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PRELIMINARY REPORT
for
CIVIL DEFENSE ORGANIZATION
AND ADMINISTRATION
in the
UNITED STATES



Submitted to the President of the United States
By F. H. LaGuardia, President of
THE UNITED STATES CONFERENCE OF MAYORS

January 31, 1941

INTRODUCTION

The need for establishing a program for civil defense in the United States has already been recognized by many cities and by various branches and agencies of the Federal Government. Some cities, such as New York City, have been giving attention to the problem for several years and detailed civil defense plans have been formulated which can be put into immediate operation in the event of any emergency. The War Department has announced that it has in preparation a report on air raid precautions for use by civil authorities. Recently the Department appointed a committee of engineers to assist on problems of protection to civilians and civilian properties in time of war. Among the matters to be studied are those pertaining to air-raid bomb shelters, water supply and power. For several months a Fire Advisory Committee to the Advisory Commission to the Council of National Defense has been functioning. In the organization of the Council there is also an office of Coordinator of Health, Welfare and Related Activities giving attention to the health and welfare problems of both the civilian and military population. The Defense Communications Board has been established by Executive Order of the President. The Federal Security Agency (including the United States Public Health Service, the Social Security Board, and the NYA) and the Federal Works Agency (including the WPA) are similarly concerned in one way or another with civil defense problems.

We have already gone so far along the road of preparation for any eventuality that municipal officials have studied conditions, on the spot, in both Canada and England. And certain Federal officials are now engaged in making surveys in combat zones abroad.

It is now apparent that the time for creation of an *integrated* and *coordinated* Civil Defense administration has arrived if waste and duplication of effort are to be avoided and efficient organization is to be achieved. In an emergency it would simply be impossible for local authorities to deal with a score of separate and independent Federal agencies.

The interest of the cities of the Nation in an adequate civil defense program requires no extended discussion. The fact that city governments have an important part to play in any civil defense program is evident through European examples. Local government in England, as elsewhere, "was established and developed to administer the acts of peace, and to promote social welfare. Today it finds itself cast for the involuntary role of playing a leading part in the Battle of

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Britain". And upon the extent to which the English local authorities are able to carry the burdens which have been thrust upon them, much depends.

Modern warfare has completely changed the whole conception of civil defense; and aerial warfare, specifically, has emphasized the importance of efficient municipal governments prepared to deal with emergencies. For "aerial assaults on cities spread death and ruin, impair public utility services and put a tremendous strain upon police, fire, welfare and other municipal departments".

A recent editorial in the "Washington Post" is to the point:

"The bombing of our own cities by a hostile air force may appear to be a very remote possibility at present. But it is against such potential dangers that we are arming, and the greater our preparations for defense the smaller will be the likelihood of an attack.

"With the experiences of London vividly in mind, Americans can readily appreciate the importance of close cooperation between the civilian and military authorities in the event of war. To make such cooperation fully effective, when an emergency develops, it is essential for the military and civilian authorities to understand one another's problems and to be ready with plans of action.

"At its recent annual meeting the United States Conference of Mayors showed that it realizes the heavy responsibilities resting upon the shoulders of the municipal authorities in the present emergency. The War Department is likewise impressed by the importance of city defenses. Brig. Gen. James E. Chaney told the mayors:

"You are in a position to exercise profound influence over the American people who have elevated you to your present positions. Consequently we of the Army are glad to talk to you and point out from a military viewpoint some of our problems and our plans for the future.'

"Here is encouraging evidence that military and civilian leaders have a realistic grasp of the problems created by modern warfare. They know that it is no longer a clash between armed forces but a contest in which both civilians and soldiers must employ all the resources at their command to avert disaster to themselves and to overcome a common enemy."

Attack from the air "made it necessary for Great Britain to develop a whole new system of civil defense. In doing so, it chose to make use of its existing structure of local government rather than to turn the job over to military authorities or to set up new organs of administration." In the stress of the emergency the latter two alternatives were, of course, out of the question. Similarly, Canada is now at work on a nation-wide civil defense program based on utilization of existing municipal machinery.

This report is submitted in the hope that, based upon the experiences of Great Britain and the studies made in Canada, it may lead to adoption of a civil defense program for the United States—with particular reference to the functioning of municipal governments in such a program.

The report is admittedly incomplete in many particulars. It deals primarily with organization. Civil defense consists of many activities and only the important phases are mentioned. However, it is fortunate that there now exists a body of technical literature from England on practically every detail of a civil defense program. A partial list of documents now available is included in the appendix.

