information to local-level fire departments on how they can develop effective strategies to market themselves to better compete for resources, educate the public on fire and injury mitigation, etc. This was a continuum of past USFA efforts on Public Information, Education and Relations (PIER) for the emergency services.

### **Fire Codes**

Concentrated resources on residential safety results in a relatively limited effort in public building safety. USFA does not review and evaluate individual fire codes and has only laid some preliminary conceptual groundwork for Fire Safety Effectiveness Statements as authorized under Sections 12 and 13 respectively of the Federal Fire Prevention and Control Act of 1974. Since fire safety code enforcement has proven to be a continuous problem in the United States. In 1981, USFA developed code guides and management handbooks to assist state and local officials in improving inspection program management and the enforcement of codes.

In 1995, developed a CD-ROM training package for building and code officials that tracks construction features and the effect of trade-offs in building design and construction.

In 1989, provided support to the NFPA consensus codes process for fire codes. A new national advisory committee was established consisting of state and local fire service persons to directly review and input into the fire code development process.

USFA, in a project with NFPA, developed a videotape and accompanying written material on how individuals in the fire service, as well as private citizens, could have an impact on the making of standards and codes and, more importantly, how they could involve themselves in the standards and codes making process. This tape explained how codes and standards were made, and more importantly, how they can involve themselves in the codes making process. This tape was distributed throughout the country.

### **Firefighter Injuries and Death**

In order to support the development of protective equipment, analyses of specific hazards of firefighters was conducted. During 1976 a study consisting of in-depth analysis of on-duty firefighter deaths was completed. A comprehensive study centering on injuries related to protective equipment began during 1976 and was completed in 1977. From this study a reporting form was developed to provide for consistent, accurate information on firefighting injuries. This information was utilized as part of the national scheme for documenting fire losses. Other supporting hazard analysis studies of the structural firefighter's toxic and thermal environment began in 1976 and was completed in 1977. In addition to the toxic environment analysis, a project to provide the firefighter with portable toxic gas detectors began in 1976 and was completed in 1977. The product development phase continued in 1978 with the intent of encouraging the private sector to make these devices commercially available to fire departments. During 1978, hazard analysis studies relevant to special firefighting situations were initiated.

In 1976, there were four grants for toxicological studies at universities. The purpose was to determine exactly why it was that most fatalities occur from the toxic effects of fire gases and whether new standards and codes were needed to control this hazard. Work continued on autopsies of fire victims, on the effect of fire gases on test animals both at lethal and sublethal levels, and on providing expertise in animal toxicology for large-scale tests. Study of the gases formed when vinyl polymers (PVC) were burned showed that there were toxins more hazardous than expected and that special work must be undertaken to determine whether the hazard was sufficient to warrant controls on the use of PVC.

Studies of four common polymers, treated and untreated for fire retardancy, showed no significant changes in toxicity of combustion products attributable to the fire retardant treatment. In 1977 more polymers were studied with more combinations of additives, additional data was being collected on PVC, and the study of the toxic effects of fire retardants in plastics was completed. More cases were added to the autopsy database. In

1978, the basic work was finished on the PVC question, studies was completed supporting NBS development of a general test method for assessment of the hazards of toxic gases, and the autopsy program continued.

Firefighters experience a high degree of hearing loss throughout their careers. USFA developed a program which fire departments may implement to slow the rate of hearing loss among the members. This program was successfully tested in two cities and made available to other departments. The Fire and Emergency Service Hearing Conservation Program Manual was developed in 1992.

USFA developed recommendations in 1989 for use by local departments in instituting programs to lessen the effects of heat stress during major fire operations. This included methods of scheduling worker relief and the provision of air-conditioned surroundings to alleviate metabolic stress.

Published the Firefighter Autopsy Protocol in 1995 that was the first and only publication of its kind that provided guidance on performing an autopsy on a deceased firefighters. This lead to standardization in the identification of cause of death and result in an improved ability to deal with the specific causes. This is an important tool for line of duty deaths since an autopsy is required to support a request for benefits under the Public Safety Officer Deaths Benefits Program of the Department of Justice.

Developed guidelines and recommendations for the fire and other emergency services to reduce the incidence of injuries, such as sprains and strains, that may be ergonomically caused. A Fire and EMS Ergonomics Manual was developed in 1996.

In 1998, work continued on examining the critical issues of occupational health and safety as related to longevity in the fire service. The goal of this effort was to provide information to the firefighter and emergency responders that could contribute to a long, healthy, and safe career of service.

