

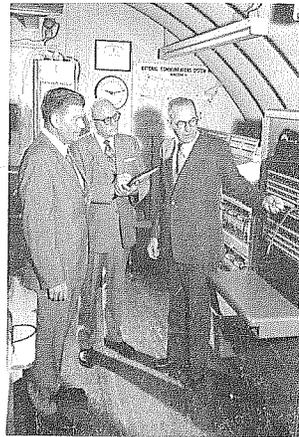
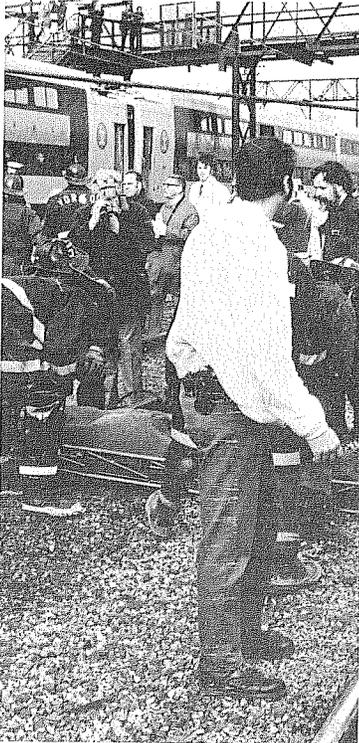
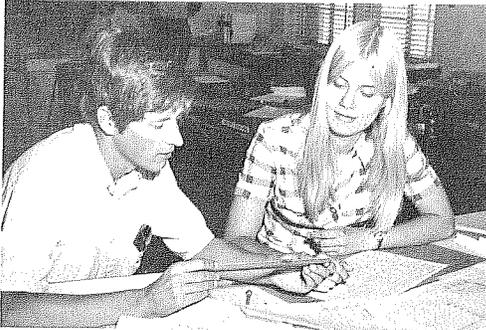
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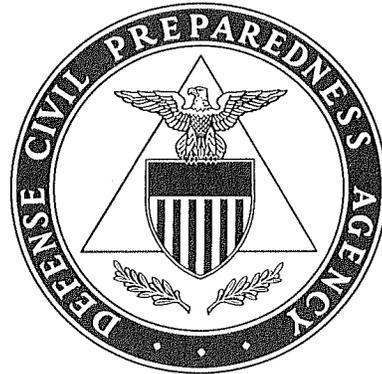
# foresight

Defense civil preparedness agency / annual report / fy73



# foresight

annual report / fy 73



The above official seal for the Defense Civil Preparedness Agency has been adopted to signify the broadened role of DCPA as a Defense Department agency responsible for dealing with peacetime as well as wartime disasters affecting the civil population.

The new insigne features a medium shade of blue in the triangle and in the circular border containing the agency name, both placed on a background of gold. A gold-colored bald eagle is perched atop a shield symbolic of the American flag. Below the shield are two green olive branches.

The new DCPA seal symbolizes the role of the Nation's civil preparedness program within the Department of Defense, as a part of the total national defense, while also stressing the essentially peaceful, lifesaving mission of civil preparedness.

The American bald eagle and shield are adapted from the Department of Defense seal, indicating that civil preparedness is part of national defense. There are no warlike arrows in the eagle's talons, and the olive branches below the shield signify peaceful means for coping with disasters of all kinds threatening civil authority or civilian life.

The new seal uses the equilateral triangle, a traditional symbol of all civil defense programs for more than three decades. The triangle and surrounding border is in a distinctive shade of blue specifically authorized for Department of Defense use. The gold disc on which this symbolism is placed traditionally signifies leadership, wisdom, and achievement. The name of the agency appears in white letters on blue.

**DEPARTMENT OF DEFENSE / DEFENSE CIVIL PREPAREDNESS AGENCY**

Vertical line of text on the left margin, possibly a page number or header.

# letters of transmittal

The Secretary of Defense

February 8, 1974

## MEMORANDUM FOR THE PRESIDENT

In compliance with section 406 of the Federal Civil Defense Act of 1950 and section 5 of Executive Order 10952 of July 20, 1961, I submit herewith the second annual report of the Defense Civil Preparedness Agency, covering civil defense functions assigned to me.



JAMES R. SCHLESINGER

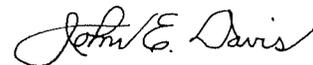
Department of Defense  
Defense Civil Preparedness Agency

February 1, 1974

## MEMORANDUM FOR THE SECRETARY OF DEFENSE

The second annual report of the Defense Civil Preparedness Agency is attached.

The report reflects DCPA emphasis placed on emergency planning and progress made in improving the crisis management capability of local governments to cope with all hazards, both peacetime and wartime.



JOHN E. DAVIS  
DIRECTOR

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1. The first part of the document is a list of names and addresses, including "Mr. J. H. Smith, 123 Main St., New York, N.Y." and "Mrs. A. B. Jones, 456 Elm St., Boston, Mass." This list appears to be a directory or a list of correspondents.

## all-hazard civil preparedness

- Blizzards in the winter . . . .
- Tornadoes in the spring and summer . . .
- Hurricanes in the summer and fall . . .
- Floods, earthquakes, major fires, explosions . . . anytime.

There's an unhappy rhythm to many of nature's—and man's—disaster spectaculars, frequently out of key with a community's capability to cope with them. Natural or manmade disasters have rewritten many a city or county's Calendar of Events before local government had gotten around to printing the program.

Expecting the worst that can befall a community and planning the response is the business of civil preparedness. No one can predict what disasters large or small will confront the officials of America's cities and counties in the years ahead. The importance of civil preparedness for the future is that it provides a proven way to cope with many and varied peacetime disasters no matter how complex or involved they become, with local, State, and Federal agencies working together. And if the ultimate disaster of nuclear war should occur, a tried and proven methodology will exist to mobilize our people and resources for long-range recovery.

### THE PROGRAM

In keeping with President Nixon's desire to make the Federal Government more responsive to the needs of State and local governments, the Defense Civil Preparedness Agency (DCPA) program takes into account all of the hazards and dangers which confront the Nation's population today.

Local government is the keystone of civil preparedness. The Federal and State governments provide guidance and assistance to municipal and county governments in this readiness effort. The objective at all levels is to develop the capability to protect life and property in any type of disaster.

In furthering that objective, the "dual-use" concept long advocated by the Defense Civil Preparedness Agency is applied wherever possible. This is the concept of developing emergency systems useful both in the everyday routine of government as well as during emergencies; and of being useful both during peacetime or in event of war.

Current program changes include: (1) Enhancement of State and local capability to cope with attacks and other disasters, (2) reorientation of the program to emphasize, wherever possible, available protection from nuclear weapon effects

and natural disasters, (3) shifting of some on-going programs to systems that would only be implemented in a crisis in order to reduce peacetime costs and avoid rapid obsolescence.

Major tasks in the program include (a) maintenance of the current shelter system, but reorienting marking, stocking and home survey programs toward crisis implemented activities; (b) reorientation of the shelter survey to locate the best available protection from all the effects of nuclear weapons and prevalent natural disasters; (c) use of analytical techniques to determine the most likely hazards for each community in the event of nuclear war, e.g., blast, fire, fallout; and (d) development of guidance for local governments based on risk analysis, to include crisis relocation planning guidance for areas at high-risk to the direct effects of nuclear weapons and low-risk reception areas.

### Program Responsibilities

Programs of the Defense Civil Preparedness Agency are based on: The Federal Civil Defense Act of 1950; Executive Order 10952; Executive Order 11575, based on the Disaster Relief Act of 1970; Department of Defense Directive 5105.43; and on an agreement early in calendar year 1972 with the Office of Emergency Preparedness (OEP).

Under Executive Order 11725, June 27, 1973, disaster relief activities previously exercised by the Office of Emergency Preparedness were transferred to the Secretary of Housing and Urban Development. The Order transferred to the Secretary of the Treasury the authority under the Trade Expansion Act of 1962 which was exercised by OEP. The rest of the authority exercised by OEP was transferred to the Administrator of General Services. All executive orders relating to OEP functions remain in effect, thus DCPA will continue to assist local governments in planning and preparing for peacetime disasters.

In consonance with Executive Order 10952, John E. Davis, Director of DCPA, acts for the Secretary of Defense in developing and administering the overall National Civil Preparedness Program including:

1. A shelter program including evacuation and movement to shelter;
2. A civilian chemical, biological, and radiological warfare defense program;
3. Development and operation of civil pre-

paredness warning or alerting, and communications systems;

4. Planning for emergency assistance to State and local governments in a post-attack period;
5. Guidance and assistance to State and local governments to increase their protection and emergency operations capability;
6. Programs for financial contributions and donation of Federal surplus property to the States for civil preparedness purposes;
7. Developing systems to conduct nationwide assessments in event of attack to determine: (a) The nature and extent of damage, (b) surviving resources, and (c) specific hazards resulting from the detonation or use of special weapons;
8. A system for warning affected Federal activities, State and local governments, and the civilian population of impending disasters;
9. Providing planning assistance to local governments in their development of disaster preparedness plans and capabilities; and
10. Establishment and administration of a Civil Preparedness Advisory Committee to serve the Secretary of Defense.

In support of the foregoing responsibilities which are developed and executed in coordination with Federal, State, and local governments, DCPA conducts the following programs:

Research and Development, Training and Education, Information Services, Emergency Information, and Liaison Services. DCPA also advises the Secretary of the Army on military support to civil defense; is represented at Headquarters, North American Air Defense Command (NORAD), and at Headquarters, U.S. Continental Army Command (CONARC); and participates in emergency exercises involving elements of the Department of Defense (DoD) and other Federal agencies, and State and local governments.

The Defense Civil Preparedness Agency is organized as a separate and distinct Agency of the Department of Defense, and is civilian in character and direction. DCPA headquarters is located in the Pentagon. In addition, there are eight DCPA Regional Offices located at Region One, Maynard, Mass.; Region Two, Olney, Md.;

Region Three, Thomasville, Ga.; Region Four, Battle Creek, Mich.; Region Five, Denton, Tex.; Region Six, Denver, Colo.; Region Seven, Santa Rosa, Calif.; and Region Eight, Bothell, Wash. During fiscal year 1973, DCPA established Regional Field Offices, at New York City in Region One, and Kansas City, Mo., in Region Six. DCPA also maintains a Staff College at Battle Creek, Mich.

### Joint Responsibility

In keeping with a declaration in the Federal Civil Defense Act that the responsibility for civil defense "shall be vested jointly in the Federal government and the several States and their political subdivisions," DCPA works closely with State and local governments in developing their capability for taking effective action in time of emergency. DCPA also works with some 30 other Federal Departments and Agencies that have emergency preparedness responsibilities assigned by Executive order, or interagency agreement. During the fiscal year, DCPA reinforced close working relations, through signing new agreements with disaster-concerned organizations and agencies, including: the American National Red Cross (ANRC), U.S. Department of Agriculture (USDA), National Oceanic and Atmospheric Administration (NOAA), and the Boy Scouts of America.

Liaison, including contractual arrangements for certain civil preparedness activities, is maintained by DCPA with the National Association of State Civil Defense Directors, the United States Civil Defense Council (local membership), and various other technical and professional advisory groups.

In addition, DCPA receives timely and effective active support from the Armed Services. The concept of military support for civil authority received increased emphasis from the Armed Services during fiscal year 1973. All Services have recognized the need for a strong civil preparedness program, and have developed comprehensive survival and recovery plans to assist civil authority in the event of natural disaster or enemy attack.

The Secretary of the Army has been designated as executive agent for providing military support to civil defense. The Commanding General, U.S. Continental Army Command, and Continental U.S. (CONUS) Army Commanders provide planning guidance to State Adjutants General in

the preparation of military support for civil defense plans in each of the 48 contiguous States. In Alaska, Hawaii, and Puerto Rico similar plans are developed by the appropriate unified command and the State Adjutant General. Current plans call for each Adjutant General, when called to Federal service as a State area commander, to exercise operational control over military units made available for transattack and post-attack military support requirements.

The Army established eight civil defense support detachments to augment communications and security personnel at DCPA Federal Regional Centers in the event of enemy attack or natural disaster.

In times of declared major disasters, Defense organizations swing into action in accordance with joint plans which have been developed under the guidance of the U.S. Army's Director of Military Support. All available Department of Defense resources may be committed to aid civilian communities in time of need. Tropical storm "Agnes" is an example of such an effort.

As a Defense agency, DCPA itself responded to the call for assistance in the wake of "Tropical Storm Agnes." Although "Agnes" and the resulting "Great Flood" occurred at the end of fiscal year 1972, DCPA followup actions continued for several months during fiscal year 1973.

As part of the massive Federal assistance effort, the DCPA:

- Loaned nearly 70 staff specialists from its Headquarters and Regional Offices for disaster relief operation in four States;
- Loaned electrical generators and water pumping equipment from DCPA emergency stockpiles to stricken communities; and
- Was prepared to help civil defense units replace or repair facilities damaged or lost in the "Agnes" disaster.

The nearly 70 DCPA staff specialists working in the disaster area served in Pennsylvania at Harrisburg, New Bloomfield, Chambersburg, Lock Haven, Pittston, Norristown, Pottsville, Reading, Lancaster, Carlisle, Wellsboro, Danville, Kingston, Pittsburgh, Huntingdon, Indiana (Indiana County) and Altoona. In Virginia, DCPA professionals were assigned to Richmond offices of the Office of Emergency Preparedness (OEP). In West Virginia, DCPA staff members

worked in Charleston and Wheeling, and in Maryland, with the State Civil Defense agency at Pikesville and at the Baltimore Office of OEP.

The majority of DCPA personnel were called upon to set up and operate Federal "one-stop" disaster relief centers, and a number of them were on loan to OEP and staffed OEP regional installations.

DCPA Regional Offices at Olney, Md., and Maynard, Mass., were major Federal communications centers for gathering and evaluating disaster information, and expediting assistance in personnel and equipment. DCPA Regional Office specialists worked with local civil defense officials in the storm area to assure that they were adequately equipped and staffed to cope with the disaster.

Many lessons learned from "Agnes" will be helpful in assisting other communities prepare for emergencies of this kind. Many communities, spurred by the "Agnes" disaster, have begun to assess their capabilities to cope with massive emergencies, and to look for means of improving these capabilities.

### **Preparedness Partners**

In the civil preparedness program, DCPA works with the 50 States, Puerto Rico, the Canal Zone, the Virgin Islands, Guam, American Samoa, and the District of Columbia; and through the States, with more than 3,000 counties or parishes, and approximately 10,000 local governments.

The main thrust of the National Civil Preparedness Program is to help States and communities develop dual-use emergency systems to protect people from both peacetime disasters or the effects of nuclear attack. This is accomplished through on-site assistance, an activity which received top priority in implementing the civil preparedness program during fiscal year 1973. Many local On-Site Assistance Action Plans were established during the fiscal year; and some have paid off in lives saved when put into effect as the need occurred. The need occurred in Baldwin County, Alabama, and is described in a DCPA news release:

During the summer of 1972, a DCPA On-Site Assistance Project was carried out by County Civil

Defense Coordinator J. B. Dusenbury, working with DCPA and State personnel, other County officials, and Mr. Billy Manning, an engineer from Auburn University's Civil Defense Professional Advisory Services Center. In the course of the project, an engineering survey was ordered for the school in the small town of Rosinton, Ala. At the conclusion of the survey, changes were made in the school's plan for sheltering students. Specifically, it was recommended that students be sheltered in classroom areas, rather than in the gymnasium with its wide-span roof.

In November 1972, a tornado headed toward Rosinton. Some students were in the gymnasium. The school principal quickly moved them to the classroom shelter areas designated a few months earlier.

When the tornado struck, the roof of the gym collapsed. There were no casualties, thanks to the foresight and concern of dedicated professional civil preparedness leaders and of a school principal. Had the students stayed there—as they would have before the emergency plan was revised—serious injuries and perhaps loss of life would have resulted.

### **Paying for the Program**

Funds available during fiscal year 1973 for carrying out Defense Civil Preparedness Agency operations totaled \$87.2 million; \$83.5 million of new fiscal year 1973 appropriations, \$3.6 million carried over into fiscal year 1973 from prior year appropriations, and nearly \$0.1 million in reimbursable orders from other agencies. Of this total, \$85.9 million was apportioned by the Office of Management and Budget early in the year for execution of the fiscal year 1973 program, nearly \$1.1 million was apportioned at yearend to finance part of the fiscal year 1974 program, and \$0.2 million was transferred to General Services Administration for services provided to DCPA.

Table 1—page 55 shows the planned application of the funds programed for obligation in fiscal year 1973, and the actual obligations for specific activities. The Defense Civil Preparedness Agency obligated \$82.2 million, or 94.5 percent, of the \$87.0 million programed for obligation.

## readiness actions

Preparedness to cope with the effects of peacetime and wartime disasters includes many diverse but interrelated elements that must be woven into a comprehensive program involving all levels of government—Federal, State, and local—plus the individual citizen. Programs developed through this cooperative effort provide the best chance to avert or minimize the effects of all disasters, protect life and property, and restore the stricken area, with a minimum of social and economic disruption.

Local plans and procedures to cope with disasters are, of course, the keystone to the protection of life and property. However, few local governments can by themselves effectively prepare for, and cope with, major disasters. They need State and Federal assistance in preparation and recovery.

Local chief executives who have had to “face the music” following a disaster—even though they had made some advance preparations—can attest: there is no way ever to be fully prepared, any more than one can ever be fully insured. But reports over the years underscore one point: they were glad they had made the preparations before the Big Test came.

### ON-SITE ASSISTANCE (OSA)

On-Site Assistance is the top priority activity of the Defense Civil Preparedness Agency. It involves direct on-site (at the locality) Federal and State efforts to assist local governments in improving their emergency operational capability to cope with natural disasters and other peacetime emergencies in addition to nuclear war. On-Site Assistance consists of specific steps to (1) assess existing local capabilities, (2) determine local needs, and (3) develop an action plan to meet requirements and deficiencies identified. An action plan leads to concrete and immediate assistance, in many cases, in the form of surplus and excess property grants and loans, and planning, training, and technical assistance from DCPA.

On-Site Assistance requires that civil preparedness be viewed as a total preparedness effort. This totality is made up of many parts: some are tangible, such as rescue vehicles and emergency operating centers. Others, such as planning, training and motivating, are intangible. On-Site Assistance aims at helping localities tie together their existing assets, both tangible and intangible, into the ability to conduct emergency operations.

Thus, On-Site Assistance is basically people-oriented, emphasizing planning, organizing, training, and exercising; and requiring some shift in approach and attitude from the more hardware-oriented programs of the 1960's.

By the close of fiscal year 1973, on-site visits by joint DCPA Regional and State civil preparedness teams had been made or were scheduled for 528 localities in 49 states, Guam, the Virgin Islands, and Puerto Rico.

### **CIVIL DEFENSE MILITARY RESERVE MOBILIZATION DESIGNEE PROGRAM (CD MOBDES)**

Initiated early in fiscal year 1973, the CD MOBDES program holds potential for significant improvements in local civil preparedness. Under the program, Army, Air Force, and Marine reservists—officers, warrant officers, and enlisted members of the Individual Ready Reserve, both male and female—have the opportunity to serve as Civil Defense Mobilization Designees, with training and duty at local or State civil defense agencies or at Regional Offices of the Defense Civil Preparedness Agency.

The objective of the program is to strengthen the emergency capabilities of civil governments—local, State, and Federal—by augmenting their civil defense agency staffs with trained reserve MOBDES personnel. These personnel serve as specialists on the civilian staffs of the CD agencies. In a wartime or peacetime disaster period, they will augment the regular staff members in carrying out their emergency duties; in nonemergency periods, they will aid the agency in its preparedness planning activities.

Benefits for the CD MOBDES personnel include the opportunity of earning the required point credit for a satisfactory retirement year; and training and duty stations within daily commuting distance of their homes.

During fiscal year 1973, allotments of 600 Army, 2,932 Air Force, and 50 Marine spaces were authorized by the Secretary of Defense for personnel assignments to CD Offices. By the close of fiscal year 1973, there were 438 Army, Air Force, and Marine Corps assignments to Regional, State, and local civil defense offices.

## **WARNING**

The value of past investment in disaster prediction and warning capabilities is clearly demonstrable. Despite increasing property losses, there has been a notable decline in lives lost when such capabilities have been established and used, particularly for hurricanes and tornadoes. Timely and accurate warning and appropriate public response are central objectives of responsible officials at all levels of government.

Federal warning systems are designed to pass warning to strategic points from which State and local governments warn the public. The Civil Defense Warning System (CDWS) operates throughout the continental United States, including Alaska. This system interconnects Federal, State, and local warning systems in a single warning network. Separate warning systems serve Hawaii, American Samoa, Guam, Puerto Rico, and the Virgin Islands.

### **National Warning System (NAWAS)**

The Federal portion of the CDWS is the National Warning System (NAWAS). Almost instantaneous attack warning information can be disseminated to State and local warning points from any one of three national warning centers continuously manned and operated for DCPA by U.S. Army Strategic Communications Command (USASTRATCOM) warning officers. The primary National Warning Center is in Cheyenne Mountain, Colorado Springs, Colo. The other warning centers are located at Denton, Tex., and Olney, Md. The system includes 350 warning points at Federal installations throughout the United States; and 857 State and local warning points, for a total of 1,207 as of the end of the fiscal year.

Severe weather information generated within a given State is disseminated by government officials within the same State and across the borders of adjacent States by NAWAS. DCPA has placed NAWAS installations at more than 200 National Weather Service facilities. For several years, DCPA has assisted the National Weather Service of National Oceanic and Atmospheric Administration (NOAA) in the dissemination of severe weather information. In June 1973, DCPA entered into a broader agreement with NOAA to further community disaster preparedness by joint planning, coordination, and program effort, involving all applicable agency activities. On-site

assistance was designated as the principal means for carrying out this program effort at local government levels.

"Dual capability," the watchword for civil preparedness in the 70's, means the DCPA systems built over the past decade to protect people in the event of nuclear attack are being examined for use in peacetime. The National Warning System is a particularly apt example of a dual-use system. No matter what the emergency, dual-use systems can add to the local capability to save lives and prevent needless suffering when disaster strikes.

As an example, on April 16, 1973, the NAWAS warning point at the National Weather Service Office in Grand Island, Nebr., was used to relay a tornado warning to Ansley, Nebr., where, as a result, sirens were blown to warn the citizens to take shelter approximately 20-minutes before a tornado struck causing severe damage to homes and businesses.

The use of civil defense communications systems for natural disaster warning is authorized by Executive Order 11575, December 31, 1970, and as amended, March 29, 1972. Further dual-use will be sought wherever possible.

#### **Decision Information Distribution System (DIDS)**

DIDS is a low-frequency radio network designed to supplement and improve the present Nationwide Warning System by providing warning information directly from the three National Warning Centers to all levels of government in the continental United States. Construction is nearing completion on a DIDS prototype transmission facility located at Edgewood Arsenal, Md. It will serve a 10-State area from Virginia to Massachusetts, and has been "on-the-air" for extensive testing since early June 1973."

DIDS could form the basis for automatic indoor home warning. Special receiving devices under development included within regular television or radio receivers, and making use of low-frequency transmissions, could provide automatic alert and warning information for the public. Acquisition and use of these devices would be voluntary on the part of individual citizens. DIDS is expected to find an important peacetime application for warning of local natural disasters. Procedures for this purpose are being developed jointly with the National Oceanic and Atmospheric Administration (NOAA).

## **STATE AND LOCAL WARNING**

State and local governments use a variety of communications facilities for sending warning and supplementary information from 1,207 NAWAS warning points to thousands of local warning points. Telephone and radio are widely used for alerting local civil defense personnel and government officials. Local warning systems include both indoor and outdoor warning devices to alert the public. The siren is a preferred common outdoor warning device — although horns, whistles, and voice sound systems are also used. Indoor warning devices include telephone, radio, and various commercial communications facilities such as public address systems and circuits for transmitting background music to public places. Use of Community Antenna Television (CATV), commonly known as Cable Television, for dissemination of natural disaster warnings to the public increased significantly during the year.

Most State and local warning points are located within existing governmental agencies which are continuously manned, such as law-enforcement or fire department headquarters. This assures 24-hour warning coverage for the areas served by each warning point. During the year, DCPA continued to provide guidance and financial assistance to State and local governments to strengthen their warning systems. NAWAS extensions have been installed with Federal matching funds assistance at 334 locations important to local civil preparedness operations.

## **EMERGENCY OPERATIONS: COMMAND, CONTROL, AND COMMUNICATIONS**

DCPA has continued to advocate dual-use of facilities, equipment, and personnel to cope with day-to-day as well as attack emergencies. The civil preparedness communications systems, warning systems, and Emergency Operating Centers are available and extensively used for any type of emergency.

Any local government capable of coping with peacetime emergencies is a long way down the road in its capability to deal with the effects of nuclear attack. During fiscal year 1973, many civil defense systems and operating centers met the test in peacetime emergencies and disasters.

Communications between DCPA National Headquarters, the eight DCPA regions, and the States are provided through use of the first three systems described below. These systems are operated and maintained by the U.S. Army Strategic Communications Command (USASTRATCOM), with policy guidance and requirements furnished by DCPA.

### **Civil Defense National Teletype System (Primary)**

The Civil Defense National Teletype System (CDNATS) is one of two primary systems used for transmitting civil defense communications between DCPA National Headquarters, a relocation headquarters, the eight DCPA Regional Offices, the 50 States, Puerto Rico, the Virgin Islands, the District of Columbia, and four locations in Canada. The present system permits simultaneous automatic message switching among all connected terminals. This automatic switching feature provides unattended service after normal duty hours, and allows users to send a single address or to a multiple number of addresses within the system.

### **Civil Defense National Voice System (Primary)**

The Civil Defense National Voice System (CDNAVS) is the second primary system, and is comprised of both AUTOVON and dedicated, leased, full-period circuits. AUTOVON is used between DCPA National Headquarters, a relocation headquarters, and the eight DCPA Regional Offices. Circuit preemption capability has been provided. The dedicated circuits provide direct lines on either a conference or individual basis between each DCPA Regional Office and its States. During the year, the 10 OEP Regional Offices and two DCPA field offices were added to the system. Because of recurring disasters, a second voice circuit has been installed to 10 disaster-prone States.

### **Civil Defense National Radio System (Backup)**

The Civil Defense National Radio System (CDNARS) is a high-frequency radio network used for backup to the teletype (CDNATS) and voice (CDNAVS) systems. Control facilities for the radio system are collocated with the wireline voice and teletype positions to make them readily available during emergencies. During the year, radio equipment was installed in Louisiana mak-

ing it operational in 48 States, the District of Columbia, Puerto Rico, and the Canal Zone—as well as in a DCPA relocation headquarters and the eight DCPA Regional Offices. Installation agreements have been signed with the remaining two States and with Guam. Late in fiscal year 1973, temporary, high-frequency radio equipment was installed for the Virgin Islands in anticipation of possible wireline failures during the hurricane season. This equipment will be manned by licensed amateur radio operators.

### **Radio Amateur Civil Emergency Service (RACES)**

During fiscal year 1973, more than 1,900 RACES plans were reviewed and many were updated to support State, county and local emergency communications requirements. RACES is made up of amateur radio operators who perform emergency communications functions as an important supplement to State and local emergency communications operations. During the year, many RACES and local Citizens Band radio networks were called into service to support police, fire, and rescue operations during disasters. Of special interest was the report that in Elmira, New York, during the Agnes flooding, the only radio communications in or out of the flood-stricken area were provided by an amateur radio operator.

