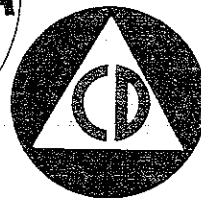
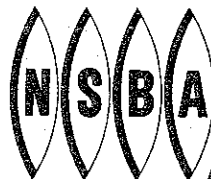


MP-31-August 1965

SCHOOL
BOARDS
PLAN
FOR
CIVIL
DEFENSE



SCHOOL BOARDS PLAN FOR CIVIL DEFENSE

Produced by the
NATIONAL SCHOOL BOARDS ASSOCIATION
1233 Central Street, Evanston, Illinois 60201

for the
OFFICE OF CIVIL DEFENSE
Department of Defense
Washington, D. C. 20301

August, 1965

Project Writer
William M. Lamers

The Material in This Publication May Be Reproduced

FOREWORD

Need for a statement outlining the role of school boards in civil defense resulted in the 1957 publication by the National School Boards Association of **School Boards Plan for Disaster Problems**. Since then, weapons and thus military and civil defense have changed so rapidly and radically that they call for a new statement.

Again, as in 1957, it should be pointed out that, although certain recent pamphlets deal with various phases of school civil defense, nowhere is the role of the local school board given more than incidental treatment. This pamphlet, therefore, fills a definite need. At the same time it should be clear that to treat fully even a segment of so complicated a subject as, say, radiological monitoring or shelter analysis or any one of many other matters is not possible in a short booklet. This admittedly is a "support pamphlet," to be studied with the aid of more specialized publications on the subject in related fields.

As a support pamphlet, it aims: 1) to call the attention of board members to the grave threat posed by modern weapons to not only the students and schools but also to the whole population and area of the United States; 2) to give general information concerning the civil defense shelter program, developed to meet this threat; 3) to point out the role school boards have in civil defense.

The high caliber of the thousands of men and women serving the school boards of America today gives reassurance that they will accept their responsibility in civil defense.

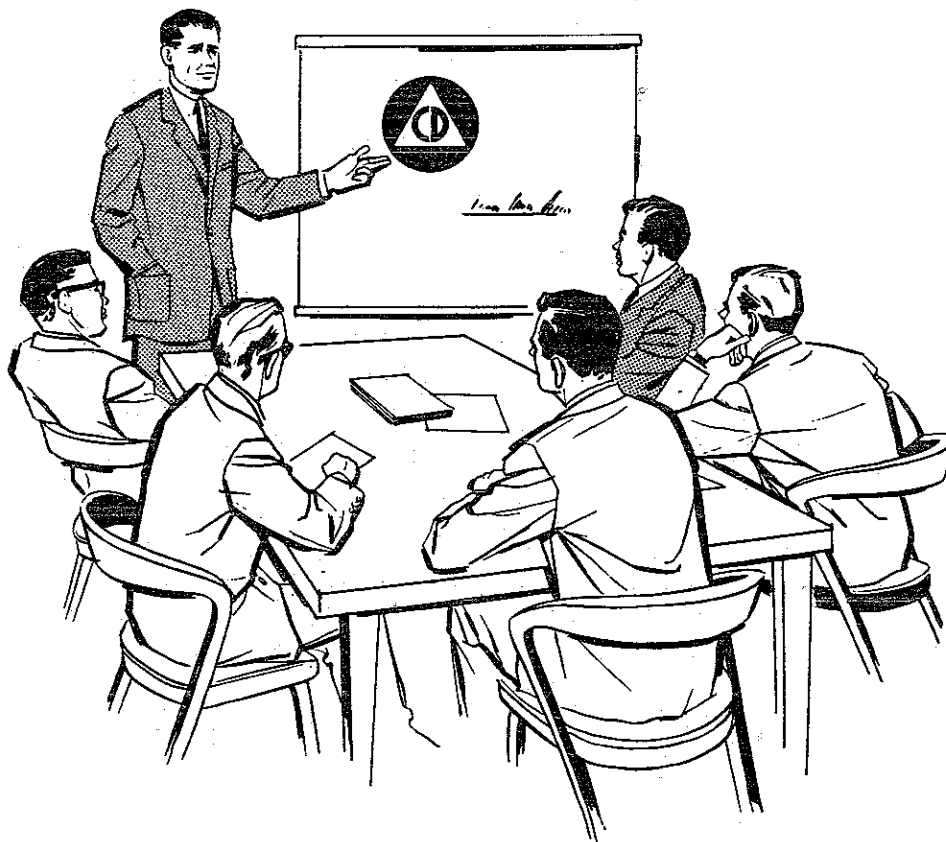
Every school board member in America should weigh carefully the necessity for developing a civil defense capability for the school or schools he serves.

MRS. FRED PAUL, President
National School Boards Association

CONTENTS

PAGE

- 2 — FOREWORD
- 5 — SCHOOL BOARDS PLAN FOR CIVIL DEFENSE
- 7 — UNDERSTANDING — AN IMPORTANT PREREQUISITE
- 11 — FALLOUT SHELTER SPACE FOR EVERYBODY — TODAY'S
CIVIL DEFENSE OBJECTIVE
- 13 — SCHOOLS, SCHOOL BOARDS and CIVIL DEFENSE
- 15 — SCHOOL BOARDS TAKE POSITIVE ACTION: PLANNING
FOR SCHOOL CIVIL DEFENSE
- 16 — THE SCHOOL PROTECTION PROGRAM: GENERAL
CONSIDERATIONS
- 18 — THE LOCAL SCHOOL BOARD AND THE SCHOOL SHELTER
PROGRAM
- 19 — PROVIDING THE SCHOOL FALLOUT SHELTER
- 22 — EQUIPPING and STOCKING THE SCHOOL FALLOUT SHELTER
- 24 — STAFFING A SHELTER
- 26 — THE SCHOOL BOARD AND THE CIVIL DEFENSE
EDUCATIONAL PROGRAM
- 29 — THE SCHOOL BOARD PROVIDES FOR THE CONSERVATION OF
ITS PHYSICAL FACILITIES
- 30 — THE SCHOOL BOARD AND POST DISASTER PROBLEMS
- 31 — REDUCING STAFF LIABILITY IN THE SCHOOL
CIVIL DEFENSE PROGRAM
- 31 — REMEMBER — IT HELPS TO UNDERSTAND
- 32 — CONCLUSION



SCHOOL BOARDS PLAN FOR CIVIL DEFENSE

The dictionary defines civil defense as "measures and emergency relief activities conducted by civilians under civilian authority for minimizing civilian casualties and property damage and for maintaining civilian facilities and services in case of enemy attack, sabotage, or other hostile action."

This country has known some civilian self-protection on an individual or community basis from its colonial beginnings. The concept and fact of civil defense are old, familiar. Only the name, great national emphasis, well-organized programs at all levels, and the specific functions, are new.