I emphasize that the suggestions made herein are not made for the purpose of spreading alarm regarding our own situation as related to the present international situation. The report simply recommends establishment of an organization for civil protection against possible air attack.

If Montreal, just a few minutes by air from the border of New York State, has deemed it advisable to plan an extensive air-raid shelter scheme, it is at least well that we give some thought to developing a coordinated and workable civil defense program for American cities—particularly for those cities in areas which are, in the opinion of military experts, vulnerable to attack.

F. H. LaGUARDIA,
President,
United States Conference of Mayors.

PRELIMINARY REPORT
Prepared by PAUL V. BETTERS
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CHAPTER I¹

THE PROBLEM AND PASSIVE AIR DEFENSE

Defense against air attack can be divided into two parts—active (which comprises the bombing counter-offensive and the action of fighters, anti-aircraft guns and searchlights) and passive. Active defense is the responsibility of the Military Services, and, as such, is outside the scope of this report. Passive defense includes those measures of protection which can be taken on the ground to minimize the effects of attacks from the air, both on personnel and material.

Unlike land forces, aircraft cannot be prevented from crossing a frontier by any natural or artificial means; the measures of active defense, i.e., bombing, fighting and anti-aircraft defense, which can be instituted will, however, reduce the scale of attack and may ultimately render the attack of objectives situated some distance from the coast too hazardous to be undertaken regularly. Air operations can be conducted with almost equal facility either by day or by night and under weather conditions which 10 years ago, would have been considered extremely hazardous; the regularity with which modern air transport operates bears ample witness to the developments which have taken place.

It is therefore of importance that any preparations for protection against air attack should be brought to as great a degree of finality in peace time as circumstances will permit; reliance on eleventh-hour improvisation or the assumption that adequate warning will be received is almost certain to prove illusory and may have the most unfortunate consequences.

Air attacks may be experienced in any of the following forms:—

(a) *High Explosive Bombs*

This type of bomb is filled with high explosive material, and is intended primarily for the destruction of life and property. The actual effect of the bomb will naturally depend on the amount of high explosive it contains and the thickness of the case, but most modern bombs of 100 pounds weight or over will be capable of penetrating *ordinary* buildings. Contact with any part of a steel or stone structure may serve either to deflect the path of the bomb or to explode it prematurely, and reinforced concrete floors of exceptional

¹ Based on material supplied to the writer by the Federal Air Raid Precautions Committee, Ottawa, Canada.

thickness may also cause the bomb to explode. It will be more normal, however, for the explosion to take place at or below ground level. Apart from the direct damage caused by the explosion of the bomb, considerable effect may also be felt from the blast which usually spreads upwards and outwards.

(b) Incendiary Bombs

This type of bomb is usually small and light and is filled with an incendiary compound which is ignited when the bomb strikes any obstacle. It is used only for causing fires to property and is not likely to cause much injury to personnel unless a direct hit is sustained.

(c) Gas Bombs or Sprays

Gasses may be divided into two main types:—

- (i) Non-persistent.
- (ii) Persistent.

(i) Non-persistent gases when liberated are rapidly diluted by admixture with the atmosphere, and the danger is therefore of fairly short duration. Examples of such gases are chlorine, phosgene and the poisonous smokes derived from various arsenical compounds.

(ii) Persistent gases are usually liquids which will contaminate the area on which they are released and continue to give off vapor for a considerable time, in certain cases, weeks, unless counter-measures are taken. Mustard gas is the most dangerous of the persistent gases, and in addition to the high degree of vapour danger, there is also risk of injury as a result of contact with the contaminated ground. Under normal weather conditions the rate of evaporation of mustard gas is slow and this accounts for its persistency. It should be noted that the danger from vapour will be greatest in confined places, where rapid interchange of air does not occur.

The essential difference between these two types of gas is that in the one a temporary local high concentration of gas may be expected, whereas, in the other, an area will have been contaminated which will continue to be dangerous for an extended period unless measures of decontamination are undertaken.

Gas attacks may be made by means of bombs or sprays. If the former are used, the gas will be liberated where the bomb explodes, whereas the latter will descend in the form of a shower of liquid, which may reach the ground at some considerable distance (i.e., up to 5 or 6 miles) from the point in the air at which it has been discharged.

Passive Air Defense

Passive air defense may be considered under a number of different headings, of which the most important are:—

The restriction of lighting.