### **State and Local Emergency Communications Planning**

During fiscal year 1973, State and local governments continued to develop emergency communications plans based on DCPA guidance. This guidance provides for the most effective use of existing communications resources and recommends acquiring additional communications equipment only when justified to meet a requirement. At the close of this fiscal year, a total of 48 States and 915 local governments had completed Communications Planning Reports.

### **Broadcast Station Protection Program**

Under the Broadcast Station Protection Program, key broadcast stations are protected from radioactive fallout, and are provided with an emergency power generator, programing equipment, and a radio link to an associated Emergency Operating Center. This gives these stations the capability to remain on the air to broadcast Presidential, State, and local information under fallout conditions. Also, this capability permits

these stations to remain on the air to broadcast essential information when power fails during natural disasters and other commercial power failures.

A total of 595 AM stations have been included in this program, and 113 of those stations have both AM and FM broadcasting capability. By June 30, 1973, fallout protection had been completed in 590 stations, and 581 of these had also been provided the required equipment. No additional stations were included in the program this fiscal year. Radio links to associated EOC's were provided for 10 stations as the EOC's were completed. Other actions were taken to maintain the present emergency broadcasting capability. During the year, several stations used the equipment furnished under this program to broadcast essential information when power failed during tornadoes and during the heavy flooding in the northeast part of the country.

### **Regional Emergency Operating Centers**

To assure continuity of Federal field emergency operations, underground Federal Operating Centers have been constructed in six of the eight DCPA Regions. The underground centers for the remaining two centers are in the planning and design process. The underground centers house the Regional staffs of DCPA and the representatives of other Federal Government agencies. The buildings provide substantial protection against the effects of nuclear weapons. They contain a 30-day supply of fuel, food, and other supplies and have their own water supply and power for emergencies. These centers have communications that tie all the States in their Regions into one network with the Federal Civil Defense System.

Underground centers now operational are located at Region One, Maynard, Mass.; Region Two, Olney, Md.; Region Three, Thomasville, Ga.; Region Five, Denton, Tex.; Region Six, Denver, Colo.; and Region Eight, Bothell, Wash. The centers to be completed are for Regions Four and Seven.

Plans call for fitting each Regional Center with protection against the effects of electromagnetic pulse (EMP). During fiscal year 1973, the Centers at Regions Two and Three were so fitted.

### **State and Local Emergency Operating Centers**

An Emergency Operating Center (EOC) is a protected place where the government executive, his department heads, and other key officials can

meet to direct and control operations in a community emergency. The Center is a focal point for warning and emergency communications — including emergency public information. EOC's are promoted by DCPA for use in peacetime emergencies as well as in the event of nuclear attack. During fiscal year 1973, EOC's were frequently used by local governments in dealing with emergencies such as hurricanes, earthquakes, widespread fires, floods, and ice and snow storms. In many communities, EOC's are also in day-to-day use as the normal headquarters of government units such as civil defense or police or fire departments. Such dual-use is encouraged by DCPA.

Development and construction costs of EOC's which meet Federal standards may be matched up to one-half with Federal funds. During the fiscal year, approximately \$9.2 million in Federal funds were obligated for the planning, design, construction, and equipping of State and local EOC's. Federal standards, recommended for all EOC's and required for Federal financial assistance, include fallout protection, emergency generators and fuel, sufficient food, water, and medical supplies to maintain the emergency staff for at least 14 days, a ventilation system, emergency communications and warning facilities and equipment, and sufficient space for an augmented staff.

By the close of the fiscal year, a total of 1,328 EOC's had been established or were being established, through assistance by Federal funds.

### **Damage Assessment**

Based upon its responsibilities under Executive Order 10952, the Defense Civil Preparedness Agency continued the development of planning and operating systems for nationwide postattack assessment of damage following a nuclear attack. During and after a nuclear attack, Federal, State, and local governments would receive from the damage assessment systems the information needed to direct emergency operations and to speed recovery from the effects of the attack.

During fiscal year 1973, DCPA conducted continuing damage assessment and vulnerability studies to meet the requirements of the Executive Order. DCPA designed and operated a wide variety of computer models to estimate direct effects and radioactive fallout resulting from possible nuclear detonations. These estimates included population and critical national resources, and were used as a basis for the development of effective civil preparedness postures.

The National Civil Defense Computer Facility (NCDCF) is maintained by the DCPA to provide the necessary computer support services for damage assessment, operations analysis, fallout shelter programs, increased readiness programs, tests and exercises, information systems, and a wide variety of management applications. The NCDCF also furnished increased technical assistance in ADP to State and local civil preparedness jurisdictions which are entering the computer systems field. The maintenance of the numerous data bases that support the operating systems continued to be a basic service provided by NCDCF.

### **Emergency Information**

The Defense Civil Preparedness news exchange, *RESPONSE*, is based on the concept that examples of the responses of a local civil defense director to emergencies in his community can be of direct and lasting benefit to other communities throughout the Nation — and, as a consequence, to the security of the Nation.

Information sent in from State and local civil defense directors across the country was condensed, edited, and published. From July 1972 to June 1973, six editions of *RESPONSE* were published and delivered across the Nation to State and local civil defense directors, and upon specific request, to Federal agencies, governmental officials, private organizations, schools, colleges, libraries, and individuals. *RESPONSE* continued to be international in scope during fiscal year 1973, as stories of civil defense accomplishments were shared with Canada and lands across the seas, namely England, Ireland, Australia, and Germany. Stories appearing in *RESPONSE* this year involved 64 communities and 34 States. At year's end, work was underway to combine *RESPONSE* and DCPA Regional newsletters into a single periodical aimed at a broad audience concerned with various aspects of civil preparedness.

*Information on Other Programs Applicable to Civil Preparedness.* — In addition to the Defense Civil Preparedness Agency, a number of other Federal agencies have programs that are directly related to emergency readiness actions in local communities. With information as a key — information about these other Federal programs and procedures — DCPA Headquarters started in August 1971, to send special information packets, compiled from other Federal agencies, to its Regional Offices. The purpose was to provide

DCPA regional staff members with a variety of informational tools to use in assisting State and local civil defense directors, especially in DCPA On-Site Assistance techniques.

In fiscal year 1973, many of these special information packets were sent to DCPA Regional Offices describing specific emergency readiness program elements available from other Federal departments and agencies. More than seven million copies of publications prepared by the National Oceanic and Atmospheric Administration (NOAA) and reprinted by DCPA were made available to DCPA Regions, Staff College, and to State and local civil defense directors for use in disaster preparedness programs.

### **Emergency Operations Planning**

This program translates the results of DCPA research, operational analysis, and field tests into practical civil preparedness doctrine and operational systems for use at State and local level. In addition to refinement of On-Site Assistance previously described in this report, projects during the year included:

- *Crisis Relocation Planning.*—During fiscal year 1973, DCPA worked on the development of handbooks for use in guiding State and local governments in preparing contingency plans for population relocation, should a period of international crisis make this advisable. Such contingency plans may also be needed when certain types of natural disasters threaten, such as hurricanes or floods, which might require people to evacuate low-lying areas. The contingency planning guidance was developed through on-site work in Richmond, Va., and San Antonio, Tex. DCPA expects to make use of the guide during fiscal year 1974, in prototype projects in Colorado and other States.

- *State On-Site Assistance.*—During fiscal year 1973, a project was launched to ascertain the need for On-Site Assistance at the State level. Work was completed on a prototype basis in South Carolina, and in the Commonwealth of Pennsylvania, following Hurricane Agnes. The prototype work resulted in a detailed plan for joint State and Federal efforts to improve operational readiness in South Carolina. As a result, the South Carolina Legislature revised and updated the State Civil Defense law.

- *Standards for Local Civil Preparedness.*—During the fiscal year, Standards were developed

jointly by local, State, and Federal civil preparedness officials, and were distributed as an aid to local officials for improving their ability to save lives and preserve property in all kinds of disasters. In addition, a Summary of the Standards stressing the "why" of local civil preparedness was prepared and distributed to local officials. The Standards and Summary were prepared in cooperation with the Council of State Governments, the National Association of Counties, the National League of Cities and U.S. Conference of Mayors, and the International City Management Association.

● *Local Resources Preparedness.*—DCPA continued to design and test concepts and procedures for postattack control of life-support resources. DCPA works with Federal, State, and local governments, as well as with selected private industry representatives whose products (e.g., energy) are among the most essential to sustaining life post-attack. The principal objectives are to devise systems that would provide equitable and, at the same time, effective local resource management preparedness in all local jurisdictions of the United States. The principal participants in this preparedness are the private-sector owners and operators of the many local business outlets that supply essential life-support items and services. Prototype preparedness plans are being developed on-site for ensuring that the responsible qualified leaders of government and the private sector will be organized for immediate mobilization in a crisis. A prototype Resolution, enacted May 1, 1973, by the City Council of Linden, New Jersey, is an early product of this joint Federal-State-local developmental effort for emergency control of life-support resources.

● *Computer-Assisted Natural Disaster Operations.*—Under a contractual arrangement with the University of Tennessee, a prototype computer system to assist local planners in natural disaster operations was developed and tested during the fiscal year. The system, using existing computer programs and available data, produces outputs useful in local natural disaster planning. Outputs include numbers of people and resources in an area; estimates of requirements to deal with all types of natural disasters; and allocations of populations affected to temporary shelter. Additional capabilities will be developed during fiscal year 1974, including a complete computer package for use in large metropolitan areas.

## Radiological Monitoring and Reporting Systems

DCPA continues to emphasize the importance of an effective radiological monitoring and reporting system which would be vital in the event of a nuclear attack. Knowledge of radioactive fallout patterns would enhance the safety of the population in recovery work and in rehabilitation. Realizing that systems in everyday use have a greater probability of being available for use in emergencies, stress has been placed on dual-use of radiological detection and monitoring resources. Application of this concept has been as follows: (1) To incorporate on-going peacetime activities into emergency response systems, and (2) to make available DCPA Radef resources to enhance peacetime emergency operational capabilities.

The increasing use of nuclear power and radioactive materials continues to raise the possibility of peacetime accidents resulting in hazards to life and property. Therefore, DCPA worked with other interested Federal agencies to delineate Federal agency responsibility in connection with nuclear incident planning at the Federal level and to provide planning assistance to State and local governments. On January 24, 1973, the Office of Emergency Preparedness issued a notice in the Federal Register assigning Federal agency responsibility for fixed nuclear facility incident planning. The U.S. Atomic Energy Commission was made the leading operating agency, and DCPA was made responsible for:

1. Assistance to State and local authorities in planning the general emergency preparedness actions required in response to nuclear accidents, consistent with AEC guidance.
2. Recommendations and guidance on the use of the civil defense radiological monitoring system.

The assistance to State and local authorities will be carried out through the On-Site Assistance effort of DCPA. DCPA participated in four AEC-sponsored Seminars on State Emergency Planning in Relation to Licensed Nuclear Facilities held at Oak Ridge, Tenn.; Argonne, Ill.; Brookhaven, N.Y.; and Livermore, Calif.

*Operational Monitoring.*—By June 30, 1973, 73,759 CD V-777 radiological monitoring operational sets were issued to provide a monitoring capability throughout the United States. As in prior years, fiscal year 1973 emphasis was placed on establishment of radiological monitoring and reporting capability in those geographical areas

not having this capability, and in emergency service locations such as police and fire departments where there would be peacetime assignments for radiological accidents or incidents.

*Shelter Monitoring.*—The end of fiscal year 1973 saw a total of 120,401 public fallout shelters provided with at least one radiation monitoring kit (CD V-777-1). This was a net increase of 3,416 during the year. Radiation measurements in each shelter would serve as a basis for (1) determining the best protected shelter areas in a facility, (2) determining the advisability of using adjoining areas of the facility to alleviate crowding when radiation intensities permit, and (3) determining the amount of radiation exposure to be recorded for shelter occupants. Many shelters will also serve as operational monitoring locations and provide this information to local governments.

*Aerial Monitoring.*—All 50 States, the District of Columbia, and Puerto Rico have been furnished equipment for the development of an aerial monitoring capability. A total of 665 CD V-781 Aerial Survey Meters and supporting equipment has been issued. The aerial monitoring plans (as a part of each State's resources plan) have continued to be developed. These plans are in consonance with the North American Air Defense Command (NORAD) Plan, "Security Control of Air Traffic and Navigation Aids (SCATANA)." Regions and States have continued to teach Aerial Monitor courses. The Instructor Guide for Aerial Radiological Monitoring was completed and ready for use in October 1972.

*Postattack Radiation Exposure Control.*—The States have been supplied with 1,888,602 dosimeters and 82,404 dosimeter chargers for use by emergency services personnel who would conduct postattack emergency operations. The dosimeters are for exposure control through measurement of the workers' accumulated radiation exposure.

*Distribution of Radef Instruments.*—Radiological defense instruments distributed during the year totaled 108,000 for a cumulative total of 4.2 million. The number of instruments on hand has been adequate to meet requirements for shelter and operational monitoring sets. Therefore, procurement has been for replacement parts to maintain and increase the reliability of the instruments.

*Radef Equipment Inspection, Maintenance, and Calibration.*—Since radiation cannot be detected by the human senses, radiation detection and measuring instruments must be used for detection and monitoring. The instruments can be used to measure exposure rates and doses in shelters, and also for determining exposure of emergency workers outside shelters. To give a reliable operational capability, these sensitive instruments must be periodically inspected, recalibrated, and repaired. The 100 percent federally funded inspection, maintenance, and calibration program was continued during the year for the 50 States, the District of Columbia, and Puerto Rico.

All civil defense operational monitoring instruments that have been distributed for emergency use are calibrated and serviced every two years at State calibration facilities. Major repairs are made at these facilities. During the fiscal year, State personnel inspected more than 735,000 instruments and repaired and/or calibrated approximately 225,000. DCPA has developed radiation devices suitable for calibrating all ranges of the radiological instruments being used, without a significant radiation exposure to the operator. These calibrators have been made available to all States.

*Radiological Engineering Services.*—DCPA participation in the cooperative Federal Agency Program to lend assistance to State and local governments in peacetime nuclear incident planning resulted in modification of the CD V-700 low-range survey meter. The modified CD V-700 will be useful to local communities in coping with emergencies which involve radioactive materials.

*Fallout Forecast Data.*—Under contract with DCPA, the U.S. National Weather Service continued to disseminate data on upper wind observations throughout the continental United States, Alaska, Hawaii, and Puerto Rico. Approximately 70 National Weather Service observatories routinely take twice-daily observations of direction and speed of upper winds. This raw data is computer-processed into fallout prognosis for more than 100 points in the United States and Canada. The fallout forecast message provides information for use at 12, 18, and 24 hours after the twice-daily observations. The forecast messages are calculated for particles originating at the 100-millibar level (approximately 53,000 ft.)

that fall to the ground within a 3-hour period. This information can be used at Emergency Operating Centers to develop fallout forecasts.

### Emergency Equipment

One hundred and forty communities in 32 States were aided during the fiscal year through the loan of DCPA emergency power/water supply equipment.

The loans helped these local governments recover from disaster and protect the health and welfare of their residents during emergencies. In many cases, the loans enabled communities to avoid spending their limited funds for new equipment needed only temporarily. In other cases, the needed equipment could not have been obtained in time to meet the emergencies.

For the past nine years, emergency power/water supply equipment has been made available without charge to communities to help them cope with emergency situations. The equipment includes water pipe, pumps, chlorinators, purifiers, storage tanks, and electric generators. It is stored at 15 locations throughout the country which are managed by the Defense Supply Agency (DSA). The Defense General Supply Center (DGSC) at Richmond, Va., a field activity of DSA, is the National Inventory Control Point for the DCPA emergency equipment.

Heavy rains this spring caused much flooding throughout the entire country. Thirty communities in 17 States were issued 179 pumps to alleviate the problem. Eighty-nine of these pumps were issued to combat conditions caused by the Mississippi floods. In West Virginia, 32 pumps were issued to avert excessive flooding due to dam failures in Logan, Mingo, and Nicholas counties.

To overcome local drought conditions or water shortages, 23 communities were issued 331,940 feet of pipe, 31 pumps, 1 chlorinator, 15 purifiers, and 10 tanks.

Waste fires broke out in three Pennsylvania communities this fiscal year, and 10,000 feet of pipe and three pumps were loaned to combat the fires. Assistance was provided during the repair of ruptured or broken water lines in the States of Virginia and Kentucky. Equipment loaned consisted of water storage tanks, pipe, pumping and purification equipment.

Twenty-eight generators of various sizes were issued to 11 communities to overcome some temporary shortage of electrical power or power failure. In New England, four generators were

issued to assist during a local "brown out."

Ten chlorinators were issued to five communities due to local water contamination; two of these were airlifted to Miami Beach when the chlorinators in the local system malfunctioned.

Inventory value of the equipment loaned during the fiscal year was approximately \$1.9 million. At the end of the fiscal year, equipment was still on loan to 20 States for use in 84 communities.

### Tests and Exercises

Fiscal year 1973 saw a continuation of the transition from nationwide exercises involving State and local governments to individualized exercises for selected local governments. These local exercises are being scheduled in on-site assistance action plans to meet the particular needs of a locality. Exercises being used at the local level are:

1. Emergency Operations Simulation (EOS) to inform and train key officials and department heads in emergency operations;
2. Planning seminars to permit in-depth discussion and study of specific problems of concern to key officials; and
3. Full-scale emergency operations simulation exercises requiring full staff participation involving government, industry, and private sector interaction and cooperation.

Emergency Operations Simulation (EOS) is an experience which motivates. Few local executives undergo it without resolving that civil preparedness needs more of their attention, or more funds, better planning, or additional equipment and personnel. EOS also provides a test of existing facilities—it can demonstrate to top officials and budget-makers whether an EOC or emergency plans are equal to the potential disasters for which they are designed. In an on-site assistance project, an EOS may be used to evaluate a community's resources, pinpoint its deficiencies, or show the steps needed to remove them. An EOS also demonstrates the results of on-site assistance.

There were 310 Emergency Operations Simulation exercises held throughout the United States during fiscal year 1973. Approximately 3,000 persons participated in a citywide tornado test in Portsmouth, Va., on May 8, 1973:

*U.S. Civil Defense Council Bulletin—July 1973—Portsmouth Civil Defense, assisted by the medical staffs of Portsmouth General Hospital, Maryview Hospital, United States Naval*

Hospital, U.S. Navy Dispensary at the Naval Shipyard, and Public Health Service, conducted the exercise to determine the operational readiness of local government for emergency medical services resulting from a major natural disaster.

The exercise also provided Emergency Operating Center training for the various departments of city government and encouraged public participation in learning the warning system used by Portsmouth for natural or nuclear disasters.

Objectives included testing local medical planning in the treatment of mass casualties, testing the city's ability to transport large numbers of injured persons, testing communications effectiveness, testing the ability of department heads to determine the effects of a major disaster on the city, and finally, to give further training to students of the six local high schools who had received training through the Medical Self-Help Program.

The test began at 10:00 a.m., when a simulated tornado struck the Naval Shipyard located in the city. It bounced into the middle of town

and left by way of the Churchland Shopping Center, causing injuries to approximately 500 students and 100 naval personnel who were tagged with all types of injuries at the beginning of the test.

First-aid stations were set up at six locations throughout the city, and vehicles from the schools; the police, fire, public works, public health, and welfare departments; The Salvation Army; and Civil Defense were used to transport the injured to the three hospitals where the entire medical staffs and other personnel were used to check the victims into hospital trauma centers.

Personnel of the city's radio stations, assisted by RACES and Citizens Band volunteer operators, handled all communications between the Emergency Operating Center and field units and staging areas.

According to Capt. Lawrence W. Smythe and Portsmouth Civil Defense Director J. Herbert Simpson, the State Office of Civil Defense and the local Portsmouth officials were satisfied with the results of the exercise which closed with a critique of problems discovered during the test.

## preparing protection for people

Encouraging progress was made during the fiscal year toward reducing worldwide tensions. As a result of this progress, the likelihood of nuclear war also diminished.

Although the *likelihood* of nuclear war has decreased, the *possibility* of nuclear war remains. As long as this is so, the United States must maintain its military strength, and its passive defenses—its civil preparedness system.

To achieve the “Generation of Peace” sought by President Nixon, the United States must be able to negotiate with potential adversaries from a position of strength, not weakness. The President has said, “Strong defenses are not the enemy of peace. They are the guardian of peace.”

Accordingly, DCPA—in collaboration with State and local governments—continued during fiscal year 1973, to develop an effective, nationwide civil preparedness system which would save lives and protect property if a nuclear attack should occur, reduce suffering and hardship, and substantially increase chances of national survival.

### THE SHELTER PROGRAM

Studies show that a nationwide, balanced risk shelter system could save tens of millions of lives in event of a heavy nuclear attack. Moreover, the

present system, and plans for the years ahead, provides the Federal leadership with greater flexibility in making decisions for overall national security.

During fiscal year 1973, DCPA made additional progress toward the objective of providing the entire population of the United States with shelter from the hazards which could result from nuclear attack. Methods used to attain the objective are described in the following paragraphs.

#### The National Shelter Survey (NSS)

The NSS continued during fiscal year 1973 to locate potential shelter space. As in the past few years, survey operations continued to be principally of an updating nature—confined, for the most part, to areas developing community shelter plans. The operations consisted of surveying new facilities and resurveying facilities as needed, because of renovation, construction or related reasons, and identifying and deleting facilities which had been demolished. Computerized results of the survey operations were made available to State and local planning officials to help them provide protection for people in their areas of responsibility.

During the fiscal year, an all-effects survey was developed and tested. This all effects survey, which includes direct weapons effects and natural

disaster protection, is being implemented during the summer of 1973. Also during the year, contracts were negotiated with several States to fund engineering personnel to conduct State shelter surveys. This action was in keeping with the adjusted national program designed to better meet State and local needs.

An additional 9.7 million public shelter spaces were located during fiscal year 1973; and the nationwide shelter inventory was increased by 7,197 facilities, resulting in a grand total of 224,368 facilities, with an aggregate of about 222.3 million spaces.

## SHELTER DEVELOPMENT

DCPA administers a nationwide shelter development program. Its aim is to encourage and aid architects and consulting engineers to include shelter from both natural and manmade hazards in the design of new buildings.

DCPA, with the assistance of universities, institutes, and professional societies, has qualified many architects and engineers in the technology of shelter design and analysis. These architects and engineers, through the use of appropriate design techniques, are able to realize additional protection in new buildings at little or no extra construction cost. DCPA also offers advisory services on shelter design and related guidance to architectural and engineering firms and to building owners from Advisory Service Centers located in various States. These advisory services are provided at no cost to the building owner or his architect.

### Professional Development of Architects and Engineers

In recognition of the greater need for preparedness to meet the full spectrum of disasters—natural as well as nuclear—DCPA initiated a broader Architect and Engineer professional development program during fiscal year 1973. A new professional development course for architects and engineers titled Multi-Protection Design was developed and pilot-tested during the year, with a total of more than 600 architects and engineers in attendance. These courses emphasized slanting techniques to be used during the design phase in new construction or in the remodeling of existing structures at little or no additional cost to the building owner. Application of these techniques could result in lifesaving shelters to protect people

from the effects of natural disasters such as hurricanes, earthquakes, and tornadoes, as well as from the effects of nuclear attack. Additionally, as a further part of the professional development program, four two-week sessions of the Fallout Shelter Analysis course were conducted at the U.S. Navy Civil Engineer Corps Officer's School, Port Hueneme, Calif. In addition, a special 13-week semester course in Protective Construction was conducted at Kansas City, Mo., with some 35 participants attending.

DCPA-sponsored courses in Fallout Shelter Survey Techniques were again offered during the fiscal year for undergraduate students of architecture or engineering. The course prepared the students for summer employment in the Shelter Survey Program. Approximately 250 students were so employed during the summer.

The professional development courses are administered for DCPA, under contract, by the National Society of Professional Engineers. Exceptions are those courses conducted at the U.S. Navy Civil Engineer Corps Officer's School for practicing architects and engineers and those conducted for credit at universities and colleges for undergraduate students of architecture and engineering.

*Technical Information.*—To provide architects, engineers, and others with technical information on environmental hazards and natural disasters as well as the effects of nuclear weapons, new technical reports were developed and disseminated. New buildings providing protection against such hazards as vandalism, noise or pollution, floods, tornadoes, hurricanes, as well as fallout radiation, and electromagnetic pulse (EMP) were illustrated and described in various technical publications to show architects and their consulting engineers how protection against these hazards can be accomplished at little cost.

### Services to Architects and Engineers

*Direct Mail Shelter Development System (DMSDS).*—This program, administered by DCPA, involves use of a systematic procedure for contacting owners and architects of selected new buildings, to offer technical assistance for incorporating protection from natural and manmade hazards in the design of new projects. The DMSDS uses direct-mail techniques, combined with personal contact by State or local government authorities and Advisory Service Centers to assist the project designers. Contacts are made early in

the design phase while there is still time to incorporate protection into the building at little or no extra construction cost. During fiscal year 1973, the DMSDS was active in 47 States. Direct mail or personal contacts were made directly by State authorities in the States of Alaska, Arizona, Hawaii, Idaho, and Montana.

*Federal Buildings.*—Executive Order 11490 assigns emergency preparedness functions to Federal agencies, and requires that all Federal agencies engaged in building construction, to plan, design, and construct the buildings to protect the public against the hazards that could result from nuclear attack upon the United States. Federal agencies, where empowered to extend Federal financial assistance, are to encourage recipients to use standards for planning, design, and construction to maximize protection of the public.

DCPA, acting for DoD, reviews proposed annual design and construction programs for Federal buildings. The purpose of this review is to insure that the budget estimates include provision for public fallout shelter, as required by Executive Order 11490. During fiscal year 1973, 25 Federal agencies submitted their fiscal year 1974 design and construction projects to DCPA for review, and DCPA approved plans for provision of shelter in 64 major projects.

During the year, legislation was passed amending the Public Building Act of 1959, to include authorization of purchase contracts for Federal buildings that have been or will be designed with public shelter. More than 60 major Federal buildings are involved in this program. Other Federal construction programs which include fallout shelter are those of the U.S. Postal Service and the Military Services. By fiscal yearend, public shelters in Federal buildings accounted for more than 16.9 million spaces of the national inventory.

*Schools.*—DCPA continued to encourage State and local school officials to incorporate fallout shelter in new schools and to plan for total protection against environmental hazards, both natural and manmade, since protection provided against any one hazard often will provide protection from others.

Funded by DCPA, and in cooperation with the U.S. Office of Education, the Council of Educational Facility Planners (CEFP) continued during the fiscal year to provide DCPA slides, films, literature, and other informational materials on

shelter in schools. These materials are made available to architects and school-planning officials nationwide from the CEFP headquarters library in Columbus, Ohio.

The DCPA film "Environment for Education" was released during fiscal year 1973. It is narrated by E. G. Marshall, and it features six schools that have been designed with protection from various environmental hazards including radioactive fallout. They are: Lamar High School, Lamar, Colo.; East Central High School, Tulsa, Okla.; Hendrix College, Conway, Ark.; Nathan Hale Intermediate School, Crestwood, Ill.; Dr. Charles R. Drew Junior High School, Detroit, Mich.; and Missisquoi Valley Union High School, Swanton, Vt.

## LICENSING AND MARKING SHELTERS

*Licensing.*—A Fallout Shelter License or Privilege form authorizes the marking of public fallout shelters and temporary access by the public to specific fallout shelter space in emergencies. It also authorizes storage of shelter provisions in the facility, and inspection by government officials. During fiscal year 1973, licenses were signed for 1,056 facilities with an aggregate capacity for about 3.0 million persons. This increased the grand total to 130,205 licensed facilities, with an aggregate capacity for 138.2 million persons.

*Marking.*—A total of 625 facilities, with an aggregate capacity for approximately 1.9 million persons, were marked with DCPA-furnished standard fallout signs during the fiscal year. This increased the grand total to 118,889 marked facilities, with an aggregate capacity for approximately 118.4 million persons. Posting these signs is the responsibility of State and local government.