For some eighty years, from the Civil War to World War I, the American home front lay secure, protected by friendly neighbors and two oceans.

Then came the unfulfilled threat of invasion and bombings, and, rapidly after that, the laying bare of the whole home front to nuclear weapons and fallout.

EVOLUTION OF CIVIL DEFENSE

To meet this threat, Congress in 1950 established the Federal Civil Defense Administration as an independent agency with the mission of stimulating and assisting states and local communities in planning to minimize the effects of disaster and to promote the training of volunteer personnel. Between 1950 and 1961, civil defense was reorganized several times, and in 1961, by order of the President and in recognition of the fact that it is an integral part of the national defense, it was transferred to the Department of Defense as the Office of Civil Defense. In March, 1964, the Secretary of Defense transferred Civil Defense from his office to the Office of the Secretary of the Army.

A statement of Secretary of Defense Robert S. McNamara is typical of the best defense thinking in America today: "In some wartime situations a reasonable civil defense program could do more to save lives than many active defense measures The very austere civil defense program . . . recommended by the President . . . should be given priority over any major additions to the active defense."

SELF-HELP AND MUTUAL AID

On the principle of self-help and mutual aid, civil defense begins with the individual citizen. It extends to groups and communities. As individuals and groups help themselves and one another, as communities look to their own welfare, and, beyond that, to the welfare of other communities, their state, and the nation, security grows.

Civil defense requires joint, advance planning and coordination at all governmental levels—local, state, and national. This planning is kept flexible to adjust it to technological changes in weaponry and defense, and comprehensive to enable it to meet widely varied needs.

A KEY ROLE

Among the groups directly concerned with the planning and coordination of civil defense programs, the school board plays a key role. To school boards falls the responsibility of protecting the welfare of this nation's 42.7 million elementary and secondary school children.

UNDERSTANDING— AN IMPORTANT PREREQUISITE

For school board members and all Americans, a sound understanding of the nuclear weapons to which this country may be subjected in the event of war is the beginning of civil defense wisdom.

A nuclear weapon in excess of 50 megatons already has been detonated by a foreign power. A megaton is the blast equivalent of one million tons of TNT. Nuclear weapons can be transported by manned bombers, carried by submarines and launched underwater, or delivered by intercontinental ballistic missiles. These missiles can be launched from points thousands of miles away and then travel at speeds up to twenty thousand miles an hour. Under such conditions, any point in America is a possible target.

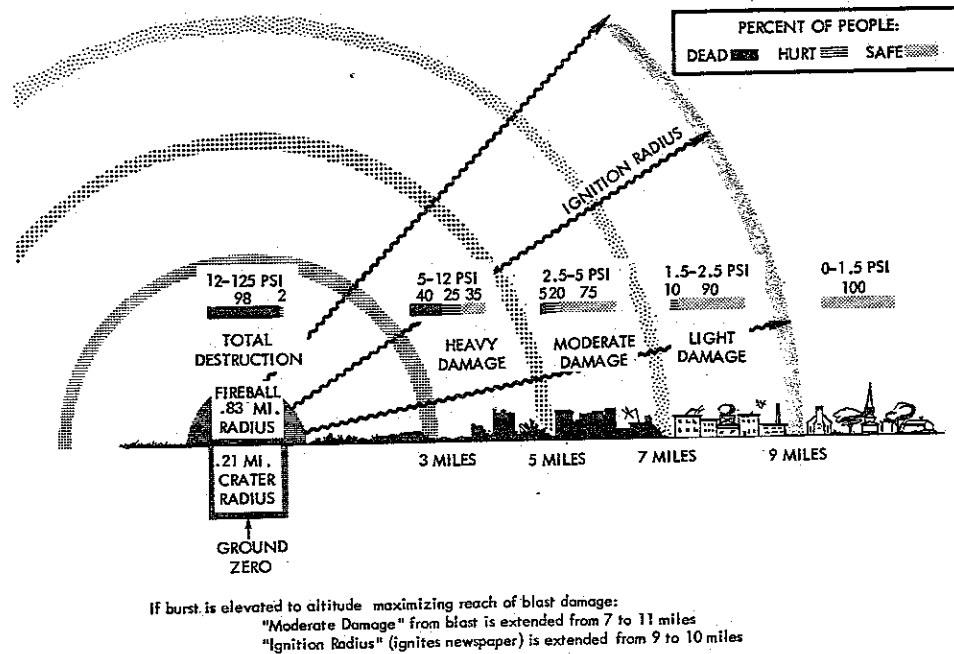


FIGURE 1

HOW NUCLEAR WEAPONS DESTROY

Nuclear weapons destroy instantaneously by blast and thermal effects (radiant heat and initial radiation) and more slowly by radioactive fallout. Total destruction from blast and thermal effects is confined to an area around the point of detonation. Figure 1 illustrates the blast and thermal destruction caused by a five megaton weapon.

Figure I makes it clear that while people close to the point of detonation have little chance of surviving the blast and thermal effects, the farther one is located from the blast and thermal area, the greater will be the chances of survival.

The effect from fallout is not limited to blast and thermal areas. As Figure I indicates, a nuclear weapon in a surface burst excavates a large crater, vaporizing the material and carrying it high into the air to form the familiar mushroom cloud. As this cloud is borne along on the prevailing winds, particles of radioactive material, usually about the size of sand or salt grains, condense and fall back to earth as radioactive fallout.

In the immediate vicinity of the blast, the first fallout is likely to arrive in about a half hour, depending on the height of the bomb burst, wind velocity, and direction of the resultant cloud. At distances beyond this point, the time of arrival depends upon the speed of the winds. People twenty miles from the blast may have an hour in which to take shelter, while people 150 miles away may have several hours.

The Department of Defense has studied virtually all sizes and types of possible nuclear attacks. These studies show that in an all-out attack on a wide variety of major U. S. targets, only about 1% of the land area of the United States would be "subjected to those effects that cause total destruction" and that about 98% of the country would be "free of heavy damage." They also indicate that 70% to 75% of the population live in locations where, for a person in shelter, survival is more likely than death from the blast and thermal effects of nuclear weapons.

These studies also show that with some variations due to season, weather conditions, the enemy's target pattern, the accuracy of his weapons, and other factors, the same all-out attack would create disabling or lethal radiation levels over 75% of the nation's land area, contaminating 85% of the population. Under these conditions, "only 15% of the population would be free of fallout or be exposed to a tolerable level of radiation." The conclusion is obvious: Despite the variables involved, fallout would be a major problem in virtually all of the United States.

Figure II shows one possible pattern of fallout after a massive nuclear attack.

Studies such as the foregoing consistently show that the establishment of a national system of fallout shelters, even if shelters in target areas should be destroyed, would save tens of millions of lives and would con-

A SPRING DAY



FIGURE 2

tribute greatly to national survival and to the ability of the nation to recover from devastation caused by an attack.