The provision of protection, including shelters, and the safeguarding of important points.

The evacuation of personnel from threatened areas to districts less liable to attack.

The maintenance of vital services, including food supplies, transport services, electrical supplies, gas supplies, water supplies, and postal, telegraph and telephone services.

The treatment of casualties and the organization required to set up and maintain first-aid posts, hospitals and ambulance services.

The organization required to repair damage caused by enemy air attack, including clearance of debris, fire fighting, road repairs, etc.

Anti-gas measures, such as decontamination, gas-proofing of dwellings, individual and collective protection against gas, etc.

Dealing with these various problems constitutes the responsibility of the civil defense organization.

It is well to add to the above list the very important problem of maintaining the morale of the civilian population.

CHAPTER II

GENERAL ORGANIZATION

The problem of evolving the most suitable type of organization to meet the peculiar needs of passive air defense is to find a system which, while combining central direction and guidance with a large measure of local decentralization, will also allow sufficient elasticity to meet the rapidly changing situations which may arise.

It is also necessary to establish the closest relations between the *civil defense* and *military* authorities and to define clearly their respective responsibilities. It is equally essential that the machinery should be such that in time of emergency *ad hoc* decisions on matters of high policy can be obtained without delay.

Finally, the organization set up in normal times must be equally suitable for abnormal conditions. The whole machinery must, in fact, be so designed as to enable it to meet an emergency with the minimum of delay and the maximum of efficiency.

THE FEDERAL CIVIL DEFENSE BOARD

It is clear that any effective organization for civil defense in the United States must be directed by some Federal agency functioning in a supervisory and advisory capacity to local civil defense authori-

ties. The whole experience of England indicates that *national* policies are essential in such fields as financing of the cost of shelters, warning systems, communications control, evacuation, mutual aid plans, et cetera.

It is recommended, therefore, that a Federal Civil Defense Board be created, such Board to consist of representatives of all Federal agencies concerned or involved in any way with the protection and the welfare of the civilian population.¹ Also, it would be advisable to include on the Federal Committee one representative of the state governments and one representative of the local authorities. The Federal Civil Defense Board should certainly include representatives of the following Federal agencies:

War Department
Navy Department
Coordinator of Health, Welfare and Related Activities
of the Council of National Defense
Federal Security Agency
Federal Works Agency
United States Department of Justice
Defense Communications Board

Undoubtedly other Federal agencies might well be added to the above list.

The Board should have an executive officer who probably ought to be the Chairman.

The work of the Board would be to consider all points and questions arising in connection with civilian defense and to provide the required coordination between all Federal Departments. It would advise with and guide the local authorities in establishing and operating local Civil Defense Boards. Further, it would prepare and make available to all local authorities technical information and data covering all phases of civil defense. In actual emergencies, the Board might be given specified executive powers.

FEDERAL REGIONAL OFFICES

In carrying out the ever-to-be-sought principle of decentralization, the Federal Board should establish Regional Offices which as Federal agencies would deal directly, and without delay, with the local Civil Defense Boards. Such Offices might well be established for each Army Corps Area—with possible sub-regional offices within some of the Corps Areas. In this way the Federal Civil Defense Board can be relieved of a great mass of detail work.

It is essential that a plan of Regional administration be adopted since, as is well known, aircraft does not recognize state political

¹ Such as the Canadian Federal agency.

boundaries any more than microbes do; and neither do bombs for that matter. For efficient organization it is simply out of the question to expect state agencies, restricted in their functioning to obsolete and archaic geographical boundaries, to handle the task. The smoothness of operation of Regional Offices, dealing directly with the local authorities, is apparent in the British set-up—especially in the London area. Only through this plan can the problem of the metropolitan areas (which sometimes overlap into three or more states in our country) be met.

In time of peace the Regional Offices should work in close cooperation with the military authorities. It is the intention that the local authorities should be responsible for working out detailed plans of passive air defense based on general principles formulated by the Federal Board and it should be the responsibility of each Regional Office to act as the guide, philosopher and friend of the local authorities while they are working out their detailed plans.

In emergency, the Regional Office, while still acting as a general advisor, would probably be vested with considerable executive authority. It would, in fact, become the executive nerve center in each area and would provide for such coordination as might be necessary in connection with action by the local authorities. It is needless to point out that prior to and in an emergency, there must be complete cooperation with the military branches.