### **Firefighter Safety Study Act**

As a result of the explosion in Kansas City in November 1988, which took the lives of six firefighters, and several earlier accidents which also involved hazardous materials, Congress passed the Firefighter Safety Study Act, PL 101-446. It directed the Fire Administrator to review existing response information used by emergency response personnel at the State and local levels, to evaluate its accuracy and consistency, and determine if it was effective for their use. The goal of the study was to improve the accuracy and usefulness of response guidance so that safer and more effective responses to hazardous materials incidents could be conducted.

To accomplish this task, a working group was established consisting of representatives from Federal agencies, state and local operational officials, and representatives of the chemical industry. Numerous meetings were held in 1992. USFA evaluated all existing emergency response information to determine its accuracy and usefulness for firefighters.

In a preliminary report to Congress in 1993, the Working Group recommended that a single referral source written from the user's perspective be available to first responders to hazardous materials incidents.

As legislatively directed by the Act, USFA developed the Hazardous Materials Guide for First Responders in 1998. The Guide includes over 400 chemical-specific response guidance sheets, consolidated what was previously available only by consulting multiple sources, and was formatted specifically for use by the first responder.

In 1993, continued management of the Hazardous Materials Information Exchange (HMIX), a computer bulletin board system containing information on emergency management, training, exercises, resources, technical assistance, and regulations. A joint project with the Department of Transportation, HMIX provides more than 7,000 active users with hazardous materials information 24 hours a day, 7 days a week.

### **Fire Ignition/Fire Growth**

In 1974, a program was begun on the study of smoldering combustion and the noxious gases produced in fires. Combustion products, as opposed to heat, cause at least half of all fire deaths; the nature of these gases and their effects on living beings was not well understood at that time.

In 1976, basic research on smoldering fires provided recommendations for test methods to measure the hazard potential of smoldering materials. Research was shifted to a study of the transition from smoldering to flaming combustion so as to devise ways to facilitate extinction of smoldering by design of the material to avoid its eruption into flame. Research to predict the behavior of fire in corridors concentrated on the use of a small-scale corridor to develop basic mathematical models that were verified by full-scale burnouts. A model was developed for use as criteria to control ease of ignition in materials and to study the gaseous products of pyrolysis. These gases were important in two ways; first as toxic products which kill or disorient fire victims and firefighters, and second, as the source of an explosive spread of fire, a phenomenon variously known as flashover or flameover.

In 1975, research on the new test for flooring was completed and the method was submitted to the ASTM. This test enabled authorities to control fire spread and growth through corridors by specifying criteria for the flooring. The current test for carpeting (the "pill" test) was designed only to control ignitions from small sources, typically cigarettes.

In 1977, the radiant panel flooring test method for application to flooring in high-risk areas of buildings was adopted by Federal agencies and by ASTM and NFPA. Experiments to define the fire hazards of various furnishings were completed and the basis for proposed standards established. This was coupled with research on room fires and a model based on heat release rate, flame spread, and smoke and toxic gas measurements was developed. The work was assisted by use of the mathematical model

under development in the fire science program. A method for measuring the rate of heat release was proposed to ASTM.

In 1976, a series of screening tests of selected fire-retarded materials were completed which indicated the extent of toxicity of combustion products of some commercially significant plastics. The results were made available to regulatory authorities and to the plastic manufacturers. Standard tests and performance criteria were recommended to prevent such hazardous materials from reaching the marketplace.

In 1977, the toxicity studies on combustion products were extended from selected plastics to all commonly used materials and recommendations for test methods and standards was made. Studies of sub-lethal levels of various fire gases were completed. This work defined the extent of sensory irritation and mental disorientation caused by the various combustion products and defined what remedial measures may be needed.

In 1976, the sponsored program of special autopsies by the State of Maryland and Johns Hopkins University on fire victims was continued to learn more about the precise cause of death in fire. By knowing that death was caused by the action of a specific agent (rather than simply attributing death to being "overcome by smoke") controls could be devised to minimize the production of such agents in fires, and better medical treatment could be suggested on an emergency basis to save victims who survive the first few minutes.

The program on furnishings and materials for construction of rooms, including mobile homes and various passenger compartments in transportation systems, produced significant advances in 1976. A new standardized method for conducting full-scale fire tests in furnished rooms was proposed to the voluntary standards groups (NFPA and ASTM). This standard was a necessary prerequisite to the more difficult task of developing reliable correlations between full-scale fire tests and small-scale tests which measure one or only a few of the key characteristics of materials in reaction to fire.

A model of fire in an enclosure was developed in 1976 that enabled the prediction of the effect of various furnishings and interior finishes on the effective "escape time" from that room. The use of the model reduced the number of expensive full-scale fire tests required of industry in qualifying new materials or new combinations or applications of existing materials.