The Secretary of Defense has stated several times that a nationwide fallout shelter system is a prerequisite of any future U.S. ballistic missile defense interception system. While such an anti-ballistic missile system might intercept enemy weapons targeted at defended areas, an enemy might direct his nuclear weapons outside these areas so that radioactive fallout would produce casualties that otherwise would need to be produced by blast and thermal effects.

RADIOACTIVITY FROM FALLOUT HAS LIMITED POWER

We can cope with the fallout problem because we know what fallout is and what are the limits of its hazards.

1. Some fallout is visible, some too fine to be visible. But visible or not, radiation from fallout cannot be perceived by the senses, so that instruments are required to detect and measure it.
2. Although fallout damages living things—plants and animals—it does not make them radioactive.
3. Radioactive fallout emits three types of radiation — alpha, beta and gamma. All three can be blocked by interposing sufficient shielding between the radioactive source and those seeking pro-

tection from it. Alpha radiation can be stopped by a sheet of paper; beta radiation, by ordinary clothing. Gamma radiation poses the greatest problem. To obtain protection from gamma radiation requires that shielding material be placed between the radioactive source and the detector or person. In general, the greater the density of shielding material, the less is the thickness required for a given degree of protection.

4. Protection also may be obtained by removing contaminated particles from the body or proximity of the person—decontamination—or by putting the person at a distance from the contaminated particles.
5. While heavy, short-term exposure may sicken or kill, the body can absorb considerable radioactivity spread over a prolonged period of time. The fact that information exists as to what doses can be absorbed, and what will sicken or kill, is useful in taking protective action against radiation.
6. Radiation exposure or dosage is measured in units called "roentgens." Fifty roentgens in a short dose does little harm. Of ten persons receiving 100 roentgens over a few days, one might suffer slight nausea. With similar exposure to 200 roentgens, one person in 20 would require medical services. As exposure increases beyond 200 roentgens, radiation sickness mounts rapidly, and with short-term exposure to 400 roentgens, half the group would become seriously ill and the other half would die. Even a brief exposure to 600 roentgens is fatal within a week or so to most of the exposed. It should be emphasized that, in evaluating the effect of nuclear radiation on living things, we are concerned not only with the amounts of radiation received—the dose—but with the amount of time during which it is received.
7. Radiation sickness is not contagious.
8. Radioactivity from fallout decays; that is, its intensity diminishes with time. Decay rate, however, cannot be accelerated. The danger that radioactivity from fallout will cover the earth or will continue at a lethal level for generations is highly unlikely.

Knowledge of these eight facts makes the fallout problem manageable. It also makes fallout a national problem which calls for a national program of civil defense.

FALLOUT SHELTER SPACE FOR EVERYBODY— TODAY'S CIVIL DEFENSE OBJECTIVE

In the nation-wide civil defense program, states jointly with local governments are assigned the major responsibilities for actual operations. For its part, the federal government undertakes four tasks: 1) to identify and track enemy weapons; 2) to obtain and disseminate warning information concerning these and the means of defending against them; 3) to bear the major costs of certain kinds of defense activities; and 4) through state and local channels, to provide technical and financial assistance for civil defense planning.

To meet the threat of radioactive fallout, civil defense is developing a nation-wide system of fallout shelters. This system will incorporate shelters of various sizes and types — from caves, mines, and subways to basements in private homes, to corridors or large protective areas in public or private buildings. It is more important that enough well-sheltered spaces be provided to protect the whole population during the longest period in which fallout menaces life than to stress uniformity of size, location or design in such spaces. In this protection program, even small, ordinary precautions—such as closing doors and windows—may help exclude radioactive material.

Civil defense looks to the development of most of the needed shelter spaces through the following activities:

1. Continue the now traditional survey of existing structures to identify and make available spaces in large public and private buildings.
2. Use low cost ventilation kits to make additional spaces available in buildings in which barrier shielding exists.
3. Advance a structure design program in which slanting techniques* are used to develop spaces by incorporating fallout protection in new buildings with little or no increase in cost or reduction in functional efficiency.
4. Conduct a "smaller structures survey" to identify existing buildings that contain shelter space for less than 50 persons.

5. Conduct a "shelter survey" of one and two family homes having basements to provide the inhabitants with information as to the degree of fallout protection afforded by the residence.
6. Advance community shelter planning to aid a community in assigning its residents to specified shelters, in facilitating movement to shelters, in identifying deficiencies in shelter in relation to need, and in developing new resources to meet the community shelter requirement.

When this national program is fully developed, by far the greatest number of shelter spaces will be available in large private or public buildings. In the latter group, schools are prominent by reason of their numbers, the number of shelter spaces they can yield, their presence in every community, their location in the midst of the people they serve and their accessibility to the general public at night and during weekends.

* Slanting means the modification of plans for a new structure in order to increase its capabilities as a fallout shelter at little or no additional cost and without loss of efficiency or aesthetic value.

THE NATIONAL SHELTER SURVEY

All shelters should provide minimum essentials to support life and protect against fallout. Private architectural and engineering firms under contract with the Army Corps of Engineers and the Navy Bureau of Yards and Docks have been surveying larger buildings across the nation, designating as fallout shelters those with available shelter areas capable of holding fifty or more occupants and conforming to certain other minimum standards. To be so designated, the shelter area must provide a protection factor of at least 40—it must offer enough shielding to reduce radioactivity in the shelter to one fortieth of its outside intensity. In each case the consent of the owner is secured before the building is designated a fallout shelter.

Such designation brings with it the advantage that at government expense the shelter is stocked with food, water drums, if required, medical and sanitation kits, and radiological monitoring equipment.

It is to be expected that, with technological and other developments, the shelter program will change. School boards will find it to their advantage to instruct their chief administrative officer to keep in touch with local Civil Defense and to report such changes to them.

SCHOOLS, SCHOOL BOARDS and CIVIL DEFENSE

THE PARTNERSHIP MUST BE CLOSE

For school board members these general considerations can lead to one general conclusion: schools cannot help but be involved. By social will and law, school boards have assigned duties and responsibilities that bring them into a close and many-sided partnership with Civil Defense:

1. By act of Congress, Civil Defense has been made part of the nation's governmental structure. Its mission is to mobilize and assist state and local governmental agencies in conducting actual civil defense operations. School boards are major local governmental agencies.
2. School boards are responsible for educating those community children enrolled in public schools. Such education must be preparation for the American way of life. For the predictable future, civil defense is part of that way of life. School boards must therefore see that instruction concerning civil defense is incorporated into the curriculum.
3. School boards are responsible, during school hours, for providing for the health, welfare, and safety of pupils. They share the task, with other agencies, of setting up programs to make both buildings and children safe against disasters, including nuclear disasters. Under any title, such programs in civil defense will succeed only if they coordinate with local, state, and national civil defense programs.
4. School boards have authority to construct school buildings and to repair, maintain, and equip them. The boards are therefore the proper agencies to receive recommendations from Civil Defense concerning the development of school fallout shelters and to authorize their construction or conversion and their equipment, maintenance, staffing, and programming. They are the proper agencies to accept, through civil defense officials, matching funds and other aids for such purposes from the national and state governments.* However, school boards are not expected to invest educational funds for general civil defense purposes.