*Supplies.*—With the discontinuance of the Federal stocking program, except for radiological monitoring kits, in fiscal year 1972, emphasis now is on the maintenance, care, and inspection of supplies at local level. Guidance has been issued to assist in this effort to preserve supplies now in place, and for disposal of deteriorating supplies as deemed necessary by local governments. The Defense Supply Agency in its final accounting for the general supply items procured under the Federal Shelter Stocking Program showed that 105,873 shelter facilities had been provided with Federal supplies sufficient to take care of approximately 107.6 million persons for 8 days, or nearly

65.5 million for 14 days. During the fiscal year, 3,416 shelters were furnished with at least one radiation detection and monitoring kit, increasing the total so equipped to 120,401 facilities. By fiscal yearend, the capacity of shelters with Radef kits showed a cumulative total of more than 123.8 million spaces.

## **COMMUNITY SHELTER PLANNING (CSP)**

DCPA makes funds available for States to obtain the services of planners designated as Community Shelter Planning Officers (CSPOS). The CSPOS give technical assistance to city and county governments in the development of their Community Shelter Plans (CSP's) and for developing plans for dealing with peacetime disasters including natural disasters, environmental hazards and civil disorders, as well as the effects of nuclear attack.

In developing a Community Shelter Plan (CSP) for a given community, people are matched with specific shelters in the best possible combination, considering time and movement constraints. Development of a CSP for a large metropolitan

area is a complex task, appropriate for use of computer techniques. A computer-allocation procedure has been developed and field tested in several communities including Lewiston-Auburn, Maine, Huntsville, Ala., Oklahoma City, Okla., and Colorado Springs, Colo. Computer assistance for development of approximately 50 CSP's in larger metropolitan areas is scheduled during fiscal year 1974. These plans will provide for protection against direct weapons effects (e.g., fire, blast) as well as fallout. At the end of fiscal year 1973, a cumulative total of 2,737 communities, with a population of approximately 176 million had CSP's completed or underway. When growth of the community or shifts in population make it necessary, the plans are revised.

During fiscal year 1973, an in-house task force developed procedures for conducting contingency planning for population relocation during periods of increased threat for communities considered at high-risk to direct weapons effects in the event of a nuclear attack. Results of this work and DCPA research efforts are expected to be applied by DCPA and the CSPOS on a pilot-project basis during fiscal year 1974.

## active support services

Building and maintaining effective civil preparedness requires the active support of a number of vital service programs. These include training and education, daily information services, emergency information, industrial, labor and voluntary participation service, and research and development.

### TRAINING AND EDUCATION

A relevant and effective civil preparedness training and education program must be: (1) responsive to real and present hazards which may affect a municipality or county; (2) specific enough to instruct principal officials and key emergency operators, yet broad enough to be meaningful to members of community groups that can give assistance in emergencies, such as students, and adult citizens; and (3) of sufficient professional caliber to attract the support of technical associations, school systems, and institutions of higher learning. Training and education activities and support materials are designed to facilitate civil preparedness at all levels of government.

### State-Level Seminars for Local Civil Defense Directors

In fiscal year 1973, State-Level Seminars for Local Civil Defense Directors continued as a priority program for the purpose of increasing the effectiveness and professional growth of local directors. The program was broadened to include two types of seminars: (1) Initial Seminars for recently appointed local coordinators, and (2) Advanced Seminars for coordinators instructed in Initial Seminars, or who have some prior training and on-the-job experience. Seminars are of three days in length with instruction primarily by State personnel, and are 100 percent supported by DCPA through payment of travel and per diem expenses.

During the fiscal year, 85 State-Level Seminars for 1,818 local directors were conducted. Elected and other appointed officials attend on a nonreimbursable basis.

General plans of instruction developed by Staff College were used as prototype workshops, while content and structure remained flexible to meet individual requirements of the States.

Participation involved the eight DCPA Regions and 46 States, Puerto Rico, and the Virgin Islands.

*How to Respond Effectively to the Crash of a Jet Airliner in a Remote Area*, was the subject of 14 special seminars held throughout the State of Florida, following the tragedy of December 29, 1972, when a jumbo jet airliner with 176 people aboard crashed at night in an Everglades swamp 18 miles west of Miami International Airport, killing 99 people and taxing rescue efforts to remove the 77 survivors.

More than 1,200 people attended the seminars including elected and appointed governmental officials, hospital administrators, members of local medical societies, public utility representatives, school administrators, news media representatives, and officials of organized volunteer groups.

Florida Governor Reubin Askew called for the seminars and introduced the first one at the State capital in Tallahassee. In a personal invitational letter to each County Commission Chairman, asking him and other appropriate local representatives to attend one of the seminars, Governor Askew emphasized that the increasing number of jumbo jet flights over Florida "render the planned type of seminar most appropriate at this time. The plans, procedures, personnel, and equipment necessary to cope with such an incident would be equally useful in any other type of disaster."

Florida normally holds an annual series of disaster preparedness seminars, usually focused on planning for hurricanes. Colonel Robinson, director of the Division of Emergency Government for the Florida Department of Community Affairs, said that one of the major differences in the seminar program this year, in addition to being focused on an airplane crash threat, is that attendees were placed more in the role of participants rather than just observers.

"All participants of local government organizations left the seminars with some additional planning to be formulated, and some had a great deal of predisaster planning to do," Colonel Robinson said, adding: "The seminars definitely helped the local civil defense coordinators by stimulating interest in local disaster preparedness and by showing where additional planning was needed."

#### **DCPA Staff College**

The DCPA Staff College is located in Battle Creek, Mich. People from various parts of the United States and foreign countries who have

responsibility in civil preparedness come to the Staff College to receive specialized leadership training.

A total of 1,517 persons completed 47 courses at Staff College in fiscal year 1973. This brings the number of DCPA graduates to a cumulative total of 58,550. There were 10,049 students enrolled in home study courses during the fiscal year, for a cumulative total of 87,024 home study enrollees.

During the year, Staff College resident courses were redirected to increase the capability of local government to conduct emergency operations in an attack or any other emergency situation. Special seminars for local coordinators and on-site assistance to selected localities were incorporated into the Staff College curriculum.

A new home study course, *Introduction to Radiological Monitoring*, was opened for nationwide enrollment. Group enrollments and use of the home study courses in public schools increased, particularly in the revised *Civil Defense, U.S.A.* home study course. Field testing of the *Home Safety and Disaster Preparedness* course was completed, and testing of the *Shelter Management Fundamentals* correspondence course continued.

During the fiscal year, an Aerial Radiological Monitoring Instructor Guide, and a revision of the Radiological Defense Textbook were completed.

In support of fiscal year 1973 program emphasis, additional materials were developed for use by State and Civil Defense University Extension personnel in natural disaster training programs. The first Natural Disaster Course Syllabus was made available in January 1973, and was based on a joint DCPA/OEP experimental Natural Disaster course conducted during fiscal year 1972. A Natural Disaster Referent Group convened at Staff College for two weeks during the fiscal year to identify training needs, outline course objectives, and provide resource materials to be used in a new natural disaster course. The Local Disaster Preparedness course was developed as a result, and was pilot tested March 26-29, 1973, at Staff College.

Staff College continued to serve an international training and information function for representatives from 20 different foreign nations. The training included an International Disaster Preparedness Seminar developed in cooperation

with the Agency for International Development (AID), and representatives from 17 foreign nations attended.

During fiscal year 1973, the DCPA Staff College started the development of a studio to produce instructional audio-visual cassettes. Production will begin during fiscal year 1974. The cassettes will be used not only at the college in closed circuit television (CCTV) instruction, but also in the DCPA Regions to instruct regional personnel; participants in State-Level Seminars for Local Directors; and local officials involved in On-Site Assistance activity. For these purposes, each region will be supplied with an audio-visual cassette player and two monitors.

### **Civil Defense University Extension Program (CDUEP)**

The extension divisions of land-grant colleges and universities, because of their experience in local communities and by reason of their facilities, have a unique capability for civil preparedness training and education. Under contracts with the DCPA, the extension divisions of the colleges and universities conduct conferences for government officials, train instructors, and give professional training courses in local communities.

During fiscal year 1973, the CDUEP brought civil preparedness training to 32,364 State and local personnel. A total of 442,542 persons have participated in the program since its inception. The program in fiscal year 1973, included contracts with 51 universities and colleges located in 49 States, and Puerto Rico.

Through 308 conferences, a total of 10,048 State and local officials, key community leaders, and personnel in business and industry were briefed on civil preparedness. A total of 1,095 instructors were trained in 73 classes; 391 in shelter management, and 704 in radiological monitoring. Training was given to 750 key staff personnel in 51 classes in Civil Defense Management, and 565 radiological defense officers received this training in 37 classes. Training was conducted for 426 shelter managers in 22 classes, for 542 radiological monitors in 38 classes, and for 182 aerial radiological monitors in 13 classes. Also, 11,639 public officials were trained in 310 Emergency Operations Simulations, while 309 local government officials were trained in 6 courses in Local Disaster Preparedness. Also, 113 Local Civil Defense Directors were trained in 4 courses in Civil Preparedness Career Develop-

ment—Phase I, and a total of 273 courses in Plans and Operations were attended by 5,259. In the area of refresher training, 95 radiological monitor instructors attended 8 Radiological Monitor Instructor Refresher courses, 10 radiological defense officers attended 1 Radiological Defense Officers Refresher course, 25 radiological monitors attended 4 Radiological Monitor Refresher courses, 13 shelter management instructors attended 1 Shelter Management Instructor Refresher course, and 21 shelter managers attended 1 Shelter Management Refresher course.

In support of On-Site Assistance, CDUEP staff members participated in 74 On-Site Assistance Surveys, conducted 603 Position Instruction Sessions and 75 Special Exercises. The CDUEP staffs also participated in 47 State seminars for Local Civil Defense Directors.

### **National Education Organizations**

The membership of National Education Organizations have a major role in curriculum modification and the adoption of new materials and teaching techniques in schools and colleges. Working with the leaders of these organizations, DCPA encourages and assists their membership to include civil preparedness instruction and disaster preparedness plans in the program of public and private schools. During fiscal year 1973, DCPA actively participated in the annual meeting of the following National Education Organizations to advance civil preparedness in the schools: School and College Conference of the National Safety Council; National Council for Social Studies; National Association of Secondary School Principals; American Association of School Administrators; National Catholic Education Association; National Association of Parents and Teachers; and the National Education Association.

### **Civil Defense Education (CDE) Program**

The mission of the Civil Defense Education Program is to establish civil preparedness instruction as an integral part of the existing school program in each State.

Instruction materials developed and activities sponsored under the CDE Program are designed to get disaster preparedness and survival information before pupils in school curricula. An equally important facet of the program is to assist school districts in preparing a hazard-safe school environment augmented by a disaster plan that covers hazards common to their districts.

The scope of the program was broad enough in fiscal year 1973 to permit CDE staff participation in DCPA-sponsored "On-Site Assistance" projects, including arranging for civil defense operations training at the specific request of State Civil Defense Directors.

During fiscal year 1973, a new Student Manual and Instructors Guide titled *Your Chance To Live* was developed and distributed for use in the Civil Defense Education Program. Plans were approved and a contract let to have a series of training films developed to augment the Student Manual.

A publication titled *Environmental Realities* was distributed to help advance civil preparedness instruction in the classroom. This publication uses a "game" format to stress environmental problems that impact on civil preparedness.

In fiscal year 1973, all States except Kentucky and Rhode Island had active Civil Defense Education Programs. This activity produced the following results:

- A total of 900,872 pupils completed a Personal and Family Survival course of 8 hours or more. An additional 1,542,543 pupils completed from 1-8 hours of instruction presented in DCPA publications *In Time of Emergency*, *Games That Teach*, *Government in Emergency*, and *Environmental Realities*.

- School-oriented workshops were held, with a total attendance of 11,817 teachers and school administrators.

- Training assistance provided local civil preparedness agencies resulted in training of 8,147 radiological monitors and 1,618 shelter managers.

### **Medical Self-Help Training**

The Medical Self-Help training program administered for DCPA by the Division of Emergency Health Services of the Department of Health, Education and Welfare provides instruction in emergency medical care and treatment for sick and/or injured persons when professional medical services are not available.

The Medical Self-Help training program is supported by State and local health departments, civil preparedness organizations, the American National Red Cross, the U.S. Armed Forces, public and private schools and universities, social, civic and service organizations, and thousands of volunteer instructors. A total of 1,880,723 students were reported trained in 60,854 courses

during the fiscal year, bringing the cumulative total to 18,576,382 students trained since the program was launched in fiscal year 1962.

A new film, "Artificial Respiration," was completed and distributed this fiscal year, the first major revision of Medical Self-Help training course materials since 1962.

Seven Medical Self-Help Humanitarian Awards were presented during the fiscal year; one each in Rhode Island, Ohio, and Missouri, and two each in Virginia and California. Since this award was established in fiscal year 1968, there have been 34 awards in 21 States. These awards are presented to persons who have saved lives through knowledge gained from Medical Self-Help training courses.

### **Rural Civil Defense Program**

The Rural Civil Defense Program was continued during the year by the Extension Service of the U.S. Department of Agriculture (USDA), under a work order agreement with DCPA. This program provided for liaison between USDA and DCPA Regions and State civil preparedness offices, and for a civil preparedness information and education program for the Nation's rural population of 54 million. The information and education effort stressed protection of people, livestock, and crops from the effects of all types of disasters.

During the fiscal year, a semitechnical publication designed for livestock specialists and livestock producers, *Livestock, Fallout and a Plan for Survival*, was prepared and distributed. Other projects completed during the fiscal year included: (1) Film scripts on the effects of radioactive fallout on livestock and crops, (2) TV film spots on hurricanes, and (3) a publication, *Face to Face With a Flood*.

USDA Extension Service has negotiated with selected State Cooperative Extension Services to develop additional slide-tape sets, publications, and other items—a pamphlet on emergency cooking; leaflets pertaining to the effects of radioactive fallout on swine, beef cattle, and corn; slide-tape sets about tornadoes and winter storms; and a film on floods.

### **Training Materials**

DCPA continued development and production of training materials to support Staff College training programs, the Civil Defense University and the Civil Defense Education Programs, and

the State-Level Seminars for Local Civil Defense Directors. In addition, State and local civil defense offices and Federal agencies were provided with civil preparedness training materials.

New materials included a large printing of *Your Chance to Live*, which replaces the *Personal and Family Survival* textbook and teachers manual.

Existing training materials were reviewed in terms of supporting the increased emphasis on professionalism for effective emergency operations in wartime and peacetime emergencies.

### Training Evaluation and Improvement

During this fiscal year, the study of existing rescue facilities was completed, and initial actions taken to form a rescue advisory committee to assist in determining the adequacy of present training materials, rescue equipment lists, and rescue facilities criteria. This committee will meet in early fiscal year 1974 to assist in the reactivation of a national rescue program.

## PUBLIC INFORMATION

The Defense Civil Preparedness Agency is charged under Public Law to "publicly disseminate appropriate civil defense information by all appropriate means . . ."

In meeting this responsibility, the DCPA provided information during the fiscal year concerning (1) the purpose and status of the national civil preparedness program, and (2) actions to be taken for protection from natural disasters or the effects of nuclear attack.

A major step forward was taken in September 1972, with the publication of a brief booklet titled "Introduction to Civil Preparedness." This booklet is designed primarily to introduce the new local director to civil preparedness. It outlines the origins of civil preparedness, its current thrust, technical, financial, and other aids and assistance available to the community and its local director.

DCPA materials were designed for widespread dissemination of information throughout Federal, State, and local government, to business and industry, and the general public. Materials were directed to the public news media: newspapers and periodicals, and radio and television. DCPA also responded to and worked with news media representatives in developing information for release to the public. In addition, DCPA-generated informational materials were designed for use by public officials in speeches, briefings, and

other public presentations.

A major objective of the DCPA public information program during the fiscal year was to reorient the American public, both in the public and private sector, about the new, dual-purpose nature of the national civil preparedness program. For many years, the objective of the national program was to prepare Americans solely to cope with the effects of nuclear attack. Now it is twofold: to protect people from the emergencies and disasters of peacetime as well as from the effects of nuclear attack.

Much of the public information effort was in support of the Agency's priority On-Site Assistance effort to help local governments increase their emergency operating capabilities.

### Reaching the Civil Preparedness Audience

To disseminate public information on a nationwide scale, DCPA worked with all media of communication, using nearly every kind of information tool: internal publications, news releases, news photos, fact sheets, speeches by agency officials, briefing materials, specialized pamphlets and publications, motion pictures, and radio and television spots.

*The Print Media.*—Many people, including newspaper and magazine editors, are interested in what is happening in the civil preparedness program:

- Among the Nation's major news outlets, *The New York Times* and *The Washington Post* reviewed the new thrust of the national civil preparedness program in feature articles.

- DCPA contributed three articles to *Nation's Cities* magazine, which is published by the National League of Cities, and is circulated to more than 60,000 local officials—those responsible, for the most part, for disaster preparedness at the community level. A DCPA article was featured in a special "disaster preparedness" issue of the magazine in May 1973.

- *Commander's Digest*, the authoritative publication for military and civilian leaders throughout the Defense Department called DCPA the "focal point" for assistance to civilian government readiness through the use of Defense resources in an article in the July 1972 issue.

- "A Governor's Guide to On-Site Assistance," a four-page brochure, was prepared by DCPA for distribution at the National Governor's Conference in June 1973.

● An interview article with the Director of DCPA developed by *Survive* magazine with DCPA assistance has been widely circulated also as a reprint.

*Films.*—Motion pictures are a major DCPA medium of communication with a nationwide audience. In fiscal year 1973, the following major films were produced and released:

● “Earthquake”—a half-hour documentary on the 1971 Southern California earthquake; and a brief version for use in exhibits and other special presentations. It was a winner of the CINE Golden Eagle award. The long version of this film was an entry in the International Film Festival held in Rome, Italy, during November 1972.

● “Environment for Education”—a 19-minute motion picture which explains how protective design of school buildings can combine protection against vandalism, noise pollution, natural disaster hazards, and radioactive fallout.

● “The People and Apollo”—Produced to stress the variety of civil preparedness activities, this 19-minute film shows local civil preparedness in action during the Apollo 16 moon shot at Cape Kennedy, Fla.

● “Living in a Nuclear Age”—a series of six motion pictures produced in cooperation with DCPA, under guidance of the National Development Committee on 4-H Civil Defense. The films provide a scientific and ecological approach to understanding the atom for 4-H Club members and youngsters of secondary school age.

● For television, DCPA produced 11 film spot announcements on earthquake safety actions, and five spots on hurricane safety measures for the public.

DCPA films reached a large audience in fiscal year 1973. In addition to thousands of loans of films through the Army film library system, the National Archives and Records Service reported purchases of 618 copies of 24 different DCPA films.

*Exhibits.*—An exhibit entitled “Emergency Roulette,” with the chance for disaster as the theme, was widely presented throughout the Nation. Sixty full-scale exhibits and 1,300 tabletop displays were produced and distributed in fiscal year 1973.

An exhibit entitled “On-Site Assistance” was developed to support this top-priority DCPA effort.

## LIAISON SERVICES WITH INDUSTRY, LABOR, AND ORGANIZATIONS

Effective community emergency preparedness depends to a large extent upon the support of people working in partnership with local government through industry, business institutions, and industrial, business, professional, civic, trade, and other organizations. During fiscal year 1973, DCPA emphasized efforts to strengthen this partnership by disseminating information and guidance throughout the United States.

### Industrial Liaison

DCPA offers guidance and advice to industry on methods of civil preparedness planning and operations, concentrating upon (1) protection of personnel, facilities, and equipment; (2) continuity of management; (3) protection of vital records; and (4) development of mutual-assistance pacts.

*Training, Seminars, Conferences, and Conventions.*—Many industrial firms participated in civil preparedness training during the year. Industrial civil preparedness programs also reached industrial and business executives through courses of instruction and seminars conducted by other agencies of the Federal Government and through DCPA participation at business and industrial conventions, seminars, or conferences. Fiscal year 1973 highlights of these activities include:

● More than 100 industrial firms were represented among the 130 graduates of three Industry/Business Emergency Planning courses conducted at the DCPA Staff College.

● DCPA participated in, attended, or provided advice and guidance to 11 business and industrial conventions, seminars or conferences during the year. Among these were: International Security Conference, American Society of Association Executives, United States Civil Defense Council, National Defense Transportation Association, National Association of Power Engineers, and the National Safety Council.

● DCPA assistance, guidance, and reference materials were provided for (1) National Security Seminars conducted by the Industrial College of the Armed Forces, with more than 3,850 military officers and key industrial civil defense leaders in attendance; (2) training courses and seminars on Industrial Defense and Emergency

Planning conducted by the Military Police School, Fort Gordon, Ga., with 300 industrial and government officials attending; and (3) business, industry, and government conferences with more than 2,000 industrial leaders throughout the country participating.

- DCPA provided funds, staff assistance, and materials for Executive Reserve Training Sessions held throughout the United States by the Office of Oil and Gas.

- A 30-city training program was developed, tested, and deployed by DCPA to train executive reserve appointees in the Electric Power Industry.

*Information and Guidance Material.*—DCPA brochures, various topical items, and other materials were made available to business and industry during the fiscal year. DCPA also assisted other Federal Agencies to develop guidance related to a particular agency's civil preparedness responsibilities. Included among these were:

- A brochure, "Don't Gamble With Disasters." More than 65,000 copies were made available to industry.

- "Emergency Preparedness Progress in Seaports," a Department of Commerce publication.

- "Minimizing Damage to Refineries From Nuclear Attack, Natural or Other Disasters," and "A Guide to the Defense Electric Power Administration," both Department of Interior publications.

*National Organizations.*—Liaison with industrial, trade, commercial, technical, scientific, veterans, fraternal, and civic organizations is important for both local and national preparedness planning and action.

During fiscal year 1973, liaison work resulted in many national organizations supporting the civil preparedness program. Additionally, program support was received from various departments of government with civil preparedness responsibilities authorized by Executive order.

### **Labor Support**

Labor and trade unions continued their support of civil preparedness during fiscal year 1973, particularly in the area of labor leadership training. Some major examples of this support follow:

- As a result of labor leadership training seminars, 18,000 copies of a leaflet, "Labor's Role in Civil Preparedness," were distributed to labor officials throughout the Nation.

- A labor orientation course titled, "Labor's Role in State and Local Civil Defense," was given many times throughout the year at national, State, and central labor conferences and conventions.

- More than 50,000 pieces of civil preparedness-oriented literature were distributed at the Union-Industry Show in Minneapolis, Minn., during June 1973.

## **RESEARCH AND DEVELOPMENT**

The DCPA research program has as its continuing goal the development of information and data of many kinds needed by policy and decision-makers for planning and executing the civil preparedness program; and for improving the effectiveness of operational systems and procedures—and occasionally, hardware. Inherent in the total program are considerations of systems which, as technology changes and international situations fluctuate, offer the best chances for decreasing loss of life and property and increasing the capability to recover from disasters such as caused by enemy attack.

The program is executed through contractual arrangements with governmental, educational, and private organizations. The four research categories are Shelter, Support Systems, Postattack, and Systems Evaluation.

*Shelter Research.*—In keeping with guidance stressing austere civil preparedness budgets and dual-use features, fiscal year 1973 shelter research was devoted to development of means of identifying and utilizing best available shelter space in existing buildings for short warning situations and exploration of low cost shelter options for evacuation situations. Some Shelter Research fiscal year 1973 accomplishments are described below:

- In many areas there is not sufficient basement space so that in a short warning situation, it would be necessary to use aboveground space. Experimental studies have shown that one type of 8-inch brick wall in common use is at least ten times as strong as another common type, and it is now possible through surveys to identify the stronger walls.

- A large experimental model of the floor over a basement was tested in the Army's large blast load generator. The pressure required to produce damage, such that debris would begin

to kill basement shelter occupants, was found to be 20 times more than the design load of the floor. At such overpressures, initial nuclear radiation would begin to be a serious threat, and considerable progress was made in developing a shielding methodology along the lines used for fallout radiation.

- A newly developed debris prediction method was used to specify the arrangement of debris around a test basement shelter, and the nature of the fire hazard to shelter occupants was studied in detail.

- Very little data exist on the response of an average person to a sustained hot, humid environment such as might occur in a shelter. By use of a human calorimeter chamber lowered over a test subject, his physiological strain was measured under conditions of variable temperature, humidity, air flow, and overhead radiant heat.

- Considerable effort was devoted to study of shelter availability in the host area for development of a movement plan for people which might be exercised in response to crisis movement of population by a potential aggressor. While limited survey has shown that there is considerable space in existing buildings offering fallout protection, or that much of the space can be upgraded by expedient means, deficits in some areas may require the construction of expedient shelters. Examples of such expedient shelters have been built to test the ability of untrained people to do the job with minimal guidance.

*Support Systems Research.*—The following were major accomplishments in the area of Support Systems Research during fiscal year 1973:

- A study of the use of DCPA radiological capabilities resulted in a shift from the primarily hardware-oriented programs of the 1960's to a more people-oriented program based on maintaining operational readiness.

- An assessment of the Radio Amateur Civil Emergency Services (RACES) was completed, calling for major changes in the direction and management of the program.

- Major emphasis was given to the development of low-cost electromagnetic pulse (EMP) protection for State and local communications and electrical systems. A recent EMP study tested and evaluated the effectiveness of typical public safety radio communications equipment.

- An analysis of DCPA's communications systems and their capabilities to meet 1980 civil defense requirements, was started during fiscal year 1973. A similar study is in progress on the present capabilities of the overall Nationwide Attack Warning System.

- Studies on austere clinical treatment of thermal burns showed exciting progress during the fiscal year, and it now appears that a new chemical will be available for treatment.

- Feasibility studies indicated potential for verification of preliminary work on the interaction of fire with blast and shock; test facilities were started, with a full test program projected for the next two fiscal years. Experience of the German fire service in World War II has been the subject of study for about 10 years. The final report, analyzing organization problems, was produced. Latest findings of test and wartime fires were incorporated into a fire spread model.

- Further refinements of Emergency Operations Checklists for both natural and nuclear disasters were added to previous developments. These were for in-place protection, partial crisis relocation, and total crisis relocation. Three separate checklists were prepared, one for relocating communities, one for host communities or counties, and one for the State. The nuclear case was the State of Texas using San Antonio as an example relocating city. Field testing of these checklists by means of simulation exercises was found to be most effective, and computerized produced scenarios for nuclear disasters, for use in these exercises, were prepared. Work also started on computer production of natural disaster scenarios.

- Studies of natural disasters continued; the main focus during the year was to establish how civil defense image and recognition can be improved when local civil defense takes an active role in preparation for natural disasters and in coordinating emergency service functions during such disasters.

*Postattack Research.*—During fiscal year 1973, several of the postattack research programs found application in a study of the after-effects of a hypothetical nuclear exchange. This Post-Nuclear Attack Study (PONAST II) was conducted under the Organization of the Joint Chiefs of Staff, with the participation by some 30 Departments and Agencies of the Federal Government. Thus PONAST II is the most comprehensive

study of its type prepared to date. A brief scope of the study follows:

Based on previous and ongoing DCPA-financed laboratory investigations of the sensitivity to fallout radiation of the various critical food crops and types of livestock, it was possible to include a comprehensive evaluation of how these food sources would survive an attack. Further, it was possible to estimate the loss of food crops and livestock due to the inability of the farmer—because of excessive radiation levels—to tend his crops and to care for his animals.