In 1978, the need for additional test methods for furniture other than upholstered was defined and concepts developed, with emphasis on tests for ease of ignition and flame spread. The furnace test for fire endurance of structural members of buildings was studied to improve it by adding flexibility in conducting the test and adding criteria for use in reporting results.

In 1981, the Center for Fire Research continued to improve a small-scale test for furniture; completed an evaluation of mattress test; and, continued research to develop performance criteria to control fire spread and growth. Expanded the Decision

Analysis/Hazard Analysis model to enable the evaluation of additional alternatives and allocation of fire research priorities in residences.

In 1977, a comprehensive report was issued on reduced-scale modeling of fires and on a method for predicting fire behavior from these models. Coupled with the work on integrating results of laboratory tests, this report gives the fire community two methods of predicting behavior of full-scale fires. This reduced testing costs. Design criteria for improved fire safety in mobile homes and various compartments in transport vehicles (subway, buses, etc.) were recommended to authorities having jurisdiction. Research on smoke control systems for hospitals was completed with publication for the Veterans Administration of criteria for design. The new program on integrated design concepts served as a model for making design decisions based on actual analysis of case histories plus research findings at the Center.

In 1978, the room fire model was completed and validation experiments in full-scale room fires were well underway. Use of the model in prediction began. The need for running many expensive large-scale tests was greatly reduced. The studies on smoke particles were completed, and application to both the toxicology effort and the smoke detector and smoke movement effort began. Studies of solid phase chemistry of polymer degradation were advanced and mechanisms of fire retardant action were published. Subsequently, criteria for designing more fire resistant materials were developed as an aid to industry. A test method for auto-ignition of materials was developed and proposed to agencies and voluntary standards groups. Basic work on toxic effects of fire gases needed to support development of a general test method was advanced and substantially completed. Work on a hazard assessment model was completed and published. The model was validated and recommended practices developed for its use in both research and regulatory activities. Additional case histories on fires involving plastics were added to the database.

A sequence of fire experiments in mobile homes was completed, supported in part by HUD, and recommendations were made to HUD for incorporation in its new mandatory standard for all new mobile homes. Recommendations were also made to NFPA. The work in 1976 focused on corridor linings; earlier work was on kitchen range areas and locations for smoke detectors. The results of studies on the safety of plastic drain, waste, and vent pipes and flexible connectors in heating and air conditioning systems were published for use both by HUD and by voluntary standards groups.

In 1981, USFA proposed a rate of heat release test method to the ASTM based on oxygen consumption; conducted full-scale room fire tests measuring oxygen consumption and correlated it with small scale-room test; continued improvement of instrumentation and measuring techniques. Refined the reduced (1/4) scale physical model test and submitted it to ASTM. Built "in-house" standard room fire test apparatus and ran appropriate tests to improve and gain confidence in the test; continued the development of a mathematical model for flame spread and conducted experiments to verify the model. Published a revised pressurization guide on smoke movement and control for use by designers.

## **Fire Prevention Programs**

In 1975, documentation of 15 successful fire prevention education programs was completed and contact was made with major fire and burn prevention operations in the United States. Educational materials used successfully by those programs were adapted for public use. In 1976, an initial survey of domestic fire prevention education programs was underway. An annotated bibliography of available research studies and fire education programs was compiled. Education materials received were catalogued and evaluated.

Initial investigations into the educational approaches to high-risk groups and a study of delivery systems for fire prevention programs began in 1975 and were completed in 1976.

In 1977, a project was developed to provide technical assistance in the techniques of fire prevention and control to educators involved in the development and delivery of vocational training programs and fire educational programs at colleges and universities. Technical assistance needs were determined and guidelines and procedures developed for use in future implementation of the Academy's technical assistance program. A list of regional technical assistance experts to provide this assistance was established based in the needs identified. In 1978, the technical assistance experts began implementation of the technical assistance program. The program provided technical help to state and local personnel in the development and delivery of training and education programs as well as assistance in approaching other technical problems, such as, master planning and high-rise codes.

Based on studies conducted in 1976, community fire education planning methods were developed to guide communities in the planning and management of public fire safety programs. USFA studies showed that people could be educated to control elements in the chain of events that lead to local fire losses. The challenge was to identify those controllable elements in a community and then to select the educational strategy that the community could use to cause the chain to be broken. In 1977, the community fire education planning procedures were developed into a step-by-step planning manual for fire safety educators.