5. School boards have proprietorship and custody over the buildings, grounds, and equipment of the schools they serve. In many residential and rural areas, school buildings offer the best available resources for community shelter development. While giving priority to protecting the school population, local school boards, responsive to the fact that school buildings are built by and belong to their communities, will wish wherever possible to cooperate with Civil Defense in developing plans allowing for part-time use of these buildings during school periods and full-time use at other times for community shelters. During some emergencies these buildings may lend themselves for use as administrative headquarters, emergency housing or feeding centers, or as emergency hospitals.
6. Schools generally incorporate their community's greatest concentration of educational resources—persons, facilities, equipment. For adults, as for school children, civil defense is a way of life to be learned. Under the sponsorship of the Office of Civil Defense, the U.S. Office of Education is administering, through the several state education offices, a Civil Defense Adult Training Program. This program aims to teach every adult citizen how he will be warned, where he can take shelter, how best he can survive under shelter conditions, and how he must meet emergencies. School boards can do much to make school facilities—persons and things—available for these and other civil defense classes. By allowing staff members in-service credit, released time, and by defraying part of their expenses, school boards can assist such staff members in becoming civil defense leaders, specialists, and instructors to the advantage of both the schools and the community.
7. By geography, conspicuousness, and function, schools become community centers. Matters become important to the community because they are important to its schools. School interests and concerns tend to become community interests and concerns. Parents and parent-teacher groups have considerable direct contact with school staffs. Children are open communication lines bringing school thinking, verbal and printed messages, into homes. Thus a favorable posture of the school board toward civil defense creates a favorable staff posture that ultimately reaches the children and, through them, the homes.

These conclusions point to the fact that school board members should not think of civil defense as a special function but as an extension of responsibilities and functions they already have in conjunction with other community agencies.

- * Congress appropriates money for federal contributions to assist states and their political subdivisions in acquiring certain civil defense materials and equipment necessary for an adequate civil defense program, including funds for training courses outside the regular school curriculum. The criteria of eligibility for these contributions are contained in the Federal Guide, available in offices of state and local civil defense directors. Federal contributions are available to the states on a matching fund basis.

SCHOOL BOARDS TAKE POSITIVE ACTION: PLANNING FOR SCHOOL CIVIL DEFENSE

In the abstract, the partnership between the school board and Civil Defense is not enough to save lives. The board must take positive action, setting up policies and procedures whereby civil defense responsibilities are fixed, programs are established, and, if need be, funds are committed. Once the necessary administrative machinery has been set to work, the board should expect to receive reports, check on operations, counsel, encourage, sustain interest, and evaluate.

SCHOOL CIVIL DEFENSE—THE TWO PROGRAMS

In exercising their legislative functions, school boards should bear in mind the fact that school civil defense activities roughly divide into two programs—protection and education.

The protection program has short range objectives: it tells staffs and pupils what to do, when to do it. While increased understanding may inform and motivate improved performance, prompt, precise obedience is more important.

The education program, by contrast, serves long range objectives: it seeks to build good citizens who will participate actively in civil defense.

THE SCHOOL PROTECTION PROGRAM: GENERAL CONSIDERATIONS

Because individual schools, school districts, communities, and local Civil Defense capabilities vary considerably from place to place—in size, complexity, traditions, services, staffing and programs—plans for organizing school civil defense at the local level are likely to display an equal variety. Each school or school system should tailor-make a plan best suited to its unique needs. All good school plans, however, should possess eight characteristics. They should:

1. Be made cooperatively with local Civil Defense and be coordinated with local community planning. Lacking such coordination, such plans cannot succeed in themselves, and they jeopardize the entire community plan.
2. Designate leadership at all levels and define and assign responsibility. Coordination with local Civil Defense, development of school plans, testing and actual emergency operations—these are administrative functions assigned by the school board to its administrative staff. In advance of an actual emergency, the school board should give the designated personnel the necessary powers to act.
3. Be specific, precise. Plans should take into consideration individuals, distances, survival crackers, square feet. They should be realistic. If the school fallout shelter has 200 places, but the school population numbers 30 staff members and 650 pupils, school officials should face the fact that there is a shortage of shelter space.
4. Involve many people in development—board members, staff members, students, community leaders, parents, representatives of related governmental agencies, and others. Broad involvement not only enriches planning and protects against hasty or poorly informed decisions but tends to produce understandings and acceptance by those directly involved in civil defense and by the broader community.

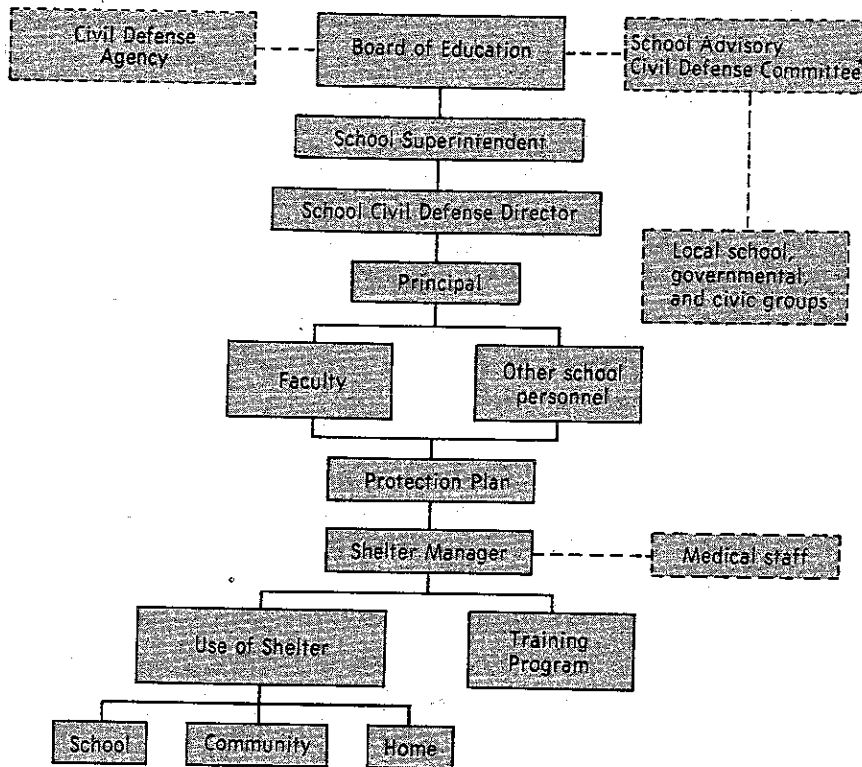
5. Draw assistance, wherever possible, from existing school programs and coordinate with the safety education program. The overlap will be apparent especially wherever the civil defense program is concerned with learnings involved in natural disasters and individual safety practices. Civil defense needs constitute a reason for intensifying the school safety program. However, the school safety program by itself is not a civil defense program.
6. Be definite enough to provide specific directives for predictable situations but flexible enough to allow for unexpected natural disasters and other emergencies.
7. Not be regarded as final or sacrosanct. On the contrary, all persons responsible for the development and execution of such plans—including board members—should understand that plans constantly must be reviewed in the light of changing conditions which bear upon civil defense, and they should up-date these plans as facts demand. Plans adequate today may be out-of-date tomorrow.
8. Have the formal approval of the local school board. Where needed, the school board, by resolutions, makes explicit provisions for implementation.