Also, in PONAST II, there was a detailed assessment of the longer-term effects of the residual radiation dose among the survivors. These included: A higher incidence of various communicable diseases, increasing incidence of malignancies such as leukemia and other types of cancer, some shortening of life expectancies, and the effects on future generations due to gene mutations. Although these various longer-term consequences were found to be substantial and important, their net impact was minor compared to the direct blast and fallout effects of the attack.

A recently developed interindustry model of the early postattack economy was used in PONAST II to predict the productivity of the economy during the first few months following the attack.

In addition to the research above which was applied to PONAST, several other significant achievements occurred:

- Heretofore, it had been concluded that animals suffering lethal exposures to fallout radiation could be slaughtered and their meat salvaged. In an experiment at the Oak Ridge National Laboratory, bacteremia was identified in five of six lethally irradiated pigs, casting doubt on the feasibility of salvaging livestock.

- A review of the fallout radioiodine problem was completed. This problem came to light because of the late discovery of excessive thyroid damage among the Marshallese children who were accidentally exposed to fallout in 1954. The iodine hazard is due mainly to ingestion of milk or water; but under special circumstances, could occur as a result of inhalation of iodine vaporizing from the fallout particles. The oral ingestion of (non-radioactive) potassium iodide is known to be an effective and safe mechanism for protection against the hazards of either ingested or inhaled radioiodines. Whether a national program to pro-

vide such protection is warranted for peacetime protection against a nuclear reactor accident, is being studied by a committee of the National Council on Radiation Protection and Measurements.

Other noteworthy studies completed during the fiscal year included (1) how fallout exposure could vary within a typical basement of a family residence, and (2) the constraints for early post-attack rescue, firefighting and other emergency actions that would be imposed by debris blockage.

*Systems Evaluation Research.*—Fiscal year progress in Systems Evaluation Research included the following achievements:

- The operational computer model for Evaluating the Vulnerability of National Systems (EVUNS model) was updated. The 1970 Census figures were programed into the basic geographical model for consideration of various distributions of people and resources. The model was useful for studying alternative plans for crisis relocation of high risk areas.

- A new technique for analyzing the risk of death and injury from direct weapons effects and fallout radiation in local areas and on a State-by-State basis was developed to a stage where preliminary application could be made to crisis relocation studies.

- Research continued on methods for testing and evaluating local emergency operating systems (TELOS model). A simplified prototype model was completed and tested to assure the validity of accounting for immediate weapons effects and persistent effects which change over time.

- An analysis of progress in the Soviet civil defense program showed continued development of a strong program through education, planning, and practice exercises.

- Research models of energy, transportation, and production networks were advanced to the developmental stage and programed for operational use as part of the EVUNS model at the National Civil Defense Computer Facility.

- The performance and effectiveness of DCPA's training effort were studied as a means of providing a sounder base for the professional development of local civil defense coordinators.

- As a result of a study evaluating alternative means of incorporating civil preparedness instruction in the curriculum of public school systems,

a set of recommended programs was developed.

● A field test of procedures for approaching the public about sharing home basement shelter was conducted in Colorado Springs, Colo. The study demonstrated that families living in areas of public shelter deficits were willing to share their own home basement shelter in an emergency.

## INTERNATIONAL ACTIVITIES

Exchange of information with friendly nations, training assistance, and mutual civil preparedness planning continued as principal international activities of DCPA during fiscal year 1973. In coordination with the Office of the Assistant Secretary of Defense, Installation and Logistics, and the Department of State, DCPA maintained cooperative relations with civil defense organizations of other friendly governments, the North Atlantic Treaty Organization (NATO), the Organization of American States (OAS), and the US/Canada Civil Emergency Planning Committee (CEPC).

The DCPA Director represented the U.S. at the September 1972 meeting of the NATO Civil Defense Committee in Brussels. A DCPA representative attended a September meeting of the Technical Committee 45 (TC45) of the International Electrotechnical Commission (IEC) in London. This Commission is concerned with international standardization of nuclear instruments. In July, a member of the DCPA research staff visited the Civil Defense and Rescue organizations of the Black Forest in Germany, and conferred with the German Civil Defense Director.

In addition to the previously described international disaster preparedness training assistance provided by the DCPA Staff College, DCPA assisted actively in an intensive international disaster preparedness training project in the Caribbean. In December 1972, 22 countries represented by 43 participants and observers participated in this Caribbean based disaster preparedness seminar. It was sponsored by the Organization of American States and the Commonwealth of Puerto Rico, and actively supported by DCPA and other principal disaster-related public and private national and international agencies.

Ironically, the earthquake which leveled Managua on December 23, 1972, struck only two weeks after Nicaragua's representatives returned from the seminar, where its delegation had presented a check for \$10,000 to the Organization of American States (OAS) to help finance its disaster relief efforts. An OAS disaster team was one of the first to reach Managua to assist in coordinating international relief efforts.

The seminar was considered a successful pilot exercise. It provided useful information on various disaster subjects, stimulated considerable interest, and provided a basis for followup technical assistance and training programs in disaster preparedness in a number of Caribbean countries.

Fifty-two civil defense officials from 16 countries visited DCPA during the fiscal year, including the Directors General of Greece and Saudi Arabia, along with representatives from Australia, Canada, Denmark, Finland, Germany, Greece, Iran, Israel, Japan, Netherlands Antilles, Saudi Arabia, Sweden, Trinidad and Tobago, United Kingdom, and Venezuela.

NATO and Central Treaty Organizations (CENTO) member countries were supplied with DCPA Information Bulletins and technical publications on a continuing basis, as well as the Annual Report for fiscal year 1972. In response to 194 requests, information and publications were sent to 34 countries. Three new DCPA motion pictures were furnished the NATO Civil Defense library for loan to member countries.

The Regional Civil Emergency Advisory Committee (RCEAC) is responsible for advising the US/Canada Civil Emergency Planning Committee of joint or coordinated regional actions or planning activities required for achieving and maintaining a maximum degree of cross-border emergency operational readiness. As a result of guidance from the RCEAC, an increase in cross-border activities at the State and local level took place in fiscal year 1973.

Day-to-day liaison activities continued between DCPA officials and their Canadian counterparts. The National Coordinator, Canada Emergency Measures Organization, and the Deputy Chief of the Canadian Defense Research Staff, visited DCPA in April and conferred with the Director at length on DCPA program elements.

## **federal assistance**

The DCPA Federal assistance program helps State and local governments obtain needed equipment and supplies for emergency purposes, as well as to help pay personnel and administrative expenses; the costs of civil preparedness training; and planning, design, and construction costs in the development of Emergency Operating Centers. Federal surplus personal property may be donated to States and their political subdivisions for civil defense purposes, while certain Federal property is authorized for loan under the Contributions Project Loan Program.

The four basic requirements for a unit of government to be eligible for DCPA Federal assistance are: (1) A civil preparedness organization must be established pursuant to law, (2) there must be a State-approved operations plan, (3) there must be an approved program paper for the current Federal fiscal year, and (4) the State or local civil preparedness agency must comply with Title VI of the Civil Rights Act of 1964.

In addition, applicants for financial assistance for personnel and administrative expenses must (1) have an approved merit system for all of their civil preparedness employees, and (2) submit annually, a financial plan and staffing pattern.

The program paper is the key instrument for determining whether a State or political subdivision will be granted Federal matching funds or other Federal assistance. It describes what is planned to be accomplished during the next fiscal year, and the number of employees and funds needed to carry out these activities.

### **SUPPORTING SYSTEMS EQUIPMENT; AND EMERGENCY OPERATING CENTERS**

The primary source of supplies and equipment needed in civil emergencies would be those used in the day-to-day peacetime operations of Federal, State, and local governments. For example, existing communications systems would be used to fulfill most emergency communications requirements, and would be augmented only as necessary to assure coordinated emergency operations. Special items of equipment may be required to meet unique civil preparedness needs. Centralized control of operations is essential to assure the most effective use of services, facilities, and supplies. Emergency Operating Centers are protected facilities, with communications, emergency power, and adequate space and equipment for effective direction and control.

To receive Federal financial assistance, local civil preparedness directors or other appropriate officials must submit project applications, with justifications, to the State civil defense agency. Upon approval, an application is forwarded to the DCPA Regional Office. If approved at that level, the applicant is notified, and the purchase may be made. The applicant may be reimbursed for up to one-half of the cost upon submission of a bill to the DCPA Regional Office. Use of facilities and materials obtained with Federal assistance is intended for all types of disaster situations.

Approximately \$2.2 million was obligated during fiscal year 1973 for State and local supporting systems equipment.

During the fiscal year, approximately \$7.0 million in Federal funds was obligated for the planning, design, construction, and/or equipping of State and local EOC's.

## **SYSTEMS MAINTENANCE AND SERVICES**

This program provides the funding for recurring and maintenance costs of State and local communications and warning systems to insure continued operational capability. Since 1952, DCPA has assisted States and their political subdivisions in building extensive communications and warning systems which are essential to civil preparedness operations in all kinds of disasters. Such equipment must be maintained and protected by the States and their political subdivisions to assure ready availability for civil preparedness purposes.

Communications and warning systems are of major benefit to localities having a high incidence of natural disasters. The operability of such systems is guaranteed by Federal grants which insure adequate maintenance and other standby costs. Detailed communications planning studies are also an integral part of the development of an operational capability. Grants are made to local governments for training courses and test exercises to maintain the highest degree of readiness in the event of disaster.

Approximately \$1.4 million was obligated during fiscal year 1973 for systems maintenance and services. Of this amount, approximately 94 percent was used for communications and warning recurring and maintenance charges.

## **PERSONNEL AND ADMINISTRATIVE EXPENSES**

The Federal Government shares in the costs of employing professionals and their clerical support to plan, coordinate, and operate special activities not ordinarily a part of government; for example, warning systems, shelter systems, radiological monitoring systems, and emergency direction and control. Civil preparedness personnel perform coordinating and specialist roles, involving the training and other preparation of regular elements of government for emergency functions. State and local civil preparedness employees numbering 3,929 full-time and 2,092 part-time at the end of fiscal year 1973, were responsible for emergency planning and organization and for the training of other State and local government employees and auxiliaries who carry out emergency services, as needed.

DCPA allocates appropriated personnel and administrative funds directly to the States. The States, in turn, retain funds and/or allocate them to their political subdivisions.

All States, the District of Columbia, Puerto Rico, the Virgin Islands, American Samoa, Guam, and 2,324 political subdivisions participated in the Personnel and Administrative Expenses program during fiscal year 1973. DCPA made \$25 million available for this program. The number of State and local employees performing civil preparedness functions totaled 6,021 at the end of fiscal year 1973.

## **STUDENT EXPENSE**

Partial reimbursement of travel and per diem expenses of students attending DCPA schools was continued to encourage training of State and local civil preparedness personnel. Course-completion certificates issued to students reimbursed under this program during the fiscal year numbered 236; and the amount reimbursed was \$30,964. Cumulative expenditures since this program was started in fiscal year 1960 total \$845,245; and the cumulative total of completion certificates is 12,705.

## **SURPLUS PROPERTY**

The Federal Property and Administrative Services Act of 1949, as amended, authorizes the donation of Federal surplus property for use in

any State for civil defense purposes. When no agency or department of the Federal Government needs equipment that another Federal agency wishes to dispose of, the equipment is declared "surplus" and can be donated for use in any State for civil defense, health, and educational purposes.

DCPA has developed a list of surplus items deemed useful and necessary for civil defense purposes. This list includes generators, winches, hoists, chain, rope, firefighting, rescue, and safety equipment, and many other items. Additional items authorized, with State approval, are earth-moving and excavating equipment, highway maintenance equipment, woodworking machinery and equipment, prefabricated structures and scaffolding, storage tanks, vessels and small craft, and metal-working machinery.

When a locality has met eligibility requirements during any given fiscal year, it may acquire needed equipment for use in developing its civil defense capability. Occasionally, when a locality needs equipment not on the list of useful and necessary items, it may apply to DCPA for special consideration. A locality obtaining surplus property must pay a small handling fee to the State.

Regulations permit collateral or subordinate use of surplus equipment, if authorized by the State or local civil defense director, and if the governmental unit to which the property is assigned has a civil defense responsibility. All property must be maintained in condition for emergency use.

During fiscal year 1973, surplus equipment obtained for civil defense purposes was used extensively to combat the effects of natural disasters and other peacetime emergencies. For example, Chicago Civil Defense built a first-rate aircraft from the parts of three Army-surplus helicopters. It proved to be a lifesaver in Chicago's Illinois Central commuter train collision on October 30, 1972. More than 350 persons were injured, and although there were hospitals nearby, the wreck site was relatively inaccessible to regular ambulances without time-consuming detours.

Dr. Peter Rosen, Director of Emergency Services and Associate Professor of Surgery for the University of Chicago's Billings Hospital, described the importance of this mission in a letter to Robert J. Quinn, Chicago Fire Commissioner and Civil Defense Director:

"It is unquestionably true that the rapid transport of critically injured patients from the site of the accident to Billings Hospital was very instrumental in saving their lives. I think that the response of your outfit in the rapid transport of these patients was truly magnificent, and your entire staff is to be commended."

Again, on December 1, 1972, the same Chicago helicopter was used in rescuing a 3-year-old girl after she had fallen through ice on an artificial lake in suburban Justice, Ill.

When a jet plane crashed into an Alameda, Calif. apartment house in February 1973, 103 Alameda County reserve fire and rescue workers and deputy sheriffs helped fight the fire, searched for victims, and controlled the throngs of spectators who converged on the area. So numerous and well-trained were the volunteer workers that one of the professional fire officers on the scene asked: "Where besides God did you get all that equipment and manpower?" The answer was through planning and training; and through DCPA matching funds or surplus property programs.

Since the Surplus program was first launched in fiscal year 1957, property having an acquisition cost of approximately \$626 million has been transferred to State and local governments. Federal surplus property with an original acquisition value of approximately \$62.4 million was donated to State and local governments during fiscal year 1973.

## CONTRIBUTIONS PROJECT LOAN PROGRAM

DCPA participates in the DoD utilization program to screen and claim DoD excess property for its Contributions Project Loan Program. DCPA is able to claim this property at the end of the Military Priority Date, just before it would normally be transferred to the General Services Administration.

This authorization permits DCPA to acquire a variety of high-quality items at no cost for use in the Contributions Project Loan Program. The property is loaned to States and their political subdivisions, subject to established regulations governing the contributions equipment program. As in other facets of the contributions program, States or political subdivisions are required to have an approved civil defense operations plan.

The civil defense organization may transfer the property (by custody receipt) only to political components or organizations having civil defense responsibilities. For example, the program permits long-term loan of generators to States and localities for use in Emergency Operating Centers and Emergency Broadcast Stations. Formerly, DCPA had purchased generators for these purposes. The result is a considerable saving in dol-

lars, and an increased civil defense capability.

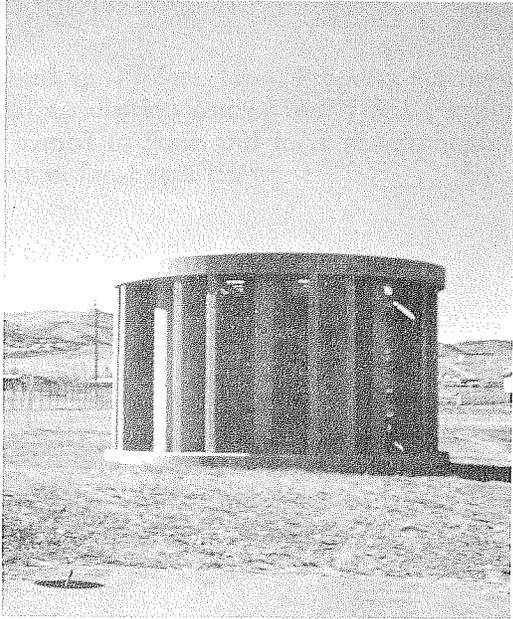
Loan procedures are initiated with submission of a Project Application by the State or political subdivision.

Contributions Project Loan Property having an original acquisition cost of nearly \$51.3 million was loaned to State and local governments by the close of fiscal year 1973.

# photographic illustrations

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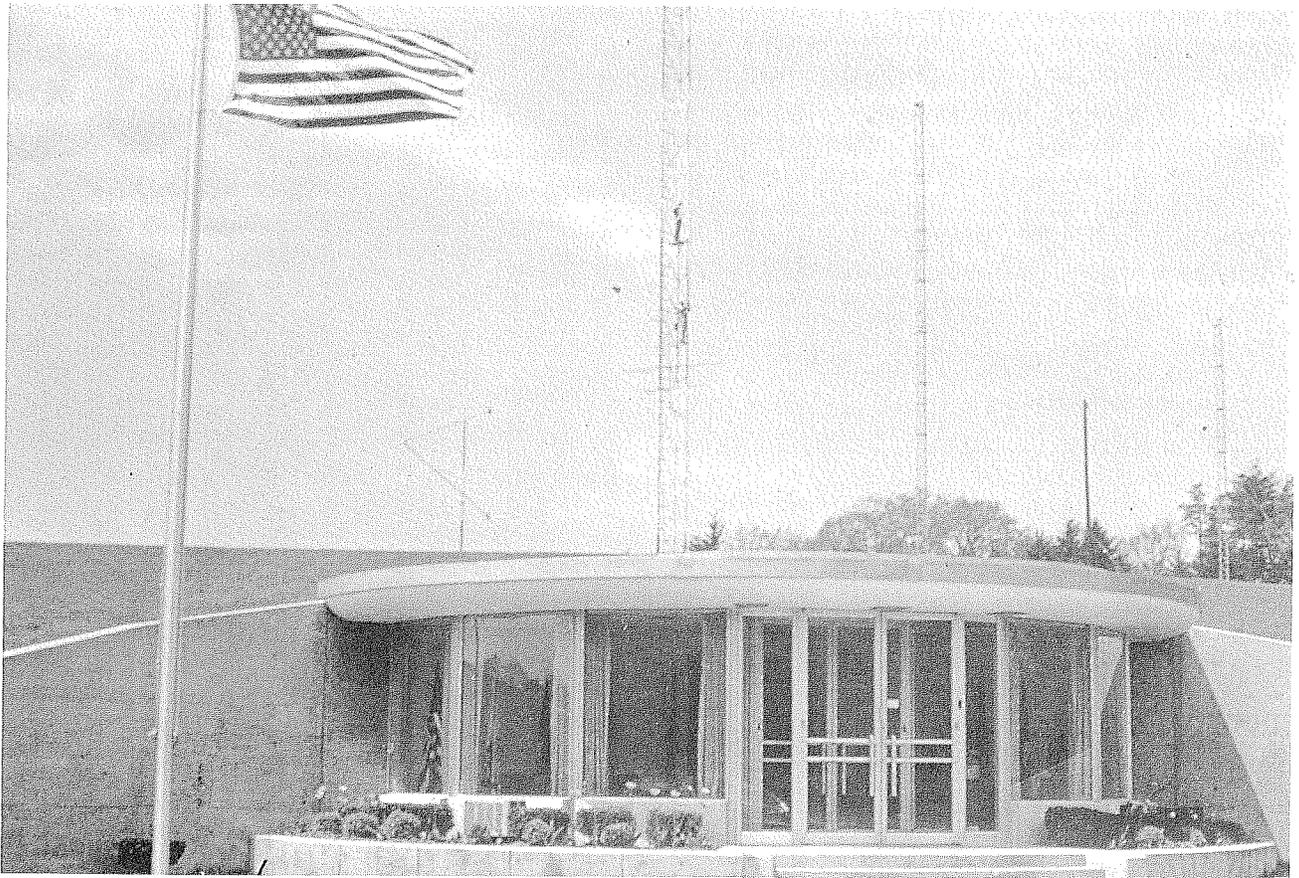
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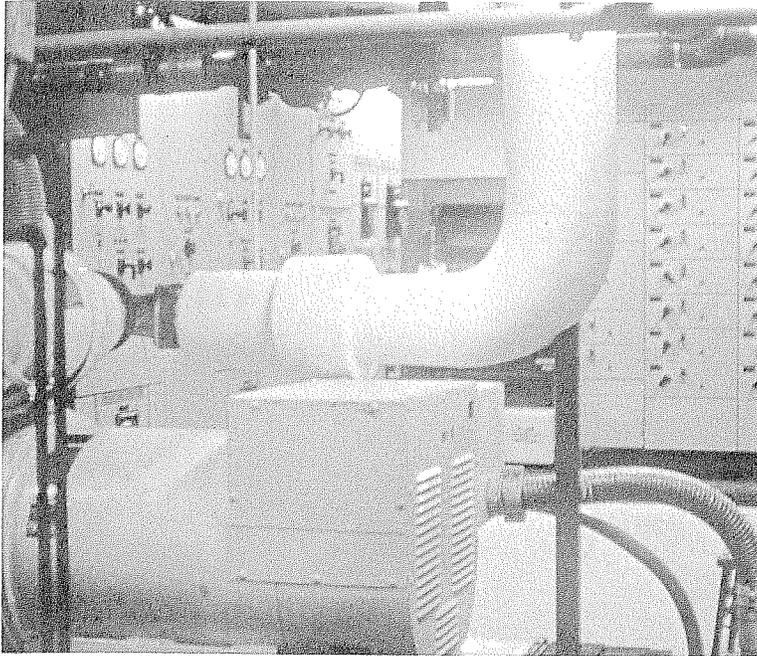


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## 1 Federal Regional Center (FRC)

Entrance to the DCPA Region I underground Federal Regional Center, Maynard, Massachusetts.

## 2 Where The Action Is

FRC conference and operations rooms are a hub of activity when disasters occur.

## 3 Cooling Tower

Blast proof cooling tower at DCPA Region 6 Federal Regional Center.

## 4 Equipment

FRC equipment includes an emergency generator, and main electric and motor control panels.

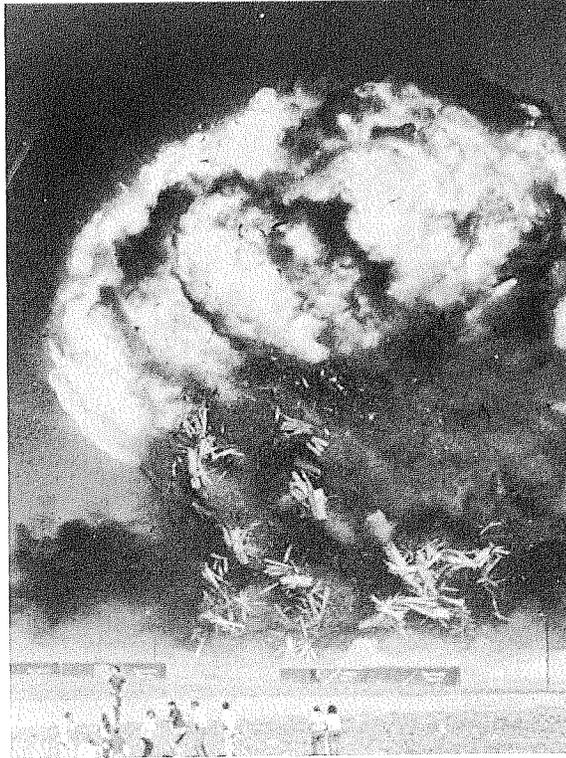
## 5 Protective Door

Each underground FRC is equipped with an electromagnetic pulse (EMP) protective-type door.



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### 6 Train Wreck

CD workers assist victims of a Chicago, Ill. commuter train collision that claimed 44 lives, Oct. 30, 1972. Rapid transport of the critically injured to hospitals by CD helicopter was credited with saving many lives.

### 7 Fireball in Freightyard

A huge fireball formed in the Roseville freightyard near Sacramento, Calif., April 28, 1973, as an ammunition train exploded, and spewed flames and debris over a wide area.

### 8 Water AND Fire

Harrisburg, Pa., firemen battled the "Agnes" flood to reach the flames, June 1972.

### 9 This Had Been an Apartment Complex

CD workmen and rescuers are shown assisting firemen in going through the still-smoldering debris of an apartment complex which burned to the ground after being hit by a flaming plane in Alameda, Calif., Feb. 8, 1973.

### 10 A Helping Hand

Harrisburg, Pa., Hurricane "Agnes" flood victims apply for housing assistance, July, 1972.

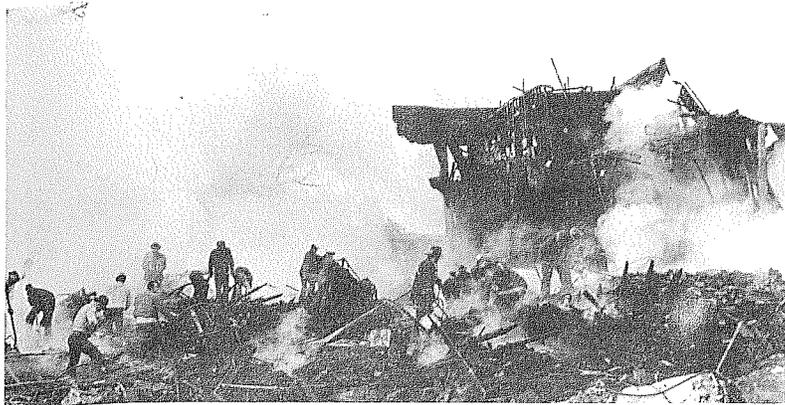
### 11 Mud! Mud! EVERYWHERE Mud!

The cleanup begins in Harrisburg, Pa., July 1972, following the "Great Flood".

### 12 Explosion

Ft. Dodge, Ia., civil defense rescue workers carry one of several victims from the rubble of a restaurant and hardware store following an explosion that leveled both buildings in Eagle Grove, Iowa, February 3, 1973.

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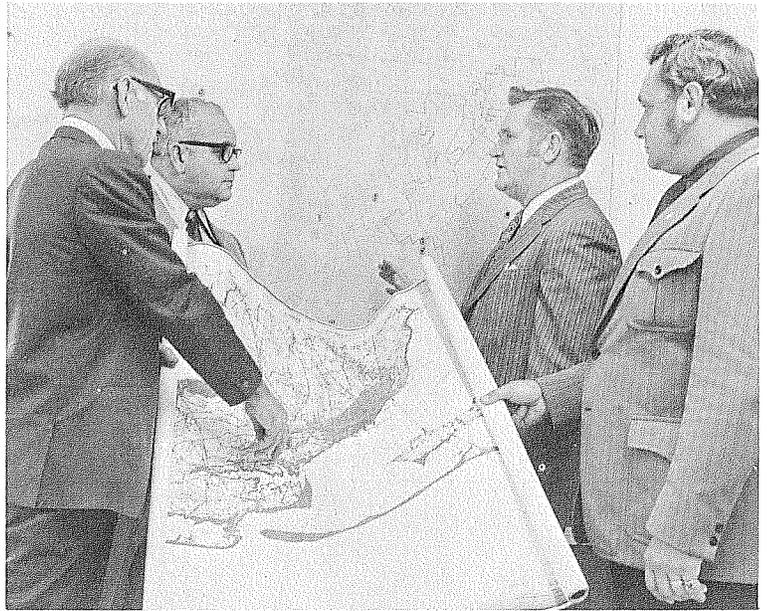
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### 13 Emergency Operations Simulation (EOS)

Following a vigorous On-Site Assistance project in Fall River, Mass., the city conducted an EOS with more than 50 city officials participating on May 25, 1973.

### 14 Foresight With On-Site

After a request for DCPA On-Site Assistance, Pensacola, Florida, Escambia County, and Red Cross Officials discuss measures for evacuating low-lying areas should a hurricane storm surge threaten flooding.