Beginning the late 1970's, USFA initiated the Public Education Assistance Program (PEAP) to focus on increasing public awareness of the hazards of fire. This program included providing grants for local public safety education initiatives, conducting public fire safety education workshops, and distributing fire safety materials.

Between 1982 and 1985, USFA embarked on a partnership with the Ozark Regional Commission of the U.S. Department of Commerce to address the fire loss rate in Arkansas. The project, Operation Dixieland, provided a concentration of USFA resources in an effort to reduce the loss of life and property due to fire.

In addition to delivering programs in the field the resource system identified outstanding local programs and made them available to other communities. Projects underway in 1980 and delivered in 1981 included:

- Juvenile Firesetter Counseling Program (0 - 7 years)
- Public Education Program Planning
- Public Education Evaluation Techniques
- Home Safety Survey Implementation
- Public Education Resource Catalogue
- Cooking Fire Safety Media Kit
- Woodburning Stove Safety Kit
- Master Planning and EMS Technical Assistance to 40 communities Master Planning Process Guide
- Multi-jurisdictional Master Planning Manual EMS Resource Catalogue
- Fire Department EMS System Design Manual

Nine national campaigns were developed and implemented:

- 1) Smoke Detector Installation and Maintenance (1989)
- 2) Partnerships Against Fire (1989)
- 3) Check Your Hot Spots (alternate heaters) (1989)
- 4) Curious Kids Set Fires (1989)
- 5) This Is Fire (1989)
- 6) Let's Retire Fire (seniors)
- 7) Corporate 500 Employee Fire Safety
- 8) Plan to Get Out Alive with the McDonalds Corporation and BRK-Pittway (First Alert) (1989)
- 9) Project Get Alarmed with the National Safe Kids Coalition (Johnson and Johnson and National Children's Medical Center) (1989)

Aggregate equivalent advertising value of all of our campaigns was \$498 million. USFA estimated that the message reached viewing and listening audiences of over 96 million or one-third of the U.S. population.

A new assessment instrument developed by a consortium of public safety specialists was successfully field tested in 24 departments across the U.S. as a result of USFA funding support. With technical assistance to departments, USFA implemented this approach to developing appropriate fire prevention programs.

In 1982, completed a public education program with "Sesame Street" and the Children's Television Workshop aimed at young children, an at-risk group which experiences double the national average fire death rate. In cooperation with the Children's Television Workshop (CTW), a new fire safety workbook and videotape have been made available to local communities. The program includes a Spanish version in response to the potentially large fire fatality rate among Spanish speaking preschoolers.

A national campaign was developed and implemented in 1991 entitled Home Electrical Fire Safety. For National Fire Prevention Week 1991, USFA was a partner with McDonalds, BRK-Pittway, and CBS on a special Rescue 911 segment on home fire safety. McDonalds and BRK-Pittway contributed over \$2 million to the program's production and advertisements and USFA served as a technical advisor on the program content.

Published and distributed Public Fire Education in the Volunteer Fire Service in 1991 that contained case studies of successful volunteer fire departments and public education programs.

In 1991, the Head Start Fire Safety Program was initiated as a joint effort of Federal involvement of the USFA and the Office of Child Development of the Department of Health and Human Services and the Pan Educational Institute of Kansas City. Head Start teachers were trained to teach a fire safety curriculum to children in high-risk communities. The Head Start Program reached young children through the coordination of teacher training and community outreach at Head Start centers. More than 100,000 classes received a variety of materials, including kits, resource books, handouts, puppets, video and audio tapes over a 4-year period.

In 1991, the successful Corporate Employee Fire Safety Program had over 300 participating companies and organizations. An effort of the program was to ask participants to consider broadening effort to a range of potential emergencies/disasters facing employees. This program had primary financial support from McDonald's and BRK-Pittway. This unique private sector fire safety program was supported by a combined \$12 million private sector expenditure. In 1992, a program to see the full implementation of the USFA's new home electrical fire safety campaign was co-sponsored and supported by the National Electrical Manufacturers Association (NEMA).

The "Home Fire Safety Act On It! public education campaign, initiated in 1992, informed people nationwide about fire safety and fire prevention behaviors. It was distributed in print, radio and television public service announcements to more than 8,000 media outlets nationwide. These public service announcements were aired or printed more than 70,000 times, reaching a potential audience of hundreds of millions of people. USFA sent hundreds of thousands of hanging tags to people requesting more information about fire safety as a result of the public service messages.

As a result of the 1992 civil unrest, the Los Angeles Fire Department School Outreach Program, a classroom training program was developed to increase children's awareness about fire and life safety emergencies. The program was implemented in January 1994.