LOCAL CIVIL DEFENSE BOARDS

In each municipality concerned,¹ there should be set up a Civil Defense Board under the chairmanship of the Mayor or his delegate and including representatives and liaison officers of all the public services concerned. It may be found, in practice, better to group some municipalities together so that resources can be pooled. It is not proposed to lay down any more detailed composition of these Committees, which will best be left to the discretion of the Chairman, with the advice, as necessary, of the Regional Office. Attention is drawn, however, to the necessity for the maintenance of a close liaison with authorities outside the control of the municipal authorities, i.e., those concerned with water, light, heat, telephone and other public services.

It is proposed that responsibility for the preparation of detailed plans should normally rest with the respective Local Boards; possibly in certain cases separate plans may be required for populous and highly developed industrial communities. The actual organization is a matter which can best be left to be worked out by the local authori-

¹It is my suggestion that, in peacetime, no municipality set up a Civil Defense Board unless requested to do so by the Federal Board acting upon recommendation of the War and Navy Departments.

ties concerned in consultation, as necessary, with the Regional Office.

The Local Boards, in addition to being responsible for working out detailed plans of passive air defense for the areas under their control, decontamination, medical services, clearing of debris, repairing of roads, etc., will also be responsible for estimating the number and kinds of any special equipment as may be required in an emergency.

It is also necessary that all local organizations concerned in passive air defense measures should be in close touch with each other and it would be the duty of the Regional Office to take steps to ensure this.

Finally, it is essential that civil passive air defense schemes should not run counter to military preparations.

This, in brief, is a suggested organizational outline for civil defense. The extent to which local Boards should now be created and activities undertaken might well rest within the discretion of the Federal Civil Defense Board.

CHAPTER III

THE JOB OF THE LOCAL CIVILIAN DEFENSE BOARDS

It is not intended in this report to present a detailed analysis of the responsibility of local Civil Defense Boards. The outline of services and activities which the local authorities in England are carrying on indicates, however, the importance and complexity of adequate civil defense in time of war.

In general the purpose of the local Boards in peace time is to provide adequate machinery for the direction and protection of the civilian population in the event of war. Such responsibility may be divided into three categories:

1. The prevention of civilian casualties and property damage.
2. The instruction of the civilian population in the proper method of protecting themselves and preventing civilian casualties.
3. The organization of those services considered necessary for the treatment of civilian casualties if they do occur.

The table of contents of the Ontario "Organization and Instruction Manual" lists the following items for the consideration of local civil defense committees:

Wardens

General Qualifications
Purpose of Wardens
Personnel
Duties of Wardens
Warden-Posts
Equipment
Training

Police Services

Duties of the Director of Police Services
Duties of Controller of Police Services
Personnel
Warning System
Traffic Control
Evacuation
Control of Lighting
Local Observers
Unexploded Projectiles
Maintenance of Law and Order

Fire Services

Duties of the Director of Fire Services
Duties of Controller of Fire Services
Problems of the Civilian Defense
Committee Fire Services
Personnel
Equipment
Auxiliary Fire Services
Special Duties and Training
Mutual Aid

Medical Services

Duties of Officials
Regular Services
Emergency Services
Casualty Service
Selection and Training of Personnel
Special Problems
Advisory Service
Advance Preparations—summary
The organization of the casualty service
Outline of organization in a larger
municipality
Personnel for casualty service
First Aid Parties
First Aid Posts
Casualty Clearing Hospitals
Base Hospitals
Ambulance services
Records

Public Utility Services

Duties of Officials
Personnel
Vital points
Equipment
Substitute Services
Anti-gas Precautions
Repair and Clearing Gangs
General

Transportation Services

Duties of Officials
Reference Lists
Transportation Requirements
Payment
Points of Preparation
Communications
Plans

Likewise, the report of the Canadian Air Raid Precautions Committee lists the following:

The Warning System

Lighting Restrictions

Provision of Protection

General
Measures of artificial concealment
Provision of shelters
Further practical hints
Provision of trenches
Responsibility for issuing instructions and directions for the provision of shelters
Protection against incendiary bombs
Use of reinforced concrete
Protection of vital points
Safe Custody of National Art Treasures

Maintenance of Vital Services

- (a) Enrolment of personnel
 - (b) Protection of Shipping
 - (c) Transport services
 - (1) General control
 - (2) Railways
 - (3) Motor transport and Gasoline storage
 - (4) Water transport
 - (5) Air transport
 - (d) Electrical supplies
 - (e) Gas supplies
 - (f) Water supplies
 - (g) Sewage disposal
 - (h) Postal, Telegraph, Telephone and Radio services
- Mails
Telegraph facilities
Telephone facilities
Repair of damage
Radio
General