SCHOOL AND COMMUNITY ORGANIZATION FOR SCHOOL CIVIL DEFENSE

The following suggested table of organization for developing and implementing a school civil defense program centered around a fallout shelter program was developed by the National Commission on Safety Education of the National Education Association. While maintaining proper channels of authority and responsibility within the schools themselves, by providing advisory relationships with the local Civil Defense and school, governmental, and civic groups, this form of organization enlists the talents and special competencies of many individuals and agencies, and builds community understanding and acceptance.

A very large school system may wish to add to this organization; a very small system, or single school, may wish to simplify it.

SUGGESTED ORGANIZATION PLAN FOR CIVIL DEFENSE



* Individual schools within a school system should establish a similar committee.

THE LOCAL SCHOOL BOARD AND THE SCHOOL SHELTER PROGRAM

THE BOARD LEGISLATES

In implementing the school shelter program, the school board has a threefold task. It must take action: 1) to make satisfactory school shelters available; 2) to provide for their equipping and stocking; and 3) to provide for their staffing and programming.

In these, as in other phases of the school civil defense program, the board's functions are legislative. The carrying out of board authorized plans by school personnel is executive or administrative.

PROVIDING THE SCHOOL FALLOUT SHELTER

SHELTERS IN NEW CONSTRUCTION AND MODERNIZED BUILDINGS

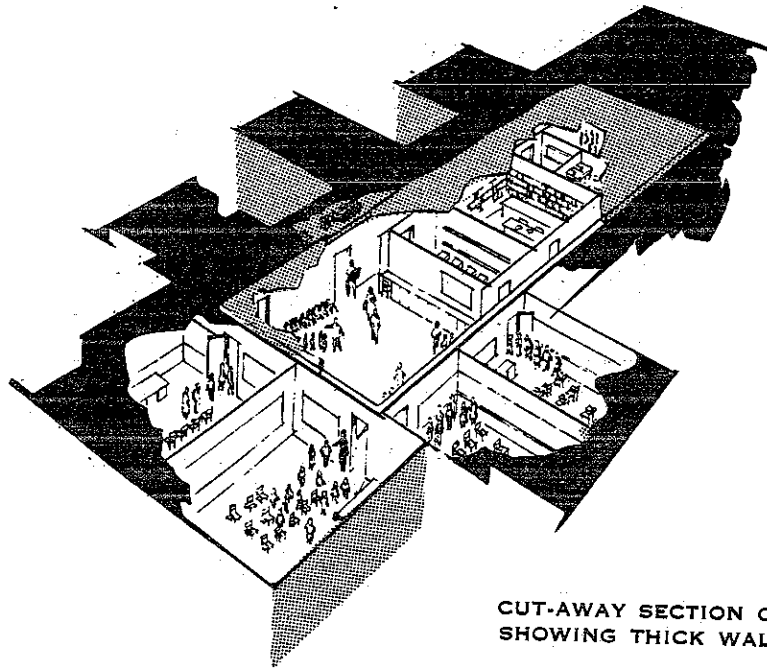
In safeguarding the student body and staff of a school against the danger of fallout, the board's first task is to provide enough shelter spaces with sufficient shielding capability. It will, therefore, ask itself a double question: "How many, and how much protection?"

New buildings, additions to older structures, or extensive modernization provide easy opportunity for including fallout shelters in the plans. Such shelters usually are designated for multi-purpose use, serving normally as gymnasiums, auditoriums, laboratories, cafeterias, libraries, storage spaces, corridors, or as classrooms. In developing plans, substantial improvement in putting distance and shielding between building occupants and fallout can be made by careful attention to positioning the building on its site; by properly locating windows, interior and exterior doors, and rooms and corridors; by changing the position of baffling or adding overhanging eaves; by using material with higher resistance to radioactivity for roof or floor slabs or for interior or exterior wall construction. Filling hollow wall blocks surrounding a shelter area with sand, gravel, or dirt may make the difference between adequate and inadequate shielding.

"Slanting" has been defined as the "incorporation with little or no extra cost or reduction in efficiency of certain architectural and engineering features into all new structures, to protect personnel from fallout gamma radiation in event of an emergency." The architect or engineer who understands protection requirements will be able to find many ways of so slanting his plans to greatly increase the shelter's protection factor with little or no increase in costs or sacrifice of aesthetics and efficiency.

The following architectural sketch shows a cut-away section of a school building in which shelter has been provided at a nominal cost by constructing a thick walled core with a concrete roof. This core contains activity rooms which are divided and reinforced by the walls of the library and rest rooms. The windows of the surrounding classrooms are shielded by projecting baffled walls.

In some way the site, size, programs, and surroundings of each school create a unique fallout shelter problem which must be solved realistically and professionally on its own terms. No fixed or final pattern for such a shelter is therefore prescribed.



CUT-AWAY SECTION OF SCHOOL
SHOWING THICK WALLED CORE

Much excellent material—discussion, suggested plans and elevations—on the architectural and engineering problems involved in school fallout shelter design can be obtained free of charge by writing to the Office of Civil Defense, Department of Defense, The Pentagon, Washington, D.C.

Early in the development of school construction plans, school boards will wish to refer this material to their chief school administrator and their architectural and engineering consultants. They also will wish to examine it for their own information and guidance.

If additional information is needed, the school board may wish to refer its shelter problems to a private consultant. Many fallout shelter analysts have been trained and certified by the Office of Civil Defense. Directories containing their names and addresses—and every state is represented—may be had free of charge by writing to the Office of Civil Defense, Department of Defense, Washington, D.C.

SHELTERS IN EXISTING BUILDINGS

Many existing school buildings have shelter areas with a satisfactory protection factor and enough shelter spaces to house their normal school populations. Such buildings are likely to have been classified and licensed

as community shelters and to have received stocks of minimum survival materials.