### 15 Water Purification System

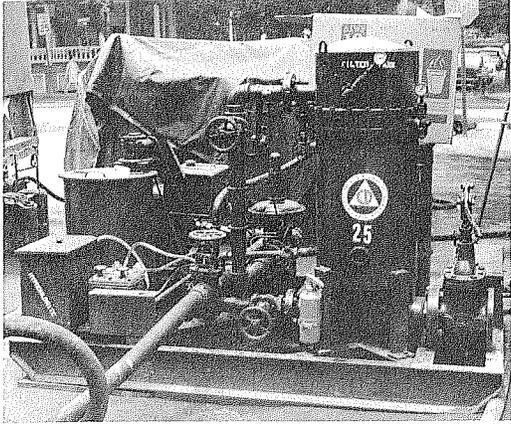
A civil defense water purification system in use at Renover, Pa., July 1972, during the "Great Flood" following Hurricane "Agnes".

### 16 Fire Fighting Foresight

When the Mississippi River flooded Campbells Island, Ill., in March 1973, Rock Island County Civil Defense set up an amphibious fire department by placing pumps and hose lines on a civil defense "Duck". Frank Dunbar, Director of the Civil Defense Fire Force, and Ron Harriott, Assistant Director, practice drawing water.

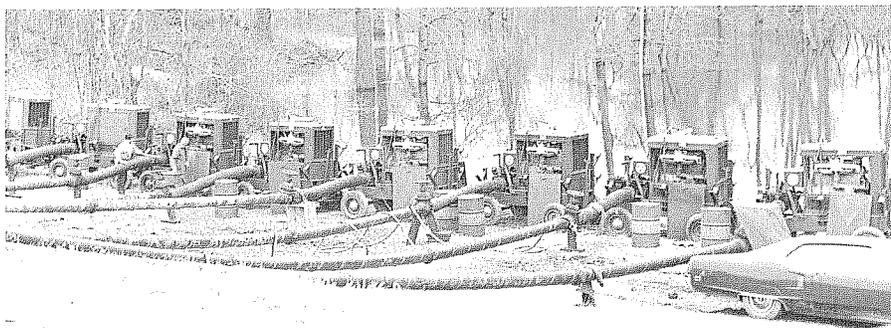
### 17 Pumps to the Rescue!

Eight high-capacity pumps and 1,600 feet of pipe from the DCPA emergency engineering stockpile pumped a quarter-of-a-billion gallons of water out of Chauvin Bayou into the Ouachita River to eliminate flooding of an area near Monroe, Louisiana.

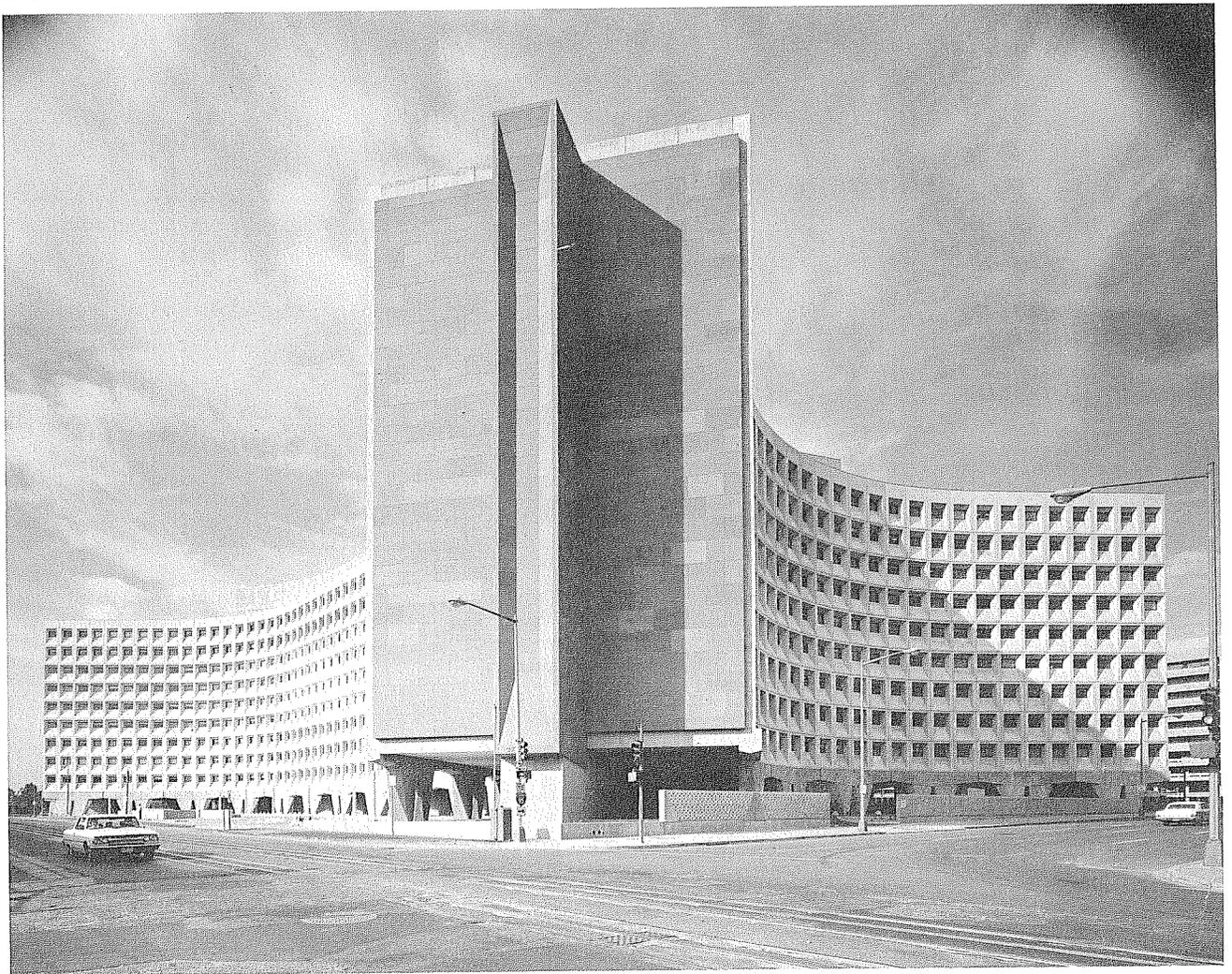


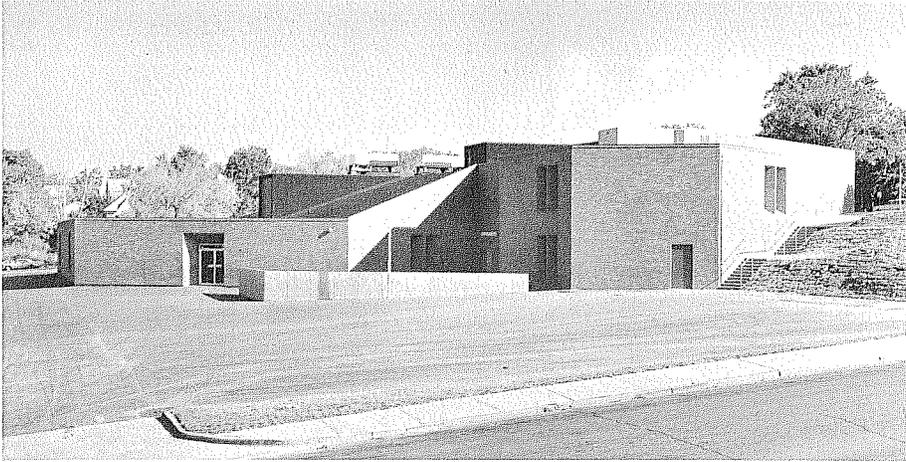
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## 18 Shelter in Federal Building

Housing and Urban Development (HUD) Federal building, Washington, D.C. constructed with 82,490 shelter spaces.

## 19 Summer Hire Students

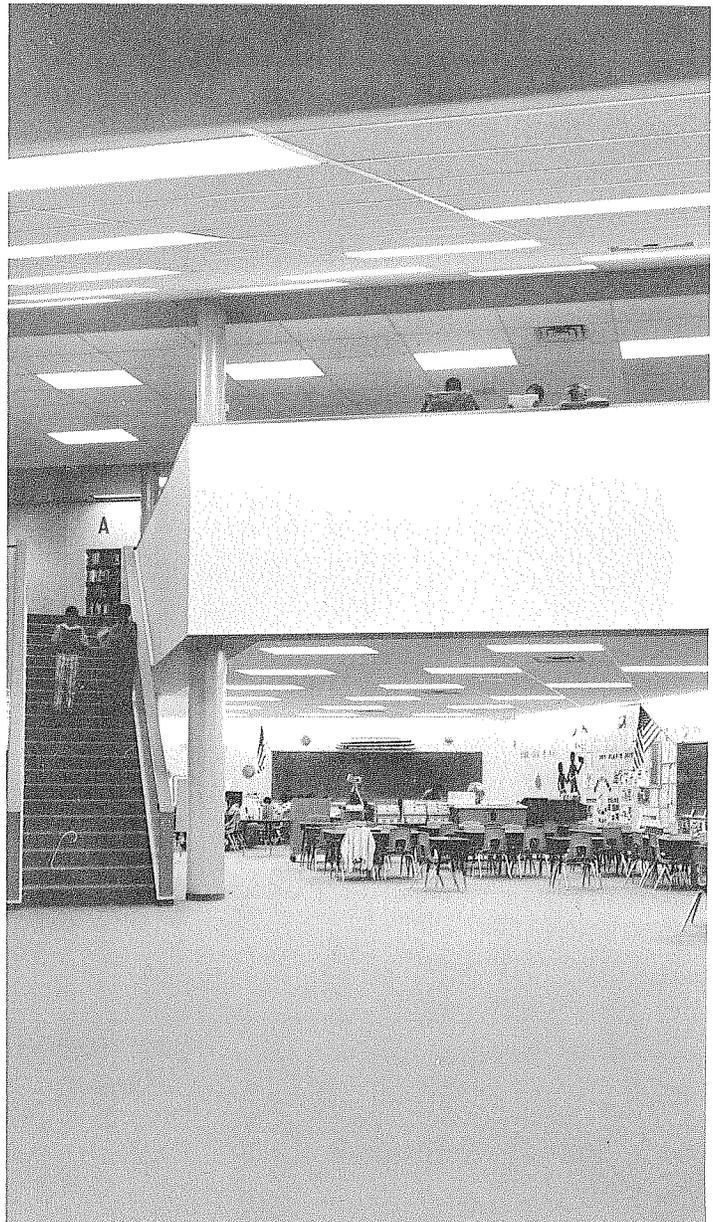
Two students preparing survey forms in the National Shelter Survey Summer Hire Program.

## 20 School Provides Tornado Shelter

In Kansas City, Kansas, the new Benjamin Banneker Elementary School designed by DCPA-trained architects was built with tornado design criteria. Tornado protection is a present requirement for new schools of the Kansas City School District.

## 21 Interior with Overhead Protection

Project architects of the Banneker elementary school achieved the required tornado protection in an interior space at the lower floor which lies under the projecting second floor. Overhead protection was gained by means of the ribbed concrete floor system which consists of a 4" slab and 16" deep pan-joists.





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## 22 Staff College Training

Emergency Operations Simulation Training at DCPA Staff College in Battle Creek, Michigan.

## 23 DCPA Communications Analysis

Mr. W. D. Tiffany and Mr. C. A. Hall, Jr., Stanford Research Institute, discuss with Mr. Roy A. Casdorff, USASTRATCOM Facility Chief, DCPA Region 7, Santa Rosa, Cal., the teletype patching and testing facilities as a part of an overall analysis and evaluation of the effectiveness of DCPA Federal Communications Systems to meet civil defense requirements through the 1980 time period.

## 24 International Boundaries Fade at DCPA

Visiting Saudi Arabians become absorbed in the group discussion conducted in Phase II of the Career Development Course at DCPA Staff College.

## 25 Disaster Preparedness Conference

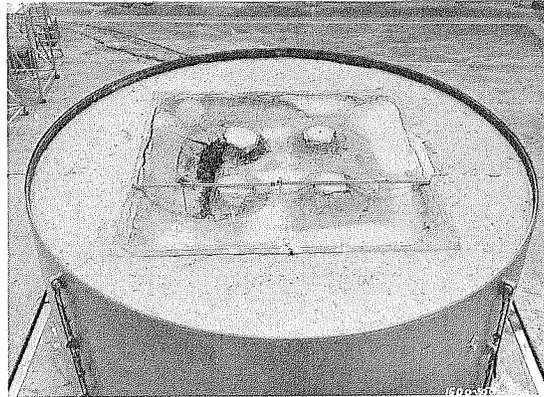
Pictured as they conferred during an Organization of American States disaster preparedness seminar in San Juan, Puerto Rico, are (left to right) Mr. Gabriel Marrero, Deputy Director, San Juan Civil Defense Agency; Mr. Francis Reilly, DCPA Region 1 Regional Field Officer; Hon. Carlos R. Barcelo, Mayor of San Juan; Mr. Fernando Morales, Director of San Juan Civil Defense Agency; and Mr. Herbert E. Kunde, Special Assistant, representing John E. Davis, Director of the Defense Civil Preparedness Agency.

## 26 Testing Under Blast Conditions

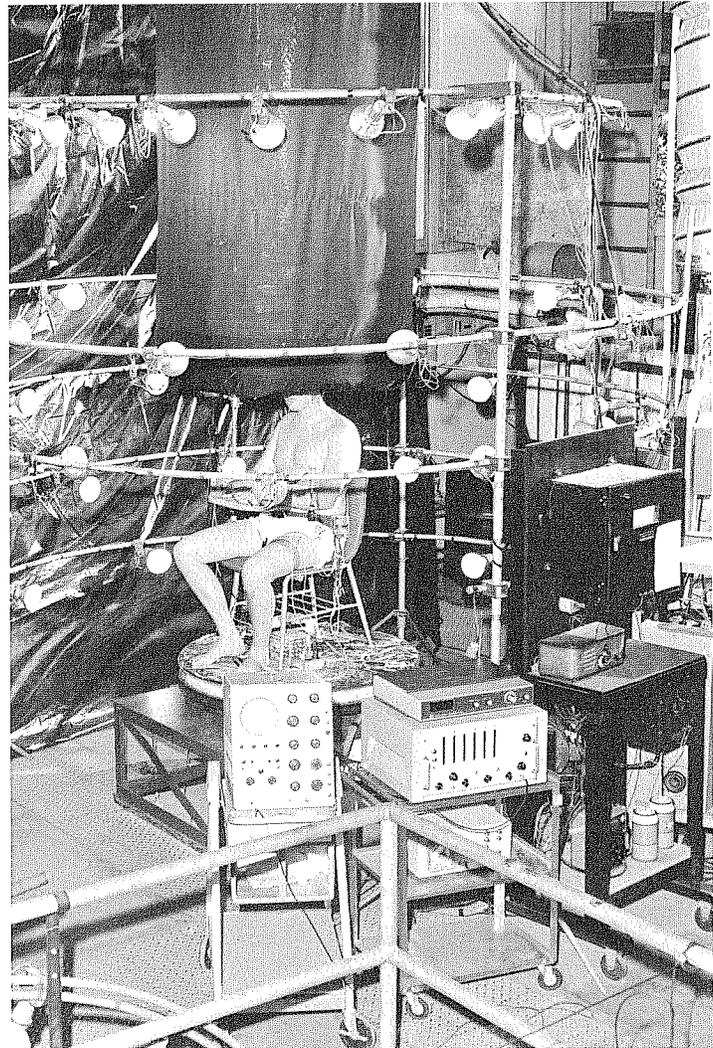
A 23ft. diameter blast loading test chamber with 1/4 scale model (13ft. on a side) of a column supported reinforced concrete slab used to estimate strength of candidate floor systems for slanting of new construction against blast effects.

## 27 Shelter Research

Human calorimeter chamber being lowered over test subject to measure physiological strain that might be experienced in a shelter, under variable temperature, humidity, air flow and overhead fire-heat radiation.

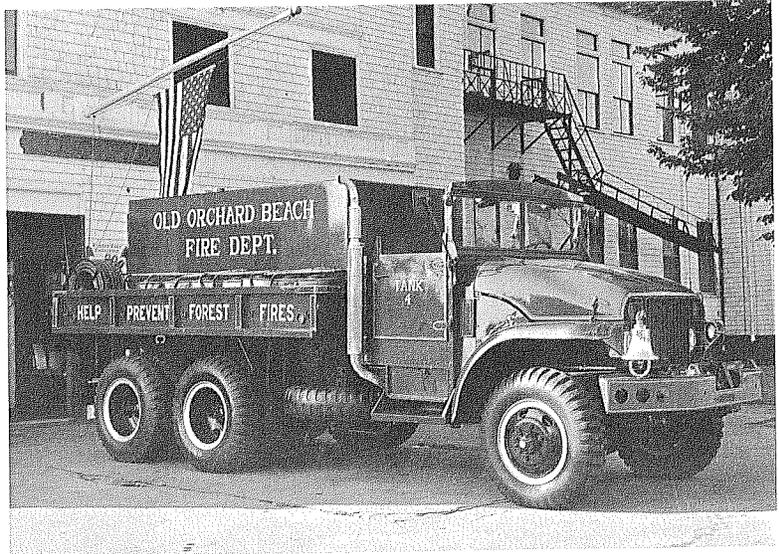


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### 28 Excess Property Power

Pictured is a truck-mounted generator for providing emergency power under blackout conditions, State of Maine Bureau of Civil Defense obtained the generator as excess property through the DCPA Contributions Project Loan Program.

### 29 Rescue Truck

A Civil Defense rescue truck patrols the streets of Harrisburg, Pa., to aid Hurricane "Agnes" flood victims.

### 30 Excess Property Fire Truck

A few coats of fire engine red paint, and a 1,200-gallon water tank, converted an ordinary 4x4 excess property truck into a first-rate fire truck. The truck was obtained through the State of Maine, York County Civil Defense for use by the Old Orchard Beach Fire Department. This is just one of many excess property trucks obtained for Maine's municipalities by the Bureau of Civil Defense.

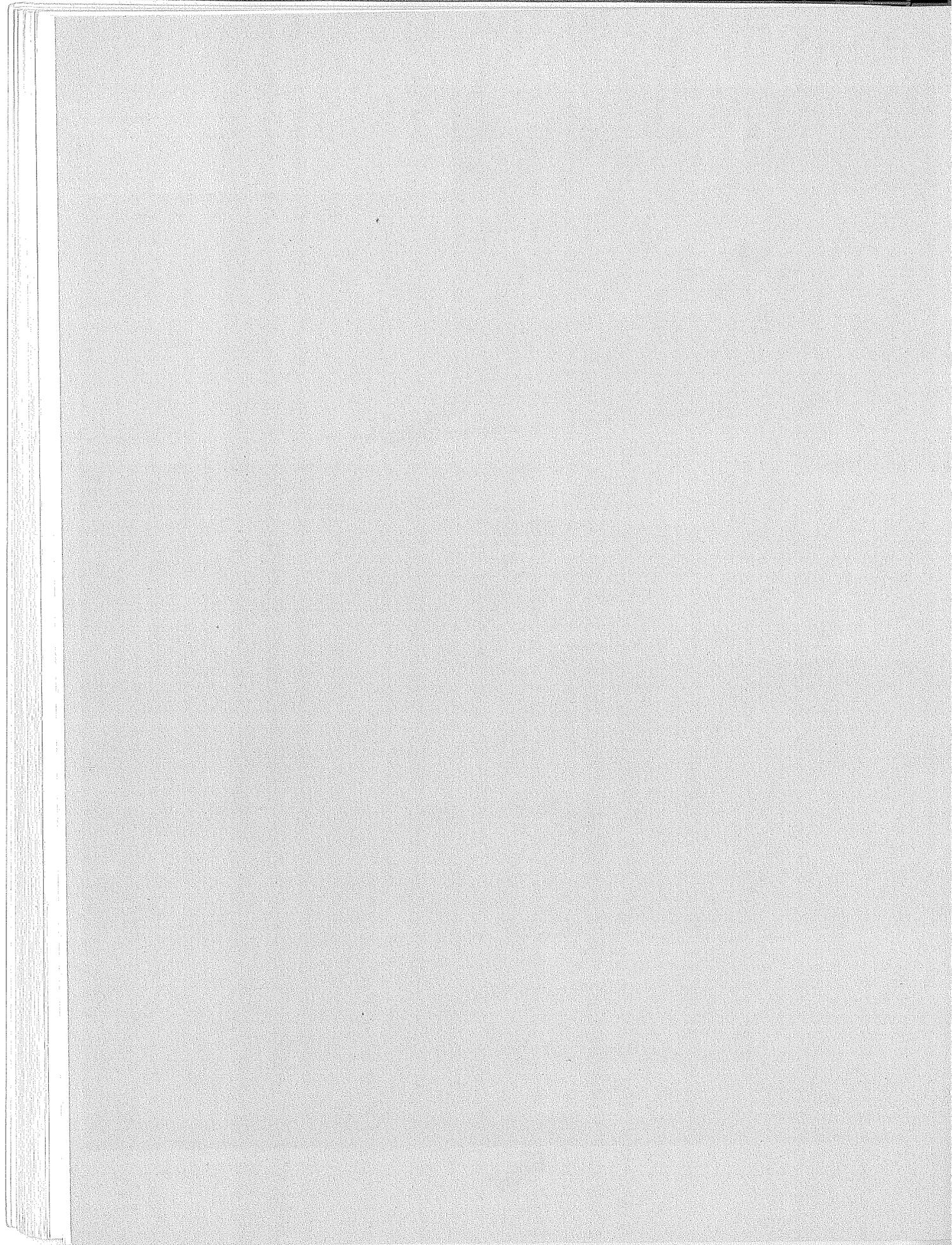


### 31 Helicopter Used for Rescue

A Chicago Civil Defense helicopter obtained through surplus property channels and rebuilt was used to rescue two persons from a boat on an icy lake at the Hickory Hills apartment complex in suburban Justice, Illinois, on December 1, 1972, after one man drowned and other persons were imperiled while saving the life of a three-year-old girl who had fallen through thin ice. The same helicopter was used to transport survivors of a Chicago commuter train collision to a hospital on October 30, 1972.

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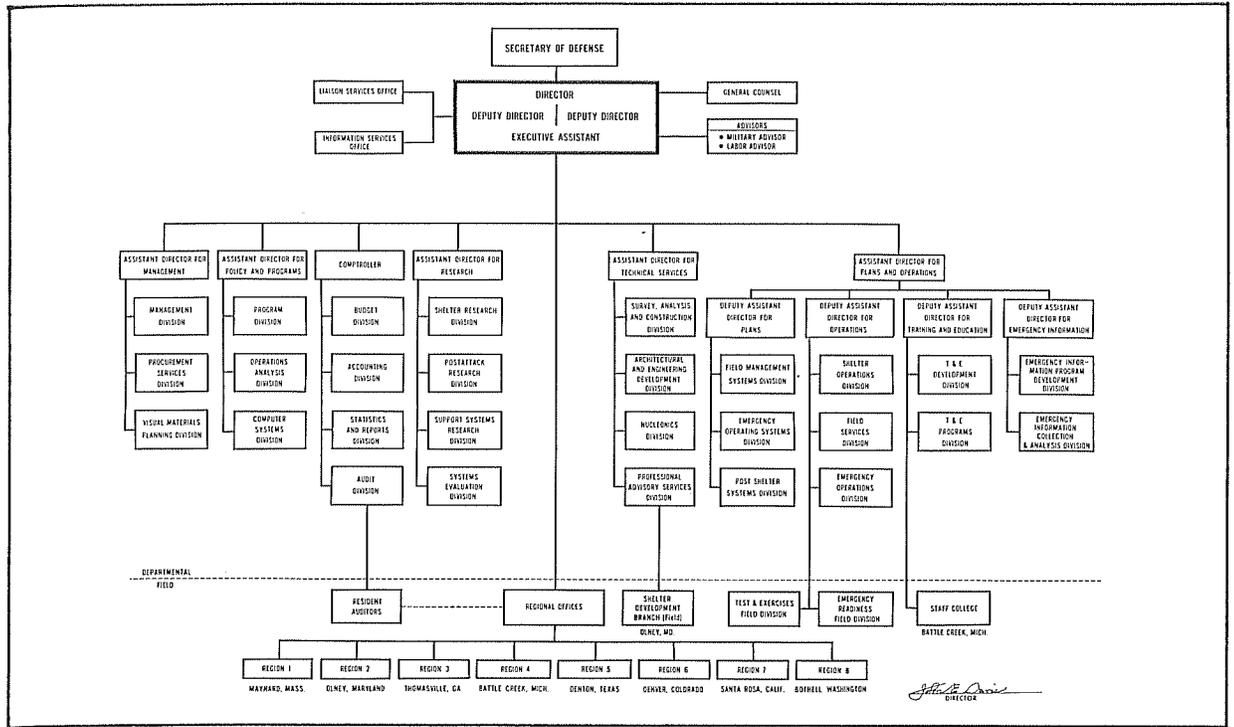