Native Americans have a fire death rate two to three times that of the average American. The USFA and the Indian Health Service, U.S. Department of Health and Human Services, started community public education projects on three reservations. The thrust of this effort was to reduce the death rate. USFA expanded this effort to reach three more reservations in 1995. In 1998, developed a resource manual, Designing and

Implementing Fire Prevention Strategies in American Indian Communities, which provided direction and resources for American Indian communities interested in developing a fire safety program or in strengthening an existing program. This resource manual was made available to communities so they can use the guide to establish their own effective fire safety programs.

In 1994, the American Red Cross and the National Safe KIDS Coalition provided their support and expertise to fire safety by assisting with the bilingual campaign *Proteja a su Familia de los incendios. Hagalo Hoy!* (USFA's companion piece to *Home Fire Safety, Act On It.*)

Developed a publication, Emergency Procedures for Employees with Disabilities in Office Occupancies, to assist building managers in planning for and managing building evacuations. The publication was available in English, Spanish, and Braille, and on audiotape. Five thousand copies in print at this time were distributed in 1995 through the USFA, the President's Committee on Employment of People with Disabilities, and the Federal Safety Council.

In 1997, released the USFA Kids Page, a World Wide Web Page dedicated to teaching children fire-safe behaviors. Through the use of child-friendly graphics, games, and an interactive cartoon fire extinguisher named "Exty," children learn about such issues as smoke alarm use and maintenance, home fire escape plans, and home fire safety. A section of the page was dedicated to teachers and parents and contains a lesson plan for teaching children fire safety and prevention.

USFA provides fire protection related technical support to the Federal Emergency Management Agency's (FEMA) Project Impact Team and their respective FEMA regional representatives. More specifically, USFA provided technical guidance to local officials where the reduction of the local fire problem is an integral part to a community's Project Impact initiatives.

In 1998, implemented a national public education campaign to address fire safety needs in rural residential settings and smoke alarm awareness in urban communities. Developed and distributed a series of Public Service Announcements, conducted a radio tour with the Fire Administrator and administered and published the Rural Fire Safety Campaign to get the fire safety message to selected at-risk citizens.

Over the last several years, incidents of fires on college campuses that have caused loss of life, injury, and property damage have continued. In partnership with the University of Maryland, USFA, in 1998, began development of an implementation guide and video for the use of college administrators in an effort to provide them with the latest information on building fire safety and how it may be improved. The videos, Get Out and Stay Alive and Ready to Respond address college campus student fire safety. They were sent to colleges throughout the U.S. and also to national fraternities and sororities. In addition, copies were sent to state fire marshals for distribution to the fire service. By providing

Administrators with information about the available technology and preventive measures, life safety on college campuses can be provided.

### **Infection Control**

USFA conducted two "Forums on Infectious Diseases for Emergency First Responders" in 1989. Because of the serious possibility of exposure to infectious disease at emergency incidents, fire service personnel were concerned with issues surrounding the contamination from various diseases. These forums led to recommendations such as the development and presentation of a training program to protect first responders from infectious disease and a manual of recommended practice for emergency services to combat the spread of infectious disease.

USFA was involved in many initiatives that dealt with protecting emergency responders from the serious risk of exposure to communicable diseases. One of these initiatives was the development of a guide, Guide to Developing an Emergency Service Infection Control Program, which would assist emergency response managers in developing, implementing, managing, and evaluating an infection control program based on Federal laws and regulations and national standards. This guide was completed in early 1992, following promulgation of a new OSHA regulation on the subject.

USFA also supported the research and development in support of the development of a national consensus standard intended to protect responders to medical emergencies against exposure to liquid borne pathogens during emergency medical operations. The standard, NFPA 1999, Standard on Protective Clothing for Medical Emergencies, was available in the summer of 1992 for adoption by fire departments and other emergency services organizations.

Evaluated occupational safety and health for ambulance occupants from a number of perspectives, including human biomechanics and ergonomics; biosafety as it related to airborne and bloodborne pathogens; crash prevention; and morbidity and mortality reduction through design alterations. The final product was an ambulance prototype to incorporate the features to obtain reduced risk of responder injury and death.

### **Integrated Emergency Management System (IEMS)**

The USFA, in cooperation with FEMA's State and Local Programs and Support Directorate, sponsored a national IEMS Project for several years, starting in 1984. Oversight of this effort was provided by a national advisory committee made up of representatives from all organizations having direct responsibilities during emergencies fire, police, EMS, public works as well as representatives of the major public interest organizations, including city managers, elected officials, counties, etc. The project had as its major goal the improvement of emergency management response at state and local levels.