If questions arise concerning a school building that has been surveyed under the National Shelter Survey, the answers should be available at the local Civil Defense office. These answers merit careful study. If such survey is lacking, or if further information is desired, inquiry should begin with the local civil defense director.

Other school buildings may fall short of shelter adequacy, either because they do not provide a sufficiently high protection factor or they do not yield enough shelter places to take care of their normal pupil population. To repeat, in some way every school building is unique and requires a unique approach to its problems of shielding and sheltering. Yet it is reasonably safe to generalize that in any school building it is possible to get some shelter. It may be that shelter areas need added ventilation or the blocking of windows or the construction of a false roof. A baffle wall in front of an outside door may convert a corridor into a shelter. Many small, inexpensive building modifications may increase greatly the shielding power of shelters in existing buildings. What to do to create enough satisfactory shelter places with a minimum of difficulty and cost, and without disturbing the efficiency or aesthetics of a building, is a problem to be settled by a qualified shelter analyst. Reference is again made to a listing of these specialists available in the Office of Civil Defense.

In some cases it may take time and money—and money may not be momentarily available—to raise the protection factor and space capacity of available school shelter to a point which meets minimum criteria.

In such cases board members are reminded of the old saying that the "greatest enemy of the good is not the bad, but the perfect." While making every effort to provide adequate shelter for every child, if conditions compel them to give less, school boards should give the child as much as they can.

Board members also are reminded that, in an all-out attack, poor shelter may save lives that a lack of shelter would sacrifice; fair shelter would save more lives than poor shelter; and better shelter would save still more lives. If these wise principles are observed, millions of lives—the lives of school children among them—will be saved that otherwise might be lost.

EQUIPPING AND STOCKING THE SCHOOL FALLOUT SHELTER

SHELL OR SHELTER?

Of itself, a shelter is a mere shell, and while it may offer protection against fallout and enable its occupants to survive in discomfort during a brief emergency, unless it is properly equipped and stocked with minimum supplies, it may endanger mental and physical health and life itself during a longer stay.

ELECTRICITY AND WATER

If public power supplies fail, a secondary power source will prove valuable. Shelters also should provide water for drinking. Unless, as it may, attack destroys mains, water may safely be drawn from them or from wells. Water stored in drums or trapped in pipes, boilers, heaters, sanitary installations, or elsewhere may be used selectively as an emergency source. To release trapped water, special faucets or connecting pipes may be required. Local Civil Defense will make the necessary recommendations. The water problem, however, is simplified by the fact that once settled, radioactive fallout does not contaminate the water it has passed through; and even while settling, it may be removed largely by water purification devices.

RADIATION DETECTION INSTRUMENTS

It is essential that each school shelter be supplied with radiation detection instruments and staffed with a radiological monitor who knows how to use them. A kit of these instruments—survey meter, docimeter, and charger—is commercially available. These instruments are supplied at Government expense to licensed Fallout Shelters.

COMMUNICATION INSTRUMENTS

School shelters should be equipped to communicate with local Civil Defense. While power line failure is possible under attack conditions, telephone companies estimate that they have sufficient battery capacity to operate two to seven days. To maintain a telephone connection, it is recommended that jacks be installed in the school office and shelter areas. Such arrangement allows the transfer of the telephone instrument to the shelter during an emergency.

In the event of telephone and power failure, a transistorized battery-operated radio receiver will enable the shelter staff to receive messages from local Civil Defense and elsewhere.

FOOD, MEDICAL SUPPLIES, TOOLS, Etc.

Fallout shelters designated for community use by the National Shelter Survey—and many school shelters are included in this group—are being stocked with survival food packages, sanitary and medical kits, water drums, if needed, and radiation detection instruments in sufficient quantities to provide in each case for the designated number of occupants.

Such stocking and equipping improves these shelters for school use. To gain this benefit, school boards having charge of shelters which do not qualify for stocking at government expense would do well to try to stock them according to minimum government standards.

CHILDREN HAVE SPECIAL NEEDS

Equipping and stocking shelters for occupancy by school children—particularly small children—poses special problems. Those responsible for the task should attempt to visualize a single child—or hundreds of children—confined in a shelter for as long as two weeks. No child can comfortably sit or sleep on the floor for this period. If food, in addition to survival biscuits, is to be served, what utensils and other equipment will be needed? If a program of individual or school activities is planned, what equipment is required? Are some clothing replacements necessary? These questions, while not exhausting the list by any means, should provoke and extend thinking and planning. Federal stocking makes no provision in fallout shelters for beds, cots, bunks, or bedding. Even for these shelters, under recommendation of local Civil Defense and the school committee or chief administrator, school boards may wish to augment minimum federal stocking. Schools will find it to their advantage to survey building stocks and supplies to determine what items can be converted to probable shelter use.

Food stocks stored for the cafeteria, for instance, may be used to supplement the minimum cracker diet in a fallout shelter or to serve as a basic source of supply in a non-qualifying shelter. In time of threatened emergency, children might be asked to bring articles such as blankets from their homes.

STAFFING A SHELTER

Once a shelter has been equipped and stocked, it must be staffed and programmed. School boards should assign these tasks to their administrative staffs with full understanding that it is one matter to march a group of children and teachers into a shelter under peacetime conditions, keep them there a few minutes, and march them out again; but it is quite something else, under attack conditions, to keep them closely confined for days or even weeks. Much thought must go into staffing and equipping a shelter.

Obviously a school brings into the shelter an organized staff skilled in working together. It also sends with them a group of pupils accustomed to following their directions. Problems of management are thereby reduced. Schools have another advantage in that their teaching and supporting staffs usually include persons who by training and experience possess special abilities in the handling of special phases of the shelter program.

Shelter staffing functions involve, among other matters, management, communications, radiological monitoring, safety and policing, supply and maintenance, feeding, sleeping, health and sanitation, information, training, and instruction and recreation. Small shelters may double up some of these assignments; larger shelters may recruit several persons for each of them. Staffing and programming must be tailored to meet the physical needs of each shelter and the ages and special needs of the occupants.

A TABLE OF ORGANIZATION IS NEEDED

A table of organization must be developed, with duties spelled out for each post, and individuals must be assigned and trained for their particular tasks. Good personnel management demands that posts be filled on the basis of the individual interests, special abilities, normal work assignments, and related experiences of staff members.

The appointment of the school shelter manager and his alternate is all-important. Normally the principal assumes this task. In exceptional cases, though, because of health, age, or other reason, some other faculty member may be called upon to serve. When a school shelter has been designated as a fallout shelter, questions of possible overlapping authority should be settled in advance between the school and local Civil Defense.