# maps and charts

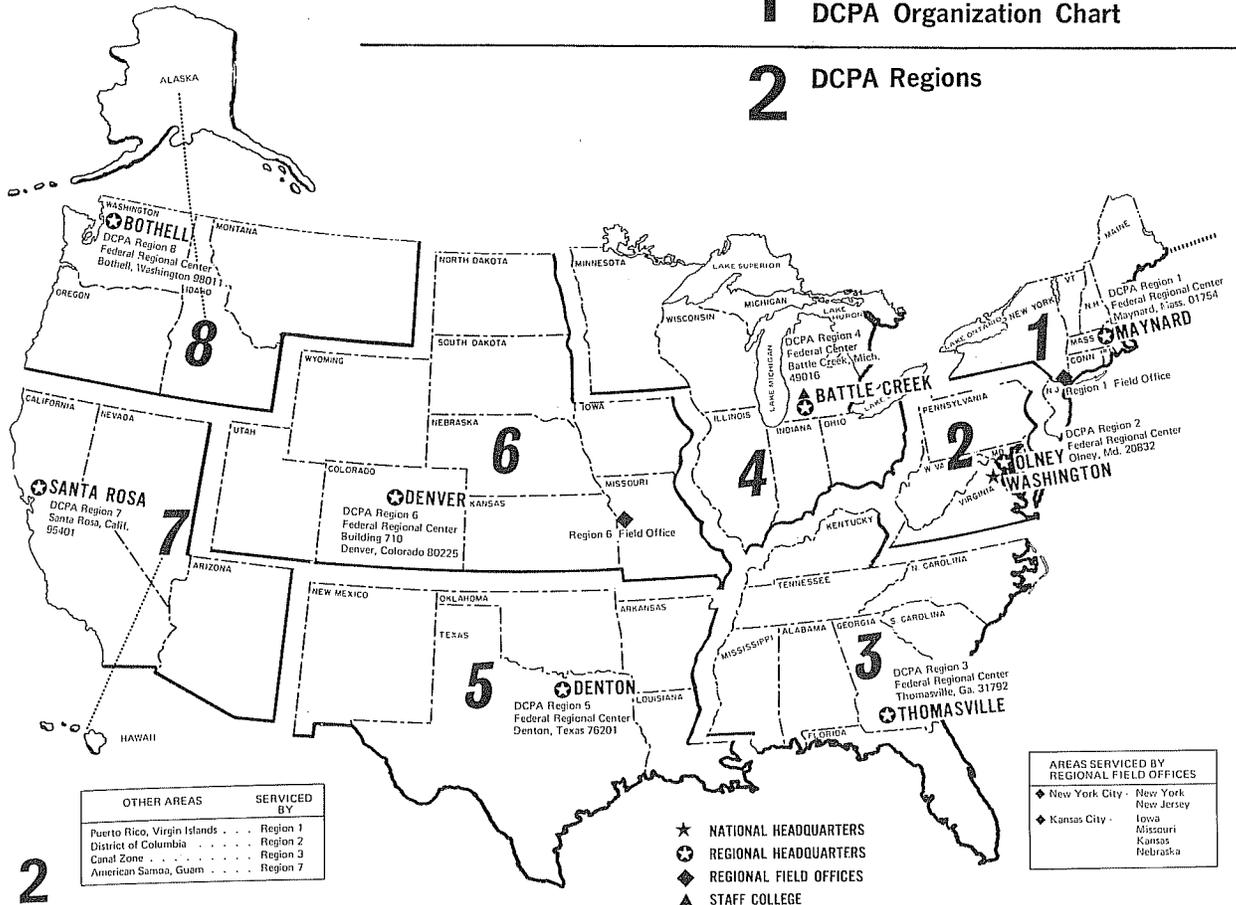
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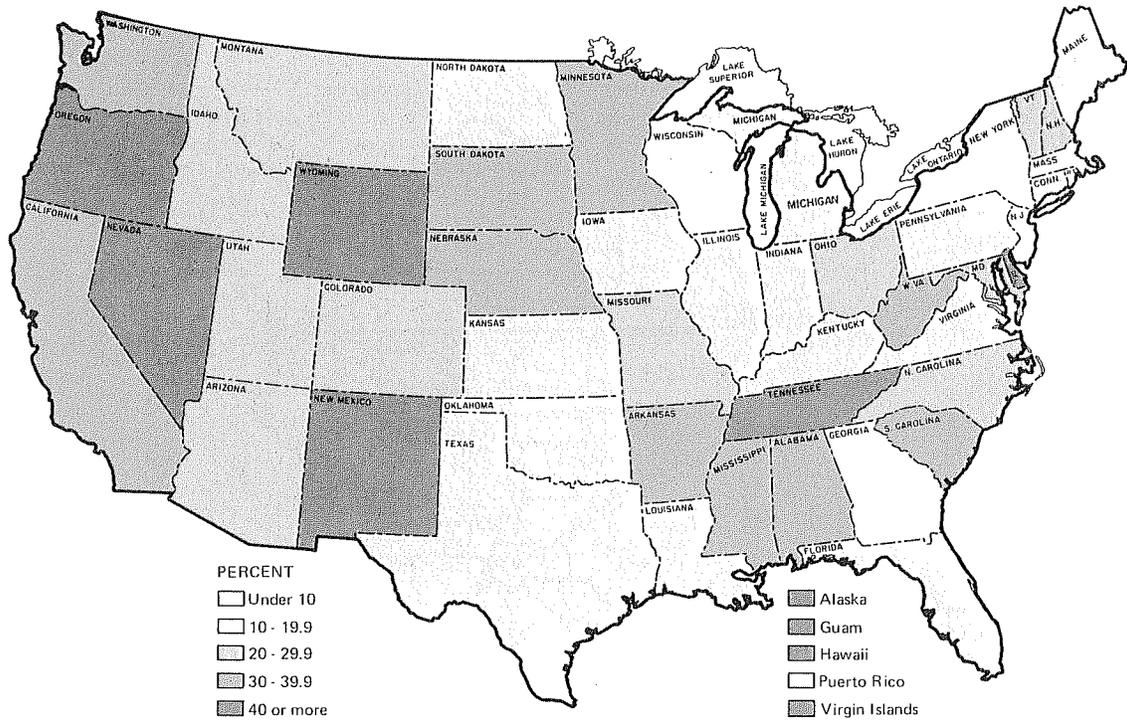


1 DCPA Organization Chart

2 DCPA Regions

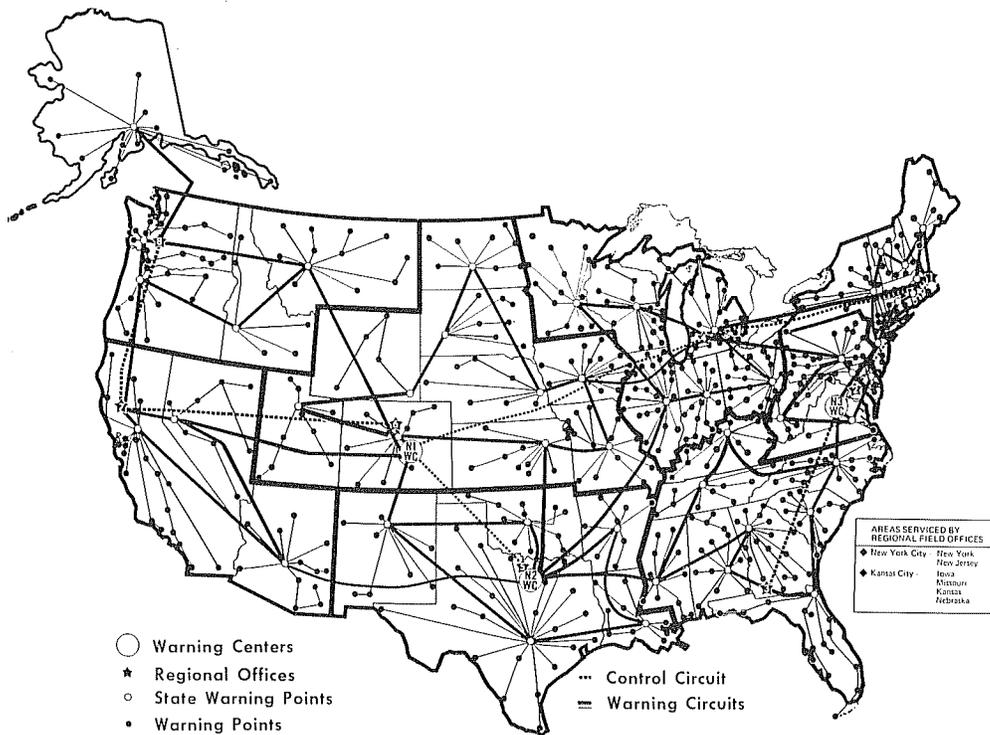


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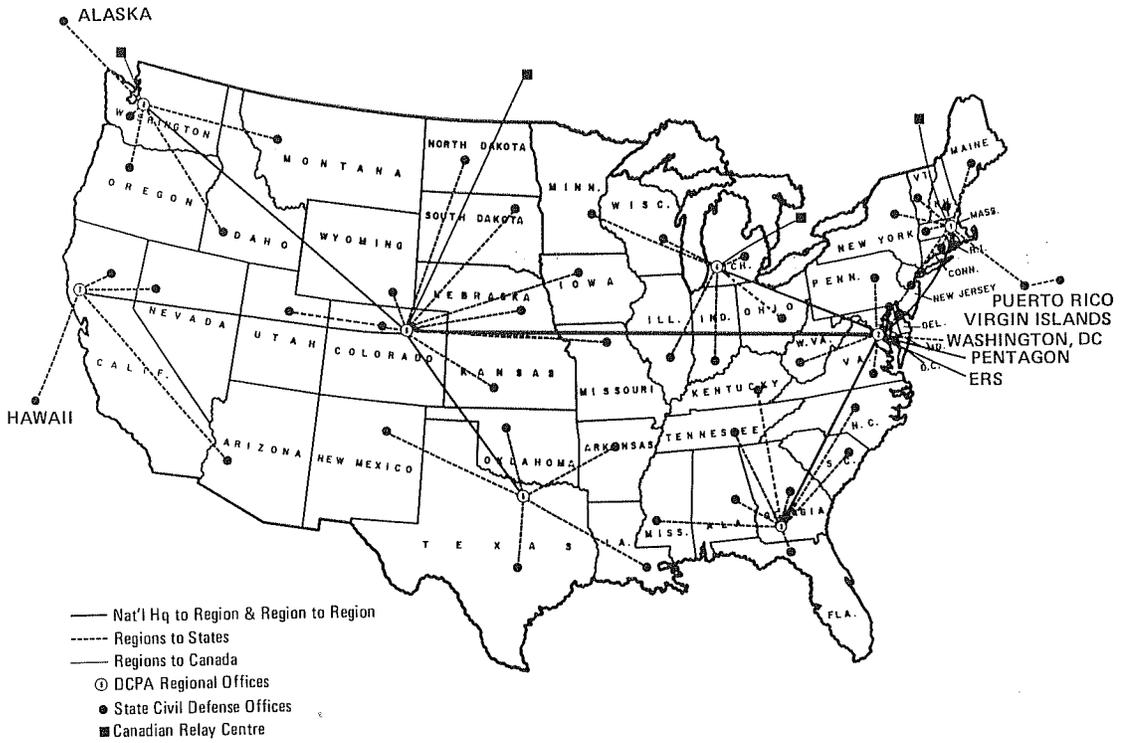


**3** On-Site Assistance—Population of Participating Localities as percent of Total State Population, June 30, 1973

**4** Defense Civil Preparedness Agency National Warning System



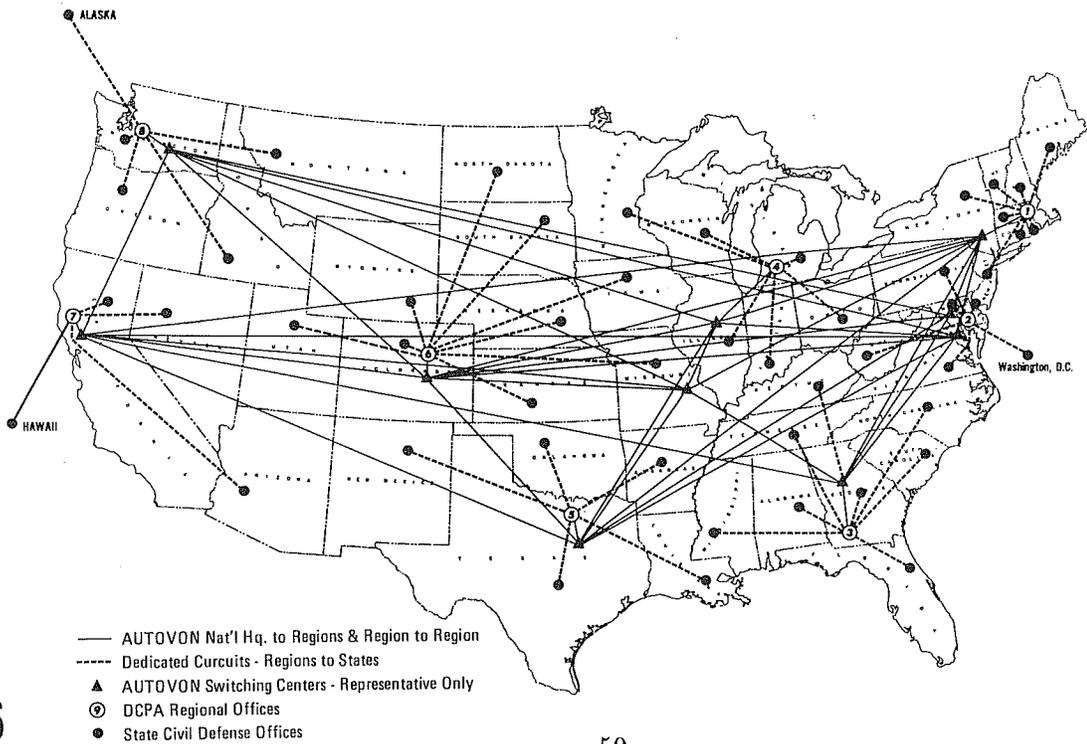
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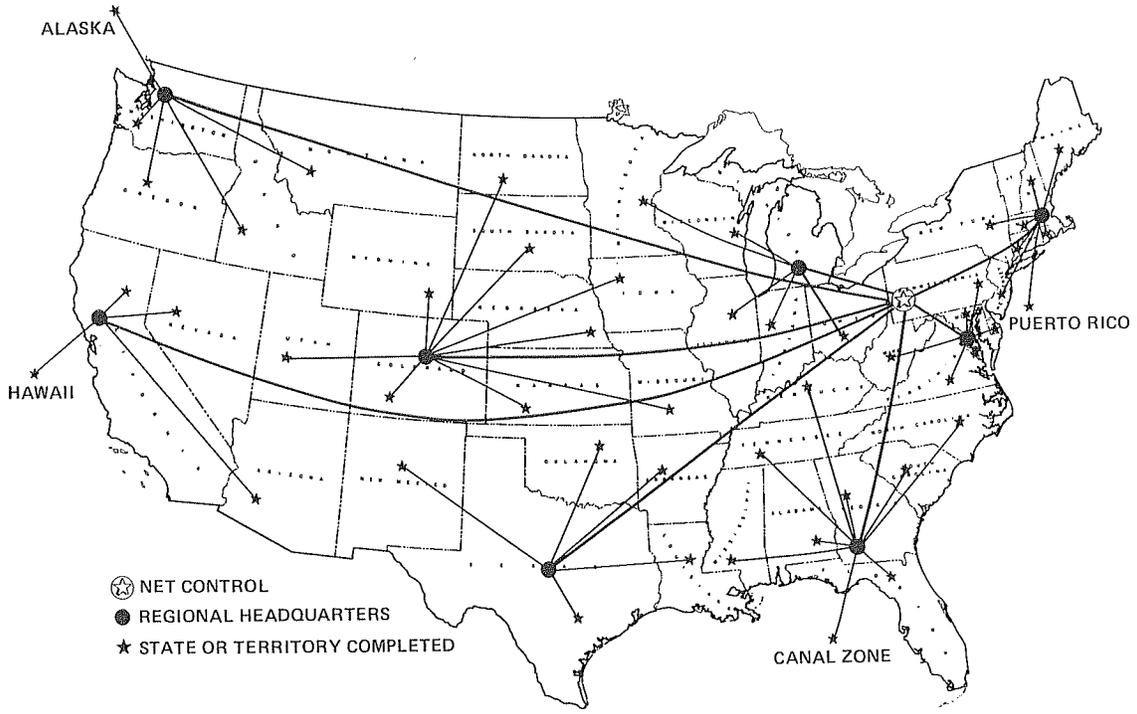


5 Civil Defense National Teletype System

6 Civil Defense National Voice System

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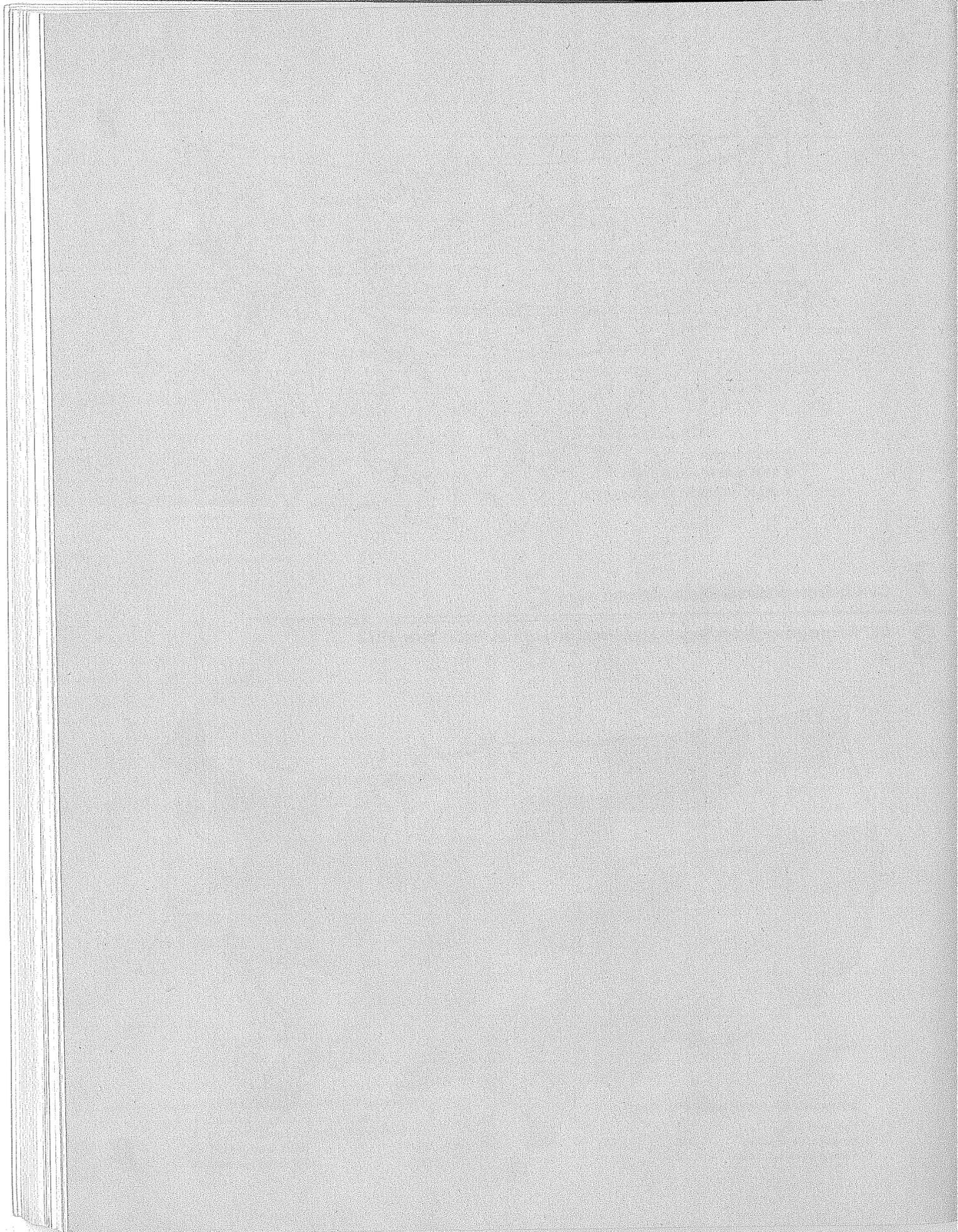
**7** Civil Defense National Radio System

**8** DCPA Emergency Water Supply Equipment on Loan in Fiscal Year 1973



**SUMMARY OF ASSISTANCE PROVIDED**

Number of States	32
Number of Communities	140
Value of Equipment Loaned	\$1.9 million



# statistical tables

3

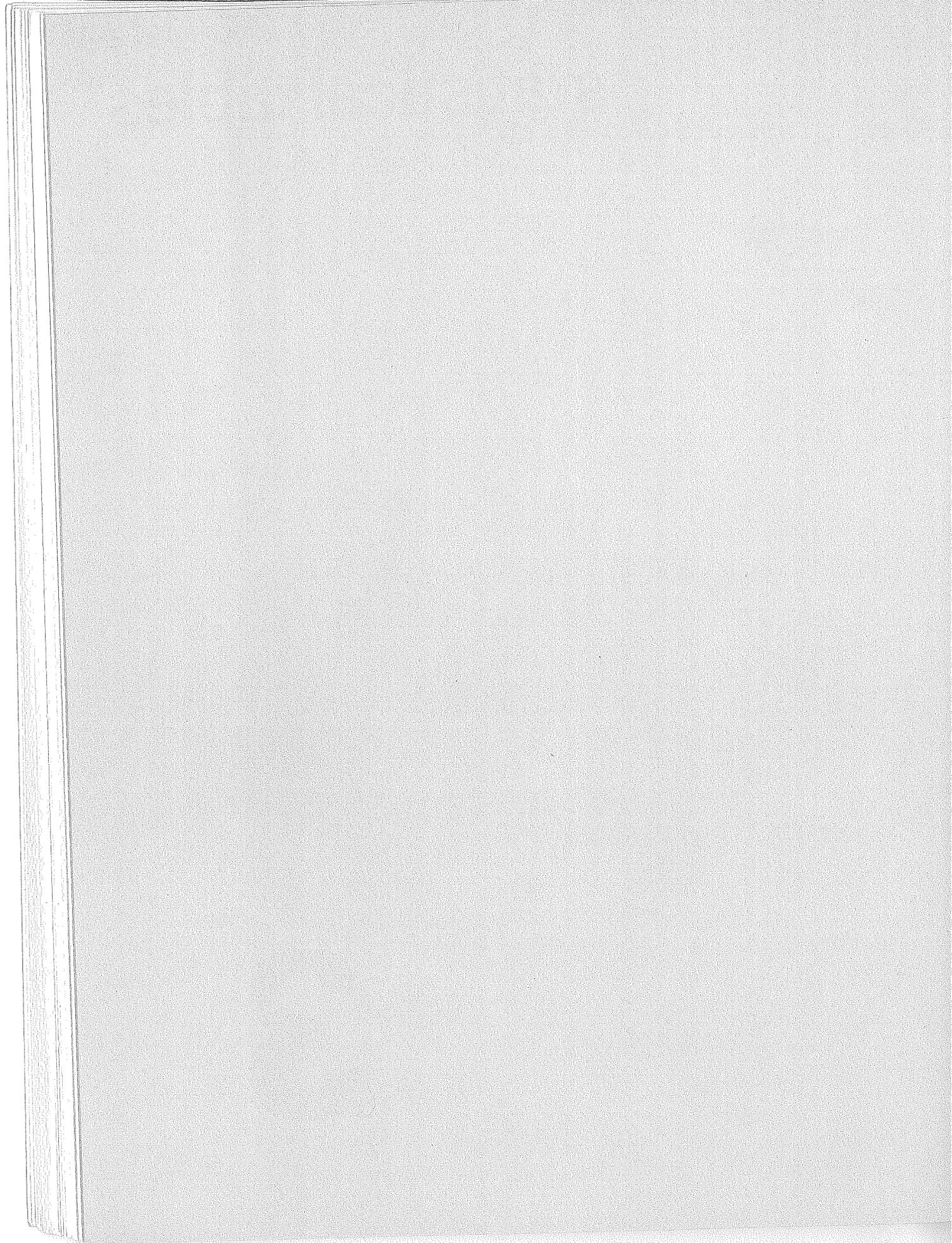


TABLE 1.—Financial summary for fiscal year 1973  
(In thousands)

<i>Budget activity</i>	Funds pro- gramed for obligation	Funds obligated
GRAND TOTAL .....	\$86,997	\$82,192
OPERATIONS AND MAINTENANCE, TOTAL.....	60,187	59,092
Warning and detection .....	4,125	4,113
Warning systems .....	470	467
Detection and monitoring systems.....	306	306
Warehousing and maintenance .....	3,349	3,340
Emergency operations .....	13,508	13,351
Broadcast station protection program.....	76	69
Training and education .....	8,164	8,084
Emergency operations planning.....	895	893
National civil defense computer facility.....	1,141	1,124
Emergency water supply equipment.....	2,068	2,063
Emergency information .....	989	943
Other emergency operations activities.....	175	175
Financial assistance to States.....	26,000	26,179
Survival supplies, equipment and training.....	1,600	1,426
Personnel and administrative expenses.....	25,000	24,753
Management .....	15,954	15,449
RESEARCH, SHELTER SURVEY AND MARKING, TOTAL .....	28,810	23,100
Shelters .....	13,772	10,718
Shelter .....	9,664	8,014
Community shelter planning.....	3,023	1,819
Decision information distribution system.....	396	249
Federal regional emergency operating centers.....	648	595
Shelter stocking .....	41	41
Emergency operating centers.....	9,425	9,191
State and local emergency operating centers.....	7,124	6,976
State and local supporting systems equipment.....	2,301	2,215
Research and development.....	3,613	3,191

Figures may not add to totals due to rounding.

TABLE 2.—Status of on-site assistance  
June 30, 1973

Region	Localities Selected	Advance Preparation	Preliminary Visit	Survey Started	Survey Completed	Summary & Recommendations Submitted	Action Plans Approved	Follow-up Underway
Total	528	441	427	396	362	310	240	177
One	53	49	48	42	42	34	22	13
Two	50	47	47	47	45	44	24	24
Three	123	84	80	71	71	60	48	21
Four	69	65	65	61	59	54	48	37
Five	104	79	75	73	69	52	42	36
Six	44	37	34	30	30	27	21	15
Seven	61	57	56	51	25	19	19	15
Eight	24	23	22	21	21	20	16	16

TABLE 3.—Shelter located, licensed, and marked <sup>1</sup>

AREA	LOCATED				LICENSED				MARKED			
	Facilities		Spaces (000) <sup>2</sup>		Facilities		Spaces (000) <sup>2</sup>		Facilities		Spaces (000) <sup>2</sup>	
	During FY 1973	Cum End of FY 1973	During FY 1973	Cum End of FY 1973	During FY 1973	Cum End of FY 1973	During FY 1973	Cum End of FY 1973	During FY 1973	Cum End of FY 1973	During FY 1973	Cum End of FY 1973
TOTAL	7,197	224,368	9,672	222,289	1,056	130,205	2,957	138,191	625	118,889	1,918	118,366
REGION 1	1,601	70,089	3,284	63,242	89	39,614	784	37,538	229	40,571	860	33,783
Connecticut	276	4,333	199	3,886	-7	2,020	45	2,438	-17	1,473	42	1,868
Maine	20	1,267	11	657	1	913	-3	502	5	852	11	479
Massachusetts	367	9,191	1,122	7,252	-4	4,645	78	3,759	-9	3,982	33	3,094
New Hampshire	33	876	73	550	-1	486	17	335	-2	393	14	328
New Jersey	104	8,129	798	8,101	-18	4,525	360	4,649	223	4,819	510	4,848
New York	690	43,243	1,007	39,676	47	24,213	248	23,862	14	26,612	222	21,734
Rhode Island	6	1,269	20	1,095	-5	1,047	-2	819	16	841	28	663
Vermont	4	523	6	248	4	356	3	184	-1	292	0	164
Puerto Rico	97	2,216	45	1,765	72	1,396	37	987	0	1,194	0	642
Virgin Islands	4	42	4	12	0	13	0	2	0	13	0	2
REGION 2	887	34,970	821	34,235	90	17,472	269	20,632	328	17,110	213	18,767
Delaware	35	894	27	595	1	525	0	433	1	470	0	367
Dist. of Columbia	1	5,851	6	7,173	0	1,664	-1	4,132	0	1,600	0	3,859
Maryland	214	3,778	350	5,133	107	2,522	142	2,959	-9	2,085	5	2,114
Pennsylvania	164	16,736	232	15,591	-15	9,448	45	9,999	351	9,292	169	9,180
Virginia	141	6,284	50	4,881	12	2,615	31	2,572	4	3,006	2	2,796
West Virginia	332	1,427	157	862	-15	698	52	537	-19	657	37	450
REGION 3	1,038	20,904	1,780	24,103	492	13,632	846	15,775	8	11,315	174	13,076
Alabama	35	2,493	18	1,790	30	1,837	16	1,436	16	1,500	5	1,150
Florida	354	3,492	1,178	6,812	46	1,946	72	3,329	20	1,514	32	2,683
Georgia	135	4,089	111	5,292	235	2,513	332	3,692	-4	2,007	7	3,064
Kentucky	99	2,134	37	2,809	66	1,477	233	2,066	-6	1,265	3	1,673
Mississippi	20	876	4	528	13	633	0	443	-7	555	-4	396
North Carolina	196	3,483	161	2,890	47	2,504	91	2,264	23	2,075	100	1,896
South Carolina	60	1,591	57	1,184	18	993	12	810	-17	805	0	644
Tennessee	139	2,491	214	2,708	37	1,624	89	1,780	-17	1,520	32	1,523
Canal Zone	0	253	0	90	0	105	0	54	0	74	0	49
REGION 4	2,049	42,012	1,545	42,131	189	24,139	446	25,377	118	21,132	411	21,043
Illinois	124	9,758	110	11,689	-1	5,438	2	6,853	1	4,830	3	5,232
Indiana	457	3,988	281	3,602	49	2,121	52	2,052	-9	1,763	35	1,728
Michigan	224	6,539	96	7,157	-14	3,339	-2	4,161	-2	2,836	3	3,431
Minnesota	242	6,295	152	6,054	101	4,200	59	4,431	84	3,793	93	3,964
Ohio	739	9,470	511	8,541	12	4,995	166	4,329	1	4,878	154	4,065
Wisconsin	263	5,962	394	5,087	42	4,046	169	3,551	43	3,030	124	2,624
REGION 5	276	12,206	192	13,682	-2	8,471	90	10,294	-63	7,014	19	9,010
Arkansas	32	1,750	16	1,035	-13	1,359	7	859	-17	1,322	3	849
Louisiana	67	1,246	14	1,679	-23	766	6	1,168	-34	706	2	1,075
New Mexico	0	996	-1	663	-1	662	0	471	-1	445	0	363
Oklahoma	90	2,615	123	2,702	21	1,731	79	1,933	-8	1,375	32	1,705
Texas	87	5,599	39	7,603	14	3,953	-3	5,863	-3	3,166	-17	5,018
REGION 6	418	23,363	212	16,530	122	14,595	70	11,061	70	12,802	48	9,861
Colorado	-7	2,673	-13	2,243	6	1,692	-1	1,497	-6	1,717	-9	1,326
Iowa	38	3,764	21	1,999	51	2,429	25	1,419	76	2,210	36	1,432
Kansas	101	3,790	19	2,274	-1	2,423	3	1,653	-5	2,173	2	1,528
Missouri	119	5,587	78	5,966	16	2,735	2	3,544	-7	2,167	0	2,922
Nebraska	104	2,464	55	1,487	13	1,715	-11	1,089	-1	1,315	-12	881
North Dakota	1	974	-4	456	2	876	-3	414	-2	783	1	377
South Dakota	-2	1,184	1	490	13	1,038	6	456	-2	929	0	383
Utah	64	2,331	57	1,343	18	1,227	48	805	6	1,142	29	836
Wyoming	0	596	0	273	4	460	0	184	0	366	0	175
REGION 7	696	13,641	1,374	21,701	29	7,239	225	12,925	-34	4,788	131	8,951
Arizona	26	936	38	1,021	0	666	-2	738	0	595	-1	611
California	637	11,320	1,270	19,147	5	5,674	193	11,083	-40	3,577	120	7,654
Hawaii	13	692	31	738	4	426	5	500	3	241	2	222
Nevada	20	650	36	783	20	450	27	599	3	363	10	462
American Samoa	0	3	0	3	0	1	0	3	0	1	0	3
Guam	0	25	0	9	0	7	0	2	0	0	0	0
Midway-Wake	0	15	0	2	0	15	0	2	0	11	0	2
REGION 8	232	7,183	464	6,665	47	5,043	229	4,590	-31	4,257	63	3,875
Alaska	9	325	18	216	3	237	2	171	6	220	2	159
Idaho	4	734	1	415	8	591	1	349	-2	441	0	262
Montana	11	1,096	-11	587	4	903	2	492	-24	756	-18	393
Oregon	137	2,042	297	2,116	9	1,040	76	1,141	-1	859	72	1,010
Washington	71	2,986	158	3,331	23	2,272	149	2,437	-10	1,981	7	2,051

<sup>1</sup> Data contained in this table are net. Negative entries result where decreases due to demolition of buildings, recomputation of original capacity, etc., outweigh increases due to new construction, etc.

<sup>2</sup> Figures may not add to exact totals due to rounding.

<sup>3</sup> Less than 500.

TABLE 4.—State level seminars for local civil defense directors  
June 30, 1973

Area	Seminars	Attendees	Area	Seminars	Attendees
<u>TOTAL</u>	<u>141</u>	<u>3,081</u>	<u>REGION 4 (Cont'd.)</u>		
<u>REGION 1</u>	<u>29</u>	<u>549</u>	Ohio	1	22
Connecticut	1	33	Wisconsin	3	70
Maine	5	100	<u>REGION 5</u>	<u>13</u>	<u>196</u>
Massachusetts	8	162	Arkansas	3	36
New Hampshire	2	22	Louisiana	1	11
New Jersey	1	20	New Mexico	2	41
Vermont	7	123	Oklahoma	3	39
Puerto Rico	4	87	Texas	4	69
Virgin Islands	2	22	<u>REGION 6</u>	<u>30</u>	<u>610</u>
<u>REGION 2</u>	<u>12</u>	<u>453</u>	Colorado	4	69
Maryland	1	23	Iowa	2	49
Pennsylvania	2	198	Kansas	2	74
Virginia	5	153	Missouri	7	160
West Virginia	4	79	Nebraska	9	137
<u>REGION 3</u>	<u>8<sup>a</sup></u>	<u>163</u>	North Dakota	2	37
Alabama	2	41	South Dakota	1	24
Florida	0	19	Utah	2	40
Georgia	0	14	Wyoming	1	20
Kentucky	3	39	<u>REGION 7</u>	<u>6</u>	<u>108</u>
Mississippi	0	12	Arizona	1	22
North Carolina	0	13	California	2	45
South Carolina	0	14	Nevada	3	41
Tennessee	0	11	<u>REGION 8</u>	<u>11</u>	<u>255</u>
<u>REGION 4</u>	<u>31</u>	<u>727</u>	Alaska	1	32
Illinois	5	139	Idaho	2	32
Indiana	4	59	Montana	4	76
Michigan	5	147	Oregon	2	53
Minnesota	13	290	Washington	2	62

<sup>a</sup> Includes three combined seminars held at Region Three Headquarters.

**TABLE 5.—Research funds programed and obligated  
Initial obligations  
(In thousands)**

Type of research	Fiscal year 1973 appropriations	
	Programed	Obligated
Total .....	<sup>1</sup> \$3,500	<sup>1</sup> \$3,160
Shelter Research .....	975	1,060
Protection studies .....	565	578
Shelter environmental studies .....	50	78
Subsistence and habitability studies .....	10	0
Prototype design for life support systems .....	0	0
Shelter management studies .....	75	49
Shelter systems studies .....	275	355
Support Systems Research .....	1,000	869
Monitoring systems studies .....	40	0
Communications and warning studies .....	175	230
Reduction of vulnerability .....	0	0
Emergency phase medical research .....	185	110
Fire effects and protection .....	262	284
Emergency operations research .....	338	245
Postattack Research .....	650	570
Radiological phenomena and effects .....	145	107
Radiological countermeasures .....	90	92
Repair and reclamation of damage .....	130	114
Postattack medical, health, and welfare operations .....	160	152
Recovery and maintenance systems .....	125	105
Systems Evaluation .....	875	662
Civil defense systems analysis .....	300	320
Strategic analyses .....	15	15
Vulnerability and requirements research .....	125	129
Organization and training research .....	215	110
Planning support research .....	10	0
Information systems analyses .....	0	0
Physical environments studies .....	5	5
Social and psychological studies .....	205	83

<sup>1</sup> Excludes FY 1973 activity from earlier appropriations: Programed \$113 thousand; obligated, \$31 thousand.  
Figures may not add to exact totals due to rounding.

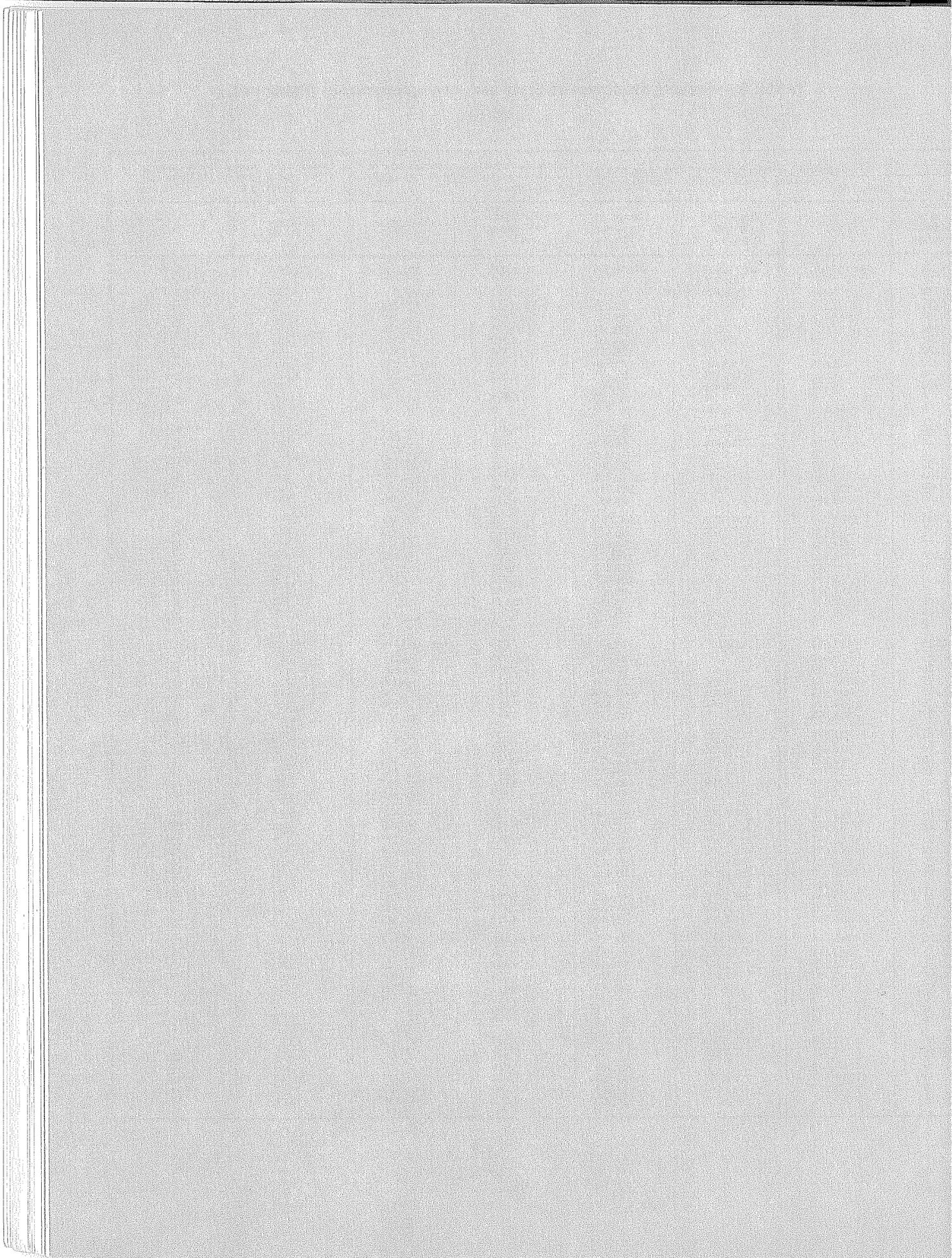
TABLE 6.—Federal assistance to State and local governments<sup>1</sup>

Area	Personnel and administrative expenses			Systems maintenance and services, amounts obligated		
	Amount obligated	Political subdivisions		Total	Recurring charges	
		Number participating	Staff		Communi-cations	Warning
<b>TOTAL</b> .....	\$24,753,521	2,324	6,021	\$1,425,957	\$473,702	\$867,236
<b>REGION ONE</b> .....	6,308,746	389	1,343	369,792	130,286	210,768
Connecticut .....	367,890	25	75	29,306	8,818	18,677
Maine .....	335,000	86	138	44,648	25,943	6,675
Massachusetts .....	867,661	61	193	28,986	12,575	10,771
New Hampshire .....	76,000	17	30	2,609	826	1,612
New Jersey .....	850,049	73	197	37,718	11,213	17,618
New York .....	2,970,900	41	396	216,622	65,827	150,795
Rhode Island .....	220,000	8	37	3,236	726	2,510
Vermont .....	84,850	5	26	3,168	859	2,109
Puerto Rico .....	497,030	73	245	0	0	0
Virgin Islands .....	39,366	0	6	3,500	3,500	0
<b>REGION TWO</b> .....	2,268,656	180	553	172,044	44,299	122,475
Delaware .....	119,503	4	23	4,670	1,810	2,860
Dist. of Columbia .....	196,822	0	27	7,117	7,117	0
Maryland .....	550,574	22	100	37,828	17,405	19,723
Pennsylvania .....	803,682	58	186	109,076	14,868	90,604
Virginia .....	437,800	61	154	12,361	3,062	8,440
West Virginia .....	160,275	35	63	991	37	848
<b>REGION THREE</b> .....	4,163,549	442	1,141	92,019	20,938	68,436
Alabama .....	555,884	62	129	12,512	3,278	8,717
Florida .....	841,497	56	214	24,902	8,212	16,690
Georgia .....	752,698	83	195	17,135	1,734	15,299
Kentucky .....	280,000	47	106	2,868	1,797	1,071
Mississippi .....	327,358	55	107	6,047	2,239	3,808
North Carolina .....	592,680	58	166	6,213	476	5,737
South Carolina .....	441,575	37	110	5,984	2,713	2,671
Tennessee .....	371,857	44	114	16,358	488	14,441
Canal Zone .....	0	0	0	0	0	0
<b>REGION FOUR</b> .....	3,354,231	445	910	205,755	30,581	162,108
Illinois .....	800,000	166	293	26,061	0	22,851
Indiana .....	194,861	28	66	11,530	266	10,744
Michigan .....	603,604	71	124	27,428	5,078	20,500
Minnesota .....	774,279	94	203	56,283	5,165	49,100
Ohio .....	414,005	24	92	36,849	6,055	26,111
Wisconsin .....	567,482	62	132	47,585	14,017	32,778
<b>REGION FIVE</b> .....	1,977,839	233	556	35,529	11,701	23,699
Arkansas .....	345,465	59	123	3,440	1,562	1,800
Louisiana .....	493,747	22	122	9,074	3,194	5,888
New Mexico .....	109,627	20	35	849	76	71
Oklahoma .....	346,000	39	85	7,988	3,614	4,377
Texas .....	683,000	93	191	14,179	3,256	10,922
<b>REGION SIX</b> .....	1,920,200	398	684	145,165	54,684	81,966
Colorado .....	254,000	35	69	24,676	4,177	14,881
Iowa .....	315,000	73	114	27,106	15,111	11,944
Kansas .....	242,250	50	94	30,423	14,447	15,344
Missouri .....	296,563	72	116	24,287	5,449	18,111
Nebraska .....	249,158	46	87	21,105	5,445	14,300
North Dakota .....	158,000	51	66	6,793	5,107	1,686
South Dakota .....	167,100	38	69	6,124	2,415	3,609
Utah .....	152,000	10	33	1,940	1,391	44
Wyoming .....	86,129	23	36	2,711	1,142	1,500
<b>REGION SEVEN</b> .....	3,636,519	105	555	364,538	165,180	182,611
Arizona .....	288,625	20	62	22,110	13,281	8,300
California .....	2,794,732	68	408	264,676	132,348	117,311
Hawaii .....	289,057	4	36	69,031	13,748	54,311
Nevada .....	230,000	13	42	7,021	5,803	1,111
American Samoa .....	6,000	0	2	0	0	0
Guam .....	28,105	0	5	1,500	0	1,500
Midway-Wake .....	0	0	0	0	0	0
<b>REGION EIGHT</b> .....	1,123,781	132	279	41,116	16,033	15,000
Alaska .....	202,732	4	20	12,586	0	2,600
Idaho .....	92,668	30	45	827	697	1,100
Montana .....	184,888	53	71	9,523	8,185	1,300
Oregon .....	150,079	17	35	1,637	1,637	0
Washington .....	493,414	28	108	16,543	5,514	11,000

<sup>1</sup> Figures may not add to exact totals due to rounding.  
<sup>2</sup> Excludes 55 State level participants.  
<sup>3</sup> Adjusted to reflect changes to prior year data.

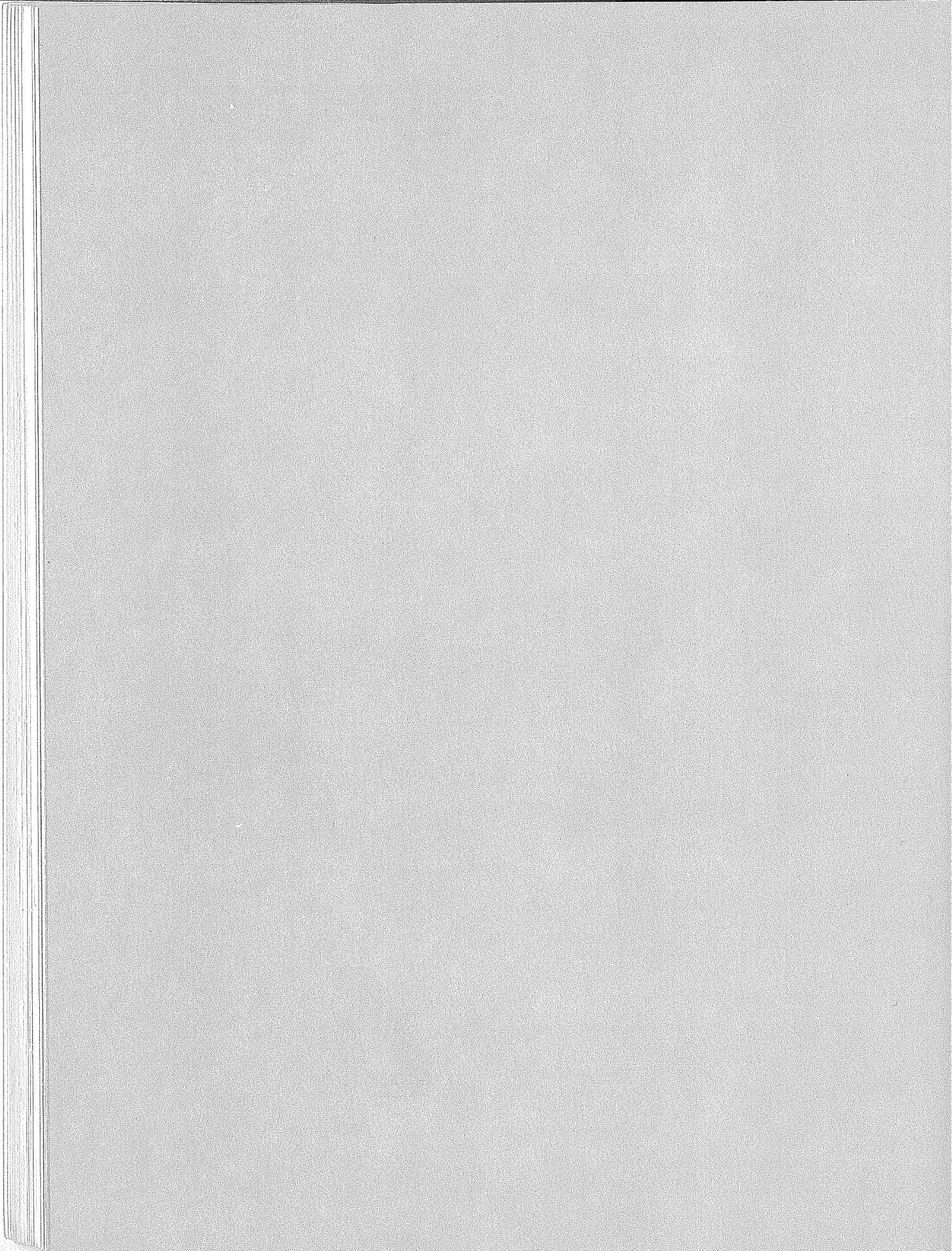
TABLE 6.—Federal assistance to State and local governments (Continued)

Education, training and public information	Supporting systems equipment, and emergency operating centers, amounts obligated			Surplus property, acquisition cost of transferred property (In thousands of dollars)		Contribution project loans, acquisition cost of property (In thousands of dollars)	
	Total	Supporting systems equipment	Emergency operating centers	Fiscal years 1957 through 1973	Fiscal year 1973	Cumulative FY 71-73	FY 1973
\$85,019	\$9,191,073	\$2,214,698	\$6,976,375	\$626,095	\$62,406	<sup>3</sup> \$51,292	\$35,129
28,739	975,475	324,025	651,451	97,257	6,345	14,335	9,301
1,811	57,120	45,095	12,025	10,651	1,485	578	289
12,030	76,658	64,754	11,904	12,624	567	1,350	630
5,640	167,285	7,044	160,241	27,391	2,060	1,132	322
171	10,719	9,481	1,237	3,989	130	485	219
8,887	183,893	44,794	139,099	15,455	301	198	198
0	341,418	55,700	285,718	17,313	1,286	7,848	5,893
0	53,815	14,194	39,622	4,622	181	1,819	1,298
200	28,221	26,616	1,605	1,817	156	824	350
0	0	0	0	3,394	179	101	101
0	56,346	56,346	0	0	0	0	0
5,270	641,013	147,994	493,019	36,910	5,911	3,102	2,850
0	23,978	14,416	9,563	1,053	173	140	106
0	4,410	4,410	0	0	0	1,907	1,905
700	61,482	28,120	33,362	10,541	1,460	159	86
3,604	162,538	92,139	70,399	12,433	2,104	401	342
860	289,111	8,057	281,054	8,344	1,198	<sup>3</sup> 248	218
107	99,494	852	98,641	4,538	976	247	193
2,644	2,337,260	382,238	1,955,022	146,341	16,364	7,265	4,153
518	62,618	25,975	36,643	19,560	2,258	1,096	732
0	214,438	83,519	130,919	31,437	3,044	962	417
102	251,920	65,698	186,221	28,300	1,953	808	323
0	819,043	39,176	779,867	10,161	3,391	896	796
0	135,852	30,045	105,808	22,772	2,101	1,232	798
0	184,973	58,604	126,369	17,066	1,189	233	181
600	28,652	25,213	3,440	10,538	1,916	760	328
1,425	639,765	54,009	585,756	6,507	513	1,279	578
0	0	0	0	0	0	0	0
13,065	1,175,533	386,032	789,502	79,630	8,518	8,486	5,622
3,205	379,940	112,423	267,517	20,393	1,727	2,817	1,459
536	15,229	14,485	745	7,011	166	493	367
1,847	156,168	34,762	121,406	32,251	3,319	758	485
2,015	446,404	142,859	303,545	8,546	1,453	1,788	1,345
4,676	22,136	13,980	8,156	7,484	1,551	437	437
787	155,656	67,523	88,133	3,945	302	2,193	1,530
132	1,077,688	113,423	964,265	98,850	12,617	2,538	1,739
70	10,806	13,015	-2,209	17,499	3,173	43	21
0	-2,172	764	-2,937	20,500	1,846	210	23
62	17,774	15,731	2,043	2,545	333	297	136
0	236,859	46,047	190,812	13,076	1,337	170	127
0	814,421	37,865	776,556	45,228	5,928	1,819	1,431
8,514	1,483,531	530,923	952,608	52,396	4,241	4,617	3,268
5,646	62,327	20,758	41,568	8,651	819	656	556
55	115,487	23,988	91,500	5,633	1,230	1,342	959
629	143,486	89,776	53,710	2,972	288	455	374
725	444,025	64,952	379,073	6,974	205	452	337
1,294	94,270	18,314	75,956	1,732	30	346	227
0	25,546	22,813	2,733	4,376	371	626	300
41	333,054	216,033	117,021	5,094	406	433	239
125	148,737	2,903	145,834	12,178	547	85	53
0	116,598	71,386	45,212	4,783	343	223	222
16,670	743,619	108,681	634,937	91,498	6,401	4,722	3,803
527	486,534	12,069	474,465	5,456	291	33	33
15,131	56,929	22,014	34,914	79,687	5,069	1,692	1,150
932	68,997	23,439	45,558	1,536	663	461	375
81	115,158	35,158	80,000	4,814	378	2,535	2,244
0	0	0	0	3	0	0	0
0	16,000	16,000	0	0	0	0	0
0	0	0	0	0	0	0	0
9,985	756,954	221,383	535,571	23,217	2,010	6,226	4,394
9,985	2,987	2,987	0	2,303	397	476	464
0	68,588	7,124	61,464	4,329	294	532	499
0	394,670	57,097	337,573	1,724	234	2,144	1,386
0	53,153	40,915	12,237	5,199	503	1,257	1,046
0	237,556	113,259	124,297	9,662	582	1,818	999



# agreements

4



# AGREEMENT BETWEEN DEFENSE CIVIL PREPAREDNESS AGENCY (DCPA) AND THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)

## PURPOSE

This agreement is to provide guidance for the joint efforts of the DCPA and the NOAA in the management and operation of a National Program for Community Preparedness. This includes the following framework for the cooperative efforts of both agencies:

1. Defines joint and individual agency responsibilities.
2. Establishes coordination mechanisms at all levels.
3. Identifies actions that must be taken to begin the cooperative effort.

## MISSION AND BACKGROUND

1. Public Law 91-606, The Disaster Relief Act of 1970, authorized the President to provide assistance to states in developing comprehensive plans for preparedness against major disasters. The Office of Emergency Preparedness (OEP) was directed to determine what was necessary to prevent or minimize losses or deaths from major disasters. The OEP "Report to the Congress, Disaster Preparedness," January 1972, pointed up the need for expansion and improvement of the preparedness program at the local level. OEP requested and DCPA accepted the assignment to provide natural disaster preparedness assistance to state and local governments.

The DCPA On-Site Assistance (OSA) effort is used to fulfill this assignment. OSA is designed to help states and particularly local governments to improve their capability to conduct coordinated operations in emergencies, including natural disasters and other peacetime emergencies, as well as nuclear attack. The goal is to improve the emergency preparedness of localities to meet all types of disaster.

Selected localities are provided On-Site Assistance by a team of Federal and state officials representing agencies with emergency responsibilities. The team assesses the potential hazards and the existing level of operational readiness in the localities and assists the localities in evaluating their needs and developing a plan for coordinated actions to improve their readiness.

DCPA has been adding NOAA National Weather Service (NWS) offices to their National Warning System (NAWAS) hot line telephones, for collection of weather and flood information and dissemination of warnings. Most of the NOAA NWS offices have been provided with a NAWAS terminal. When DCPA's Decision Information Distribution System (DIDS) becomes operational, that system will be used where advantageous for distribution of warnings.

2. Enabling legislation has charged the NOAA National Weather Service with the responsibility for issuing forecasts and warnings of weather and floods for the protection of life and property and promotion of the Nation's welfare and economy. In 1965, the NWS' parent organization, Environmental Science Services Administration (ESSA now NOAA), realized that a coordinated Federal program for dealing with natural disasters was needed. ESSA and four other Federal agencies, including DCPA and OEP, developed and proposed the Nationwide Natural Disaster Warning (NADWARN) System. NOAA is leading an inter-agency effort to prepare and keep current a Federal Plan for Natural Disaster Warning and Preparedness that is responsive to findings in the OEP Report to Congress on Disaster Preparedness, January 1972.

For many years NOAA has been involved in natural disaster community preparedness planning programs. This provides for training of tornado spotters; participation in local preparedness meetings and drills; development of community self-help programs for floods; development and installation of flash flood alarm systems; publication and distribution of preparedness planning booklets, pamphlets and films to promote public understanding of warnings issued and actions necessary for the protection of life and property, when threatened by hurricanes, tornadoes, severe weather, floods, tsunamis, and other natural and manmade hazards.

3. The DCPA and NOAA have been cooperating in planning and coordinating community preparedness meetings and drills; production and distribution of public educational materials; and joint use of communication facilities.

By this agreement an organized and systematic effort will be undertaken in On-Site Assistance, the gathering of weather and flood reports, and the dissemination of warnings and information.

## AGENCY RESPONSIBILITIES

The responsibilities outlined in this section are those related only to the cooperative efforts of the two agencies and do not cover all of their basic statutory responsibilities.

1. The DCPA is responsible for:

a. Providing natural disaster preparedness planning assistance to state and local governments in accordance with agreements between DCPA and the Office of Emergency Preparedness. The DCPA On-Site Assistance effort is coordinated and conducted by the DCPA regional offices.

b. Keeping regional NWS officials informed of the DCPA On-Site Assistance projects underway and those projected for the future.

c. Making the attack warning system available to Federal agencies, and state and local governments, for the purpose of providing warning to governmental authorities and the civilian population in areas endangered by imminent major disasters.

d. Encouraging the designation of a community focal point for emergencies in each community action plan to:

(1) Receive weather, flood, tsunami and other natural hazards watches and warnings from NOAA, via NAWAS or NOAA Weather Wire Service (NWWWS).