Study and planning will increase understanding of all shelter tasks. The Office of Civil Defense trains radiological monitor instructors and shelter manager instructors at its Staff College at Battle Creek, Michigan, and at its training centers at Brooklyn, New York, and Alameda, California. Matching funds to defray expenses for attending these short courses are available. This training also is available through the extension division of at least one university in each state. Many state civil defense offices offer various short courses. Key shelter personnel should be urged to enroll in these. Every shelter needs to be staffed with several persons who have taken a Red Cross first aid course or medical self-help training.

SHELTER PROGRAMS ARE MADE—NOT IMPROVISED

Once the staff has been selected, it should use the pre-emergency period to plan for shelter operations. World War II experiences, mass relief measures following natural and other disasters, and a growing body of research dealing with shelter problems have yielded much valuable information. This material dealing with shelter staffing and planning has been incorporated into pamphlets available through the Office of Civil Defense, Washington, D.C., or through local Civil Defense.

Shelter plans will look to both the psychological and physical welfare of the occupants. They will determine shelter space utilization; set up a program of work and recreational activities; provide schedules for daily routines such as eating and sleeping; organize instructional programs; and make special arrangements for pupils with special physical, mental, and emotional needs. They will allow for the different characteristic responses made by children of various age levels. They will provide occupation, responsibilities, activities. Physical education and recreation programs will keep shelter occupants busy, give them wholesome outlets for their energies, reduce tensions and pointless fears. Evolving shelter plans will develop equipment and stocking needs, including lists of school materials that may be brought into the shelter: books, blackboards, audio-visual equipment, games, writing and arts and crafts materials. Planning must be realistic. For example, it will not move school furniture into the shelter at the cost of moving children out.

Plans should provide for orderly shelter entry; and, post-emergence, for orderly shelter evacuation. The adequacy of shelter planning will be measured by the mental and physical well-being of those who emerge.

When plans are completed, they should be made operational by a program of indoctrination and drill that includes both staffs and pupils. Such a program serves to test plans, train personnel in their duties, and ease some of the shock of shelter living by reducing unfamiliarity and surprise.

PROVIDING SHELTER OUTSIDE THE SCHOOL BUILDING

When a school shelter has a low protection factor, if alerting time allows, it may be advantageous to send pupils to available neighboring shelters offering good protection or to their homes. Such operations require thorough plans, and children should be trained to follow them. Involved are such matters as signal systems, assembly, leadership, escort, pupil accounting, traffic safety, the setting of routes, and the readying of reception places. Planning will give special attention to the needs of the handicapped. Matters of this kind should be settled in advance with local Civil Defense, local protection agencies, and with the full and clear understanding of parents and all others concerned.

Planning and training also should provide for the safety of children when an alert occurs while they are en route to or from school on foot or in vehicles. Children themselves, and those who transport them, should be told that when an alert sounds they should take pre-planned action if the announced time of attack or the arrival of fallout does not permit them to reach the school. The school itself has the responsibility of calling the attention of children and those concerned with their delivery to or from school to shelter facilities en route.

THE SCHOOL BOARD AND THE CIVIL DEFENSE EDUCATIONAL PROGRAM

MUCH CIVIL DEFENSE IS ALREADY TAUGHT

Even without making special provisions for civil defense education, elementary and secondary school curriculums contribute many learning experiences important to emergency survival. Children and young people whose habits, attitudes, and knowledge make them good citizens for normal living cannot help but carry much of that good citizenship into the

fallout shelter. The development of character for effective living proceeds through daily experiences, in school and elsewhere. Such development is an integral part of any good school program. The awareness by school staffs and pupils of what good citizenship means to personal and national survival in a nuclear age supplies additional motivation for making citizenship training a major goal.

SPECIAL TRAINING NEEDED IN EMERGENCY TECHNIQUES

A second step, as we have seen, is to train pupils in basic survival techniques; much of this training will be incorporated as drills into the civil defense fallout shelter plan. Very young children will be taught to follow directions implicitly, perhaps with little immediate understanding of the need. As children mature, and their understanding grows of the scientific, political, and military facts creating the need for civil defense, they will participate intelligently and not blindly. Shelter plans will assign leadership and other special duties to pupils with proved capacities to perform them. Some special training may be required for these tasks. All pupils, according to age and need, should be prepared by indoctrination to meet the psychological shock of disaster and of shelter living.

INCORPORATE CIVIL DEFENSE INTO THE CURRICULUM

A third step in the civil defense educational program is to examine the on-going curriculum for opportunities to incorporate or strengthen items important to civil defense understandings. For example, the organization and operation of Civil Defense is an obvious sub-topic for civics and citizenship, areas concerned with such matters as governmental structures and functions, the rights, privileges, duties and responsibilities of citizens, etc. History teaches critical thinking and supplies backgrounds from the past against which the present may be judged. Economics may be extended to incorporate such civil defense problems as the relation of civil and military defense to taxation or the effect of nuclear war upon the distribution of goods and wealth. The physical sciences contribute to an understanding of concepts of nuclear energy, weapons, missiles, and methods of protection. The biological sciences lead to a consideration of the effects of radiation on plant and animal life. Home economics can incorporate a unit on mass feeding. Shelter management involves applied civics and many areas of the curriculum—from physics, biology, home economics to physical education.

Civil defense matters should be taught as part of many areas of the curriculum rather than organized into a separate course. Teaching these matters when they arise naturally in many subject fields tends to keep them in their normal relationships and perspectives; deepens the resultant understanding of them; keeps them current; and makes for a twelve year, rather than a one semester exposure to them. When civil defense matters are spread across the curriculum, all students, rather than limited groups, will receive the needed information.

CONSTANT REEVALUATION NEEDED

Because technological advances in weapons and defense are rapid, it is admittedly difficult to keep current the curriculum in civil defense. Yet a curriculum manual must have a high degree of currency to be of maximum value. While such a manual must be realistic and factually accurate, the "scare" approach should be avoided. In the event of a disaster, such approach can add only confusion.

THE ROLE OF THE BOARD IN THE CIVIL DEFENSE CURRICULUM

While the actual incorporation of civil defense concepts into the curriculum is the responsibility of the superintendent, aided by the professional staff, the local school board has an active and important part to play:

1. The board provides the needed instructions and authorizations to get the project under way.
2. The board makes available such funds as are needed and can legally be spent to supply materials for the curriculum group. It may supply travel expenses for visits to other cities, to study civil defense plans, or to attend training courses.
3. Upon recommendation of the superintendent, the board adopts the curriculum guide for use in the schools.
4. From time to time, the board receives reports from the superintendent and thus satisfies itself that the disaster protection curriculum is meeting its objectives.

THE SCHOOL BOARD PROVIDES FOR THE CONSERVATION OF ITS PHYSICAL FACILITIES

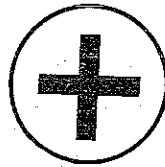
Disasters, including enemy nuclear attack, offer threats not only to school personnel but to school grounds, buildings, equipment, supplies, and records as well. The local school board is trustee for these assets. It should, therefore, take measures to protect them against needless damage.