(2) Be responsible for redistribution of these to local authorities.

(3) Relay real time information on public response back to NWS, including clarification or other changes to be made if needed.

2. The NWS is responsible for:

a. Preparing and issuing forecasts and warnings of weather and other natural hazards to the general public and designated local authorities.

b. Establishing NWS regional and state focal points for community preparedness.

c. Providing advice on types and frequency of natural disasters most likely to occur in selected communities.

d. Arranging for NWS representatives to participate on DCPA On-Site Assistance teams, when of value to the community.

e. Providing natural disaster preparedness planning assistance as part of the DCPA On-Site Assistance effort (as far as resources permit).

f. Providing, as appropriate, natural disaster planning assistance in regard to weather, flood, tsunamis and other natural hazards, directly to local authorities and news media, in areas where no DCPA On-Site Assistance project is conducted.

3. The joint responsibilities of the two agencies are:

a. Providing coordinated advice and guidance to localities as to the actions to be taken upon receipt of NOAA watches and warnings.

b. Analyzing and determining what improvements can be made in dissemination of NOAA watches and warnings to state and local officials, news media, and the general public.

c. Insuring that personnel at all facilities with NAWAS terminals know what to do upon receipt of natural disaster information, including relaying reports of severe weather and flooding to NOAA offices and the distribution of watches and warnings.

d. Assuring the effective use of national, regional, state and local government warning and communication systems in gathering and disseminating natural hazard information.

e. Providing for coordinated DCPA/NOAA identification of localities which would particularly profit from On-Site Assistance. Visits into these areas will be coordinated so optimum use can be made of personnel and funds.

f. Joint planning for annual preparedness meetings and distribution of publications:

(1) Regional planning for annual preparedness meetings at the regional, state, and local community levels.

(2) Assist in the distribution of natural disaster publications and storm evacuation maps.

g. Encouraging and assisting communities in conducting frequent tests of warning systems and local disaster community drills.

## COORDINATION MECHANISMS

1. *Staff level coordination.*—The Assistant Director for Plans and Operations, DCPA, and the Deputy Director, NWS, will meet regularly to review the program, resolve problems arising at lower echelons, and to provide overall policy.

2. *National coordination.*

a. Define areas of cooperation.

b. Establish a national plan.

c. Coordinate interregional relationships.

3. *Regional coordination.*

a. Establish regional plans.

b. Participate in OSA activities at regional, state, and local community level.

c. Utilize DCPA warning dissemination network.

d. Regional headquarters will coordinate their programs in areas as graphically depicted in Attachment 1.

4. *State coordination.*

a. Establish state plans.

b. Participate in OSA activities at state, county, and local community level.

c. Utilize DCPA state warning dissemination network and other state warning systems.

d. NWS planning assistance to communities where no OSA project is being conducted.

## IMPLEMENTATION ACTIONS

The following actions will be taken to place the cooperative program into operation:

1. *DCPA.* Each DCPA regional office will furnish the details of the civil preparedness warning plans and facilities available in each of its states to NWS regions. DCPA Headquarters will also provide this information to NWS Headquarters.

2. *NWS.*

a. The NWS will select a Coordinator of Community Preparedness Services to be program leader for NWS and will provide a liaison officer to DCPA for national program coordination.

b. The NWS will designate, and advise DCPA of NWS regional and state focal points for community preparedness.

3. *Joint Action.*

a. DCPA/NWS regional offices should meet as quickly and as frequently as possible in joint coordination sessions on agency functions, communication and warning systems and capabilities, emergency preparedness planning assistance steps, and On-Site Assistance interface. In that programming may be involved and supporting funds must be allocated, the NWS must be kept informed of arrangements made by each DCPA regional office.

b. Describe the national program of cooperation in detail and establish the necessary mechanisms to keep regional officials of both agencies informed of changes in the program. Establish regional and state contact and coordination procedures.

- c. Regional officials of both agencies will coordinate the program at the state and local community level in their region. Assure state and local officials that DCPA and NOAA are working in unison.
- d. Develop and coordinate regional plans for upgrading capability of Federal, state, and local systems to disseminate and utilize weather and flood information.
- e. Establish procedures for periodic DCPA/NWS regional office review and evaluation of system capabilities and effectiveness.

APPROVED:

DEFENSE CIVIL PREPAREDNESS AGENCY

JOHN E. DAVIS  
Director  
Defense Civil Preparedness Agency

June 8, 1973

NATIONAL OCEANIC AND  
ATMOSPHERIC ADMINISTRATION

ROBERT M. WHITE  
Administrator, NOAA

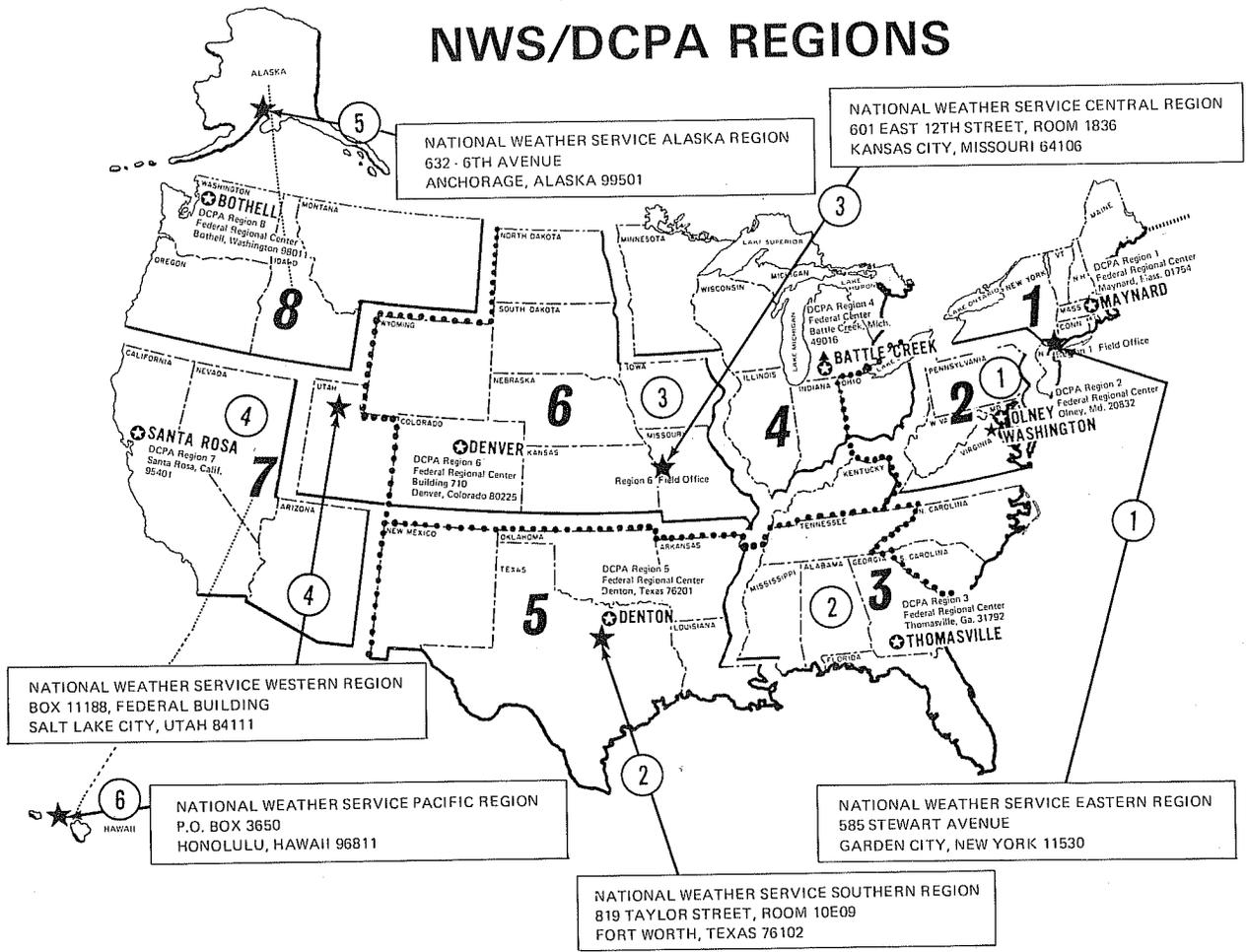
June 1, 1973

**SUMMARY**

Many of the actions outlined in the preceding paragraphs can be implemented immediately while others will require additional resources that can only be acquired through the budget process. Both agencies agree to:

1. Move ahead as quickly as current resources permit.
2. Take necessary steps to implement actions outlined in the preceding paragraphs by the most expeditious means possible.

**NWS/DCPA REGIONS**



**UNDERSTANDING BETWEEN EXPLORING DIVISION, BOY SCOUTS OF AMERICA,  
AND THE  
DEFENSE CIVIL PREPAREDNESS AGENCY  
ON EXPLORER SCOUT PARTICIPATION  
IN LOCAL DISASTER PREPAREDNESS**

Every community in the Nation has, within its boundaries, the potential for disaster. Each year natural disaster, man-caused disaster and accident bring loss of life and property in many of our communities. In addition, the threat of nuclear holocaust still remains a possibility and, with these other threats, prompts the need for community disaster preparedness. Such preparedness can only be achieved by making the best use of the abilities of all citizens of a community in an organized manner. It is recognized that Explorers, through their varied talents and interests, have much to contribute and much to gain by participation in their community's disaster preparedness efforts. In recognition of this, the Exploring Division Boy Scouts of America and the Defense Civil Preparedness Agency agree mutually to support community disaster preparedness activities by accepting the following responsibilities:

**EXPLORER DIVISION RESPONSIBILITIES**

1. Through professionals, to promote development of Explorer Posts that have the interests and talents that can contribute to the local civil defense coordinator's plans to overcome the effects of disasters.
2. Encourage Explorers to organize and train in skills that will be of value in meeting the aftermath of disasters.
3. Support training of Explorers by distributing training guidance and materials relating to activities that could contribute to disaster preparedness (i.e., Fire, Police, Rescue, Communications, Medical Self-Help, etc.)
4. Inform the public and other elements of Boy Scouts of America

of the contribution of Explorer disaster preparedness activities and the opportunity for community service provided by this aspect of Exploring.

5. Provide the Defense Civil Preparedness Agency with information and publications on Explorers for use with local civil defense directors.

**DEFENSE CIVIL PREPAREDNESS  
AGENCY RESPONSIBILITIES**

1. Encourage local civil defense coordinators or their key staff members to sponsor Explorer Posts.
2. Encourage local directors to recommend to local disaster service chiefs the involvement of their departments in organizing and training Explorers to assist in disaster relief operations.
3. Support the training of Explorers by providing local civil defense coordinators with training materials (Fire, Rescue, Police, Medical Self-Help) suitable for training youth.
4. Inform the public of the contribution being made by Explorers across the Nation through news releases and coverage in civil defense newsletters and periodicals.

JOHN E. DAVIS  
*Director*  
*Defense Civil Preparedness Agency*

ALDEN G. BARBER  
*Chief Scout Executive*

**MEMORANDUM OF UNDERSTANDING BETWEEN THE U.S. DEPARTMENT OF AGRICULTURE AND DEFENSE  
CIVIL PREPAREDNESS AGENCY**

**I. PURPOSE AND SCOPE**

This Memorandum of Understanding describes the relationship and supporting activities of the U. S. Department of Agriculture and the Defense Civil Preparedness Agency necessary to accomplish the National Civil Defense Program and related civil preparedness activities.

**II. RESPONSIBILITIES**

A. The Defense Civil Preparedness Agency (DCPA) is responsible to provide an effective and viable National Civil Defense Program in accordance with the Federal Civil Defense Act of 1950, as amended, and Executive Order 10952, "Assigning Civil Defense Responsibilities to the Secretary of Defense and Others", July 20, 1961. In addition, DCPA is to provide disaster preparedness assistance to State and local governments in accordance with agreements between the Director, DCPA, acting on behalf of the Secretary of Defense, and the Director, Office of Emergency Preparedness (OEP) and other government departments and agencies and in consonance with policy guidance provided by the Director, OEP pursuant to Executive Order 11575, "Providing for the Administration of the Disaster Relief Act of 1970", December 31, 1970, and Executive Order 11051, "Prescribing Responsibilities of the Office of Emergency Planning in the Executive Office of the President", September 27, 1962.

B. The U.S. Department of Agriculture (USDA) is responsible for the preparation of national emergency plans and the development of preparedness programs covering (1) food resources, farm equipment, fertilizer, and food resources facilities; (2) lands under the jurisdiction of the Secretary of Agriculture; (3) rural fire control; (4) defense against biological and chemical warfare and radiological fallout pertaining to agricultural activities; and (5) rural defense information and education, as assigned by Executive Order 11490, "Assigning Emergency Preparedness Functions to Federal Departments and Agencies", October 28, 1969, as amended, and in consonance with National Civil Defense Programs developed by the Department of Defense, where required by that order. USDA is also responsible for functions under Section 201(h) of the Federal Civil Defense Act of 1950, as amended, to the extent that they pertain to the stockpiling of food, in accordance with Executive Order 10958, August 14, 1961, as amended "Delegating Functions Respecting Stockpiles of Medical Supplies and Equipment and Food".

**III. RELATIONSHIP**

The relationship of the USDA to DCPA and with State and local governments in the civil defense program is supportive with respect to the programs carried out by State and local governments. USDA field personnel are urged to support local and State governments as a member (volunteer) of the regular constituted local or State government civil defense organization where this will not interfere with specific assigned responsibilities of that individual to USDA. In the area of radiological monitoring the equipment required will be provided, inspected and maintained by the appropriate local government and State radiological maintenance and calibration facility.

**IV. SPECIFIC FUNCTIONS**

**A. DCPA will:**

1. In consonance with Presidential guidance develop policies, procedures and concepts for the overall U. S. Civil Defense Program.
2. Provide that USDA will be a primary participant in any activities of the U. S. Interagency Civil Defense Coordinating Committee.
3. Continue the Rural Civil Defense Program which requires support and assistance by USDA.
4. Continue a national civil defense test and exercise program which requires support and assistance by USDA.
5. Arrange to provide USDA at national and field levels the essential monitoring and attack information which USDA requires to evaluate properly the effects of attack on livestock, crops, food facilities and other resources under USDA jurisdiction.
6. Assist USDA in developing a manual and appropriate computerized damage estimation system.
7. Encourage State civil defense directors to include space in State emergency operating centers (EOC's) for use by USDA.
8. Encourage local government officials to use USDA field employees as individuals to assist them in local civil defense operations, including radiological monitoring and damage assessment, where this will not interfere with specific assigned responsibilities of that individual to USDA.
9. Provide training to USDA employees on civil defense organization, programs, policies and procedures.
10. Continue to provide radiological instruments to those USDA agencies which must maintain a radiological capability to carry out their specific responsibilities and arrange for the maintenance and calibration of these instruments through appropriate State radiological maintenance and calibration facilities at no cost to USDA.

**B. USDA will:**

1. Develop the required plans and conduct the essential operations as set forth by Executive Orders 10958 and 11490.
2. Continue to participate in the National Civil Defense Program in a supportive role with respect to programs carried out by State and local governments.
3. Provide assistance to State and local governments necessary to obtain an effective Rural Civil Defense Program.
4. Encourage its employees at the local levels of government to participate as individuals in the Local Civil Defense Program, in tests and exercises, and in actual emergencies, where this does not interfere with specific responsibilities assigned to such employees by USDA.
5. Continue to maintain a radiological monitoring capability where it is necessary to have this capability to perform USDA assigned responsibilities.
6. Provide primary and alternate representatives to the U. S. Interagency Civil Defense Coordinating Committee.
7. Return unneeded DCPA radiological instruments to appropriate State radiological maintenance and calibration facilities as prescribed by DCPA.

8. Provide appropriate USDA representatives to State Civil Defense offices for assistance in State EOC's, for training, tests and exercises, and actual emergency operations, involving food and agriculture concerns.

## V. COOPERATION AND COORDINATION

DCPA and USDA will closely cooperate and coordinate all matters APPROVED:

### DEFENSE CIVIL PREPAREDNESS AGENCY

JOHN E. DAVIS  
Director  
Defense Civil Preparedness Agency

December 8, 1972

### U. S. DEPARTMENT OF AGRICULTURE

EARL L. BUTZ  
Secretary  
U. S. Department of Agriculture

December 8, 1972

## UNDERSTANDING BETWEEN THE DEFENSE CIVIL PREPAREDNESS AGENCY AND THE AMERICAN NATIONAL RED CROSS

### PURPOSE:

This understanding describes the responsibilities of the Defense Civil Preparedness Agency (DCPA) and the American National Red Cross (ANRC) in disaster preparedness planning and operations in peacetime and wartime disasters; outlines areas of mutual support and cooperation at national and regional levels in connection therewith; and provides the frame of reference for similar cooperative activities between State and local governments and the areas, divisions and chapters of the American Red Cross.

### STATEMENT OF GENERAL RESPONSIBILITIES:

#### Defense Civil Preparedness Agency

The Director, DCPA, in coordination with Federal, State and local governments, is responsible for the development and execution of Federal Civil Defense preparedness programs and for providing planning assistance to State and local governments in their development of peacetime disaster preparedness plans and capabilities.

Civil Defense preparedness functions include:

A fallout shelter program including evacuation and movement to shelter;

A chemical, biological and radiological warfare defense program; Steps necessary to warn or alert Federal military and civilian authorities, State officials, and the civilian population of enemy attack upon the United States. (Responsibility for developing, deploying and operating military surveillance and warning systems remains with the appropriate military department);

Civil defense communications, including an appropriate warning network, communications between authorities, and communications procedures for reporting on radiological monitoring and instructions to shelters;

Emergency assistance to State and local governments in a post-attack period;

Protection and emergency operational capability of State and local government agencies in keeping with plans for the continuity of government;

Programs for making financial contributions for civil defense purposes to the States;

Plans, and the operation of systems, to undertake a nationwide postattack assessment of the nature and extent of the civil damage resulting from enemy attack and the surviving resources, including systems to monitor and report specific hazards resulting from the detonation or use of special weapons;

A program of training and education to insure administrative and operational capability;

Necessary arrangements for the donation of Federal surplus property to State and local government; and

The establishment and administration of a Civil Preparedness Advisory Committee to advise the Secretary of Defense.

Peacetime Disaster preparedness functions include:

A program to utilize and make available the civil defense communications system for disaster warnings.

Planning assistance to State and local governments in development of natural disaster preparedness plans and capabilities.

Provision of necessary training.

#### The American National Red Cross (ANRC)

The Act of Congress incorporating the ANRC and establishing its charter requires the Red Cross to undertake relief activities for the purpose of mitigating human suffering caused by disaster and obligates the Red Cross to develop and carry out measures to prevent such suffering.

Red Cross aid to disaster victims is not dependent upon a Presidential or other Federal disaster declaration, but is provided regardless of the size of a catastrophe or disaster incident.

The Disaster Relief Act of 1970 (Public Law 91-606) states that "nothing contained in this Act shall limit or in any way affect the responsibilities of the American National Red Cross under the Act of January 5, 1905, as amended (33 Stat. 599)," 36 U.S. Code Section 1 and following.

Through its divisions and chapters, and with the help of its four area offices and National Headquarters, the Red Cross provides emergency assistance to disaster victims throughout the United States,

concerning civil defense functions and insure guidance to field elements is disseminated to such elements through respective communications channels simultaneously.

## VI. REVIEW AND REVISION

This Memorandum will be reviewed and revised as may be required and desirable.

its territories and dependencies. This assistance may include food, clothing, emergency shelter or housing, first aid and supplementary medical, nursing and hospital care, blood and blood products, prescription drugs, and other urgently needed basic necessities. These kinds of help may be provided on a mass care basis in emergency shelters, at feeding and aid stations, or through the use of mobile units. Assistance may also be provided on an individual family basis and include emergency clothing, minor home repairs, household accessories, and emergency furniture, emergency transportation, and personal occupational equipment and apparel. This assistance may be provided in kind or on a cash basis as circumstances require. All aid provided from Red Cross funds is on a grant basis, with no request or expectation of repayment from the disaster victim. Where there has been a Federal declaration of disaster, some assistance may be provided by Red Cross on behalf of the Federal Government. When a family is not eligible for Federal benefits, Red Cross assistance may be more extensive.

The Red Cross requires that all its funds utilized in providing relief be expended in accordance with its own regulations. ANRC funds are not made available to tax-supported agencies that conduct relief operations.

In maintaining a state of preparedness to carry out its responsibilities, the Red Cross works closely with governments at all levels to assure maximum coordination and mutual support. Such cooperative planning and operational activity includes working closely with State, county and municipal civil preparedness or equivalent agencies.

#### Organization of Defense Civil Preparedness Agency (DCPA)

DCPA is established as an Agency of the Department of Defense and is under the direction, authority and control of the Secretary of Defense. Its national headquarters is located in the Pentagon, Washington, D.C. DCPA is civilian in character and direction.

The responsibility for civil preparedness (civil defense) is shared jointly by the Federal Government, and the several States and their political subdivisions. The Federal role is to provide overall guidance, financial and technical assistance to the States and localities. The Federal Government exercises no command or control over the States and localities. The States and localities have the direct operational role in time of disaster.

To facilitate program administration, the United States is divided into eight DCPA regional areas, with headquarters located in Maynard, Mass., with a field office in New York City; Olney, Md.; Thomasville, Ga.; Battle Creek, Mich.; Denton, Texas; Denver, Colo., with a field office in Kansas City, Missouri; Santa Rosa, Calif.; and Bothell, Washington. A Staff College is located in Battle Creek, Michigan.

Augmented by the skills and other resources of the private sector DCPA works with the 50 States, Puerto Rico, the Canal Zone, the Virgin Islands, Guam, American Samoa, and the District of Columbia; and through the States, with counties, parishes, and local governments to help prepare the Nation for coping with the effects of man-made or natural disasters.

#### Organization of the American National Red Cross

The national headquarters of the American National Red Cross is located in Washington, D.C. For administrative purposes, the continental United States, including Alaska, is divided into four areas, each having jurisdiction in a certain number of States. Area offices are located in Alexandria, Va.; Atlanta, Ga.; St. Louis, Mo.; and San Francisco, Calif. These area offices report to national headquarters, as do Hawaii, Puerto Rico, the Canal Zone and other United States territories. There is a Red Cross chapter designated to serve every part of the United States. Most chapters receive guidance, support and field services from a division headquarters, which in turn reports to and is supervised by an area office.

Each division and chapter is responsible for developing and maintaining an immediate response capability consistent with the disaster hazards within its jurisdiction. Each formulates plans with State and local government agencies and private organizations. Through its nationwide organization of local chapters and divisions, the Red Cross extends emergency care and meets the immediate needs of families wherever disasters occur. When necessary, the resources of the local chapter are supplemented by those of neighboring chapters, the division, or the national organization, in the form of funds, trained personnel, supplies and equipment.

## NEED FOR COORDINATION:

It is essential that the resources of DCPA and ANRC be coordinated, particularly in relation to disaster planning, operations, technical assistance, and providing equipment, supplies, training and experienced personnel. Red Cross has resources available at the National, Regional, State and local levels. DCPA has resources available at the National and Regional levels, and has cooperative relationships with State and local civil preparedness agencies at the State and local levels. Coordination and cooperation is thus required at every level.

Therefore, it is agreed that:

1. Cooperative arrangements for planning, exchange of information and continuing liaison regarding preparedness for disaster operations will be developed and maintained by DCPA and ANRC on national and regional levels; State and local counterparts of the two agencies will be encouraged to make similar arrangements. Continuing coordination by all levels of government and Red Cross is essential during disasters and after disasters strike to avoid duplication of effort and to insure that all disaster needs are met.
2. The ANRC and the DCPA will encourage the promulgation of agreements between officials of the Red Cross and State and local civil preparedness authorities, to insure a clear understanding of mutual responsibilities for disaster preparedness and effective operations in both peacetime or wartime emergencies.
3. In recognition of their responsibilities to keep the public fully informed before and after disaster strikes, DCPA and ANRC will encourage regional, State and local units to maintain active and on-going liaison and coordination on issuance of public information releases concerning their respective disaster programs.

## IN IMPLEMENTING THIS UNDERSTANDING:

### DCPA:

1. As part of preparing staff to carry out their disaster responsibilities, will collaborate with ANRC in selected staff training activities, including planning, designing, and field testing training courses; providing resource persons for training events, and opening selected courses to Red Cross personnel.
2. Will encourage State and local civil preparedness agencies, including departments of government charged with emergency functions, to work closely with Red Cross divisions and chapters and involve and support them to the maximum extent possible, in disaster planning and operations at State and local levels.
3. Will encourage State and local civil preparedness agencies, and private industry, to cooperate with Red Cross by providing physical facilities, communications, emergency equipment, volunteer and staff personnel as needed, in time of disaster.
4. Will urge State and local civil preparedness agencies, to provide facilities for Red Cross personnel at emergency operating centers or other emergency centers established by State or local governments.

### ANRC:

1. Will provide to DCPA and receive from it, counsel, support and guidance in the preparation and interpretation of major information, training and other materials related to disaster operational preparedness planning.
2. Will encourage its divisions and chapters to work with the civil preparedness agencies, toward comprehensive disaster prepared-

ness at the State and local level, and toward provision of mutual support in time of disaster.

3. Will cooperate, assist and participate in the On-Site Assistance program to increase the emergency operating capabilities of local governments.

4. As part of preparing staff to carry out their disaster responsibilities, will collaborate with DCPA in selected staff training activities, including planning, designing, and field testing training courses; providing resource persons for training events, and opening selected courses to civil preparedness and other government personnel.

5. Will keep DCPA and State and local civil preparedness authorities informed as to the nature and extent of its operations and its relationships with other State and local agencies of government for both operational disaster preparedness planning and its operational activities.

6. Will accept invitations to provide Red Cross representation in emergency operations centers and will provide space in Red Cross operations centers for State and local civil preparedness personnel, and will provide first aid stations, upon request, at emergency operations centers or other centers established by State or local governments in natural disasters.

7. Will, in carrying out its responsibility for providing emergency shelters in natural disasters, cooperate with State and local governments in pre-designating potential shelter facilities for dislocated persons, and in related pre-disaster planning and mutual support of shelter operations for disaster purposes. This includes the possible use of pre-designated civil defense shelters in public buildings which meet ANRC criteria.

8. Will, in carrying out its responsibility for mass feeding in natural disasters, cooperate and coordinate with civil preparedness authorities in planning and arranging for appropriate feeding locations, facilities and supplies.

9. In war-caused situations, the ANRC will use its facilities and personnel to support and assist welfare and emergency operations activities of DCPA to the extent possible, while carrying out its other essential responsibilities and assignments.

10. In time of war, the disposition and use of all possible Red Cross resources, human and material, at State and local levels, will be subject to prior agreements made between the appropriate government and Red Cross agencies at their respective levels.

## DISTRIBUTION OF THIS UNDERSTANDING:

Since State and local arrangements are the principal means by which this understanding may be effectively implemented, DCPA will furnish copies of this national understanding to State and local civil preparedness officials, and ANRC will furnish copies to areas, divisions, and local chapters so that implementing agreements may be consummated.

The provisions of this understanding will be effective from March 7, 1973, unless otherwise changed or terminated.

JOHN E. DAVIS  
*Director*  
*Defense Civil Preparedness Agency*

GEORGE M. ELSEY  
*President*  
*The American National Red Cross*