Many school buildings have already been marked as community shelters. When attack or disaster threatens, others may be commandeered for such use. In post-disaster operations, school buildings may be taken over for emergency housing, feeding, administration, registration, hospital use, etc. Well in advance of such temporary conversion, the school board should authorize its chief administrative officer to plan with local Civil Defense for the development of orderly procedures and arrangements. Such planning provides for the opening, for emergency use, of designated portions of a building; it includes provisions for safeguarding public and private property stored there; it fixes responsibility for building control and for loss and damage to the structure and its contents; it develops plans to curb looting and vandalism; it defines the relationships between the principal, his professional and service staffs, and civil defense representatives; it avoids planning that makes duplicate or multiple use of the same facilities; it looks to the inventorying and accounting for perishables and goods used for other than school purposes.

Such plans describe what arrangements are to be made for the heating plan, plumbing, utility and other services if, during an emergency, the building is to be evacuated for any reason. They provide for a final strict inspection of the premises. Many school systems include such material in an emergency plant operations manual.

Some school systems will wish to transfer their essential records and other valuable papers to depositories clear of probable blast damage. Many metropolitan cities maintain such depositories in their secondary city halls.

THE SCHOOL BOARD AND POST DISASTER PROBLEMS



Before or after some types of non-military disaster, and, in some cases after nuclear attack, school populations may be shifted to less vulnerable or less stricken communities. Such transfer operations should always be conducted with the cooperation of local Civil Defense. These operations are certain to create many problems for local school boards in both the evacuated and stricken areas. Not all these problems can be foreseen and provided for in advance.

The reception area may find itself so overrun with evacuees that all available buildings, including schools, will be temporarily used for emergency non-school purposes. In such case education will have to be suspended until basic human needs can be provided for. Later, if return to the stricken area is not possible, or if school buildings there are not fit or available for school use, schools for evacuees may have to be set up in the reception area. In such cases, the chief state school officer must be looked to for leadership and relief.

In natural disasters the American Red Cross, in accordance with its charter obligations, has the responsibility to assist people in need of food, clothing, shelter, and supplemental medical care and to assist families in need of help to recover after the emergency. Civil Defense has the responsibility to maintain law and order, coordinate relief operations, maintain communications and all possible governmental services both during and after a disaster.

In localities that have been declared major disaster areas by the President of the United States, under Public Law 875, the Office of Emergency Planning provides supplemental financial assistance to state and local units of government, including school districts. This assistance is available primarily for emergency restoration and repair of essential public facilities.

REDUCING STAFF LIABILITY IN THE SCHOOL CIVIL DEFENSE PROGRAM

All states have adopted a Civil Defense code. This authorizes certain immunities from suits for damages resulting from injuries for anything but gross negligence. The school board should direct its legal counsel to ascertain what these immunities are and whether they cover all staff members or only those who are enrolled as members—"volunteer workers" is the common terminology—of local or state Civil Defense. If state law provides coverage, the advantage is such that the school board will wish to recommend that all eligible personnel, including its chief administrative officer—whose civil defense responsibilities and risks are considerable—should be enrolled. Local Civil Defense, in turn, should recognize that many school staff members have full and important functions to perform in civil defense exercises and operations, and on that basis should be prepared to certify them as essential personnel, non-governmental.

REMEMBER—IT HELPS TO UNDERSTAND

The greatest obstacle today to the development of an adequate civil defense program, organized around a national shelter program, is lack of understanding. With understanding of the peril to individuals and to the nation posed by the threat of nuclear attack, comes concern: with understanding, a program is possible by which individuals and the nation can demonstrate their will to stand fast under such attack and act. Key people everywhere—opinion makers, community leaders, persons playing important legislative, administrative, or teaching roles—have a personal, civic, and patriotic duty to keep themselves informed so that they may make wise decisions based on current facts. The 27,000 American school boards and their members need to keep themselves thoroughly and accurately posted.

As has been pointed out several times, means of gaining basic information and of keeping abreast of civil defense developments are many. Board members should take advantage of the fact that state and local Civil Defense agencies make available much free material regarding all phases the shelter program and other problems.

Education and training courses in civil defense and in certain of its specialties are offered from time to time locally, on announced schedules by some state departments, and by the National Office of Civil Defense. Matching funds are available for certain courses. Inquiries regarding course titles and schedules should be made through local Civil Defense or state Civil Defense offices. From time to time courses have been offered with registration limited to board members and administrators. A school board should encourage one or more of its members and its administrative staff to attend such a course.

CONCLUSION

It is evident from the discussion in this pamphlet that preparation for emergencies requires careful and painstaking planning. No single agency can accomplish this task alone. Civil defense planning is not a one-time effort but must be continuous. Even if the threat of nuclear attack were to vanish tomorrow, natural disasters will continue to be with us. An organized staff, consistent plans, and well-stocked shelters are as necessary to cope with these natural disasters as with military attack.

School boards in their capacity as the guardians of the safety and education of the children of America have a special responsibility to plan for civil defense. Measuring up to this responsibility is a primary requirement if school boards are to continue to serve their communities in the best possible manner.

The planning, preparation, production, and distribution of this pamphlet was undertaken by the National School Boards Association in cooperation with the Office of Civil Defense, Department of Defense. While the Association through its officers and staff has organized the project and seen it through to completion it acknowledges the excellent contributions and guidance of a working committee which set the policy for the booklet and assisted in editing the preliminary draft. Members of the committee are:

R. WINFIELD SMITH, Chairman, Member of Board of Directors, NSBA; Member of Board of Education, Pennsburg, Pennsylvania; Past-President, Pennsylvania School Boards Association.

JOHN ALBOHM, Superintendent of Schools, Alexandria, Virginia.

J. E. ARNOLD, Member of Board of Education, Daingerfield, Texas.

MRS. ELAINE BRANDSTAD, Member of Board of Education, Stockton, California.

FRED H. BRANTLINGER, Education Specialist, Training and Education Division, Office of Civil Defense.

DONALD BROSSMAN, Executive Assistant, New York State School Boards Association, Inc., Albany, New York.

LAWRENCE ROOT, Principal, Council Rock School, Brighton, New York.

ELMER STANLEY, Executive Secretary, Washington State School Directors Association, Olympia, Washington.

FREEMAN VAUGHN, Director of Special Services, National School Boards Association, Evanston, Illinois.

HAROLD V. WEBB, Executive Director, National School Boards Association, Evanston, Illinois.

JACOB ZION, Principal, Glades Junior High School, Miami, Florida.

PROJECT WRITER: WILLIAM M. LAMERS, Assistant Superintendent of Schools, Milwaukee, Wisconsin.