Evacuation

Treatment of Casualties

- First aid parties
- Ambulance transport service
- Casualty clearing stations
- General hospitals
- Administrative organization

Repair of Damage

- (a) Clearing of debris
- (b) Fire fighting services
- (c) Road repairs

Maintenance of Law and Order

Anti-Gas Measures

- General information
- Collective protection
- Individual protection
- Decontamination

Local civil defense involves, therefore, a whole new set of functions and activities. The situation was well stated in a recent English municipal publication :

“Local authorities which in time of peace were charged with lighting the streets are now responsible for seeing that the highways are kept darkened. Housing authorities which eighteen months ago were making closing and demolition orders are now engaged in endeavoring to rescue the victims of air raids buried beneath masses of debris from houses demolished by bombs. Education authorities which normally compel children to attend elementary schools within their areas are now doing their utmost to drive the children away from the neighbourhood of those schools into safer areas. In many parts of London and other cities the public utility services have from time to time been put out of operation by enemy action, and in consequence for days or weeks the inhabitants have been suddenly compelled to follow the example of their great-grandparents and do without gas, electricity, tramways, and even a piped water supply. Public health authorities are now called upon to consider rudimentary sanitary problems of a kind scarcely encountered in England since the early phases of the industrial revolution. The maintenance and construction of highways, before the war a dominant preoccupation of county and county borough councils (and the Ministry of Transport), has ceased to be important with the decline in motoring.

“These and similar changes constitute a fundamental reorientation in the direction and emphasis of local government services which is operative in the target areas, and especially London.”

CONCLUSION

It is only to be hoped that in the United States, civil defense may proceed efficiently and adequately under a plan of organization best suited to the existing local machinery of government. It is essential that we benefit from the experiences of local authorities in other countries of the world.

Certain steps can and should be taken now. For example, due to the importance of fire fighting in civil defense it is recommended that the Chemical Warfare Service and Ordnance Department of the War Department give training courses to municipal fire officers in the techniques and skills of fighting fires caused by incendiary and explosive bombs. These officers in turn would give this training to the personnel of their own local departments. All of this preliminary work could be undertaken without setting up extensive civil defense organizations. Similarly, training of local police officers in certain specialized fields might well be given consideration at the present time.

Until such time, however, as a national agency is created which brings together all of the various interests concerned with planning for civil defense, we shall not be organized to execute the responsibilities in a manner calculated to achieve the best results.

APPENDIX

It was recommended previously that the Federal Civil Defense Board make available to the local authorities technical data on all phases of the civil defense program. Fortunately, a great mass of scientific literature is available on this subject as is indicated by the following English and Canadian documents:

English

- A.R.P. HANDBOOK No. 1.—Personal Protection Against Gas.
A.R.P. HANDBOOK No. 2.—First Aid and Nursing for Gas Casualties.
A.R.P. HANDBOOK No. 3.—Medical Treatment of Gas Casualties.
A.R.P. HANDBOOK No. 4.—Decontamination of Materials.
A.R.P. HANDBOOK No. 5.—Structural Precautions Against Bombs and Gas.
A.R.P. HANDBOOK No. 6.—Air Raid Precautions in Factories and Business Premises.
A.R.P. HANDBOOK No. 7.—Anti-Gas Precautions for Merchant Shipping.
A.R.P. HANDBOOK No. 8.—The Duties of Air Raid Wardens.
A.R.P. MEMORANDUM No. 1.—Treatment of Casualties, and Decontamination of Personnel.
A.R.P. MEMORANDUM No. 2.—Rescue Parties and Clearance of Debris.
A.R.P. MEMORANDUM No. 3.—Organization of Decontamination Services.
A.R.P. MEMORANDUM No. 4.—Air Raid Wardens.
A.R.P. MEMORANDUM No. 5.—Anti-Gas Training.
A.R.P. MEMORANDUM No. 6.—Local Communications, and Reporting of Air Raid Damage.
A.R.P. MEMORANDUM No. 7.—Personnel Requirements for Air Raid, General, and Fire Precautions Services, and the Police Service.
A.R.P. MEMORANDUM No. C5.—Air Raid Precautions for Docks, Wharves, Quays and Waterside Warehouses.
A.R.P. MEMORANDUM No. C6.—Air Raid Precautions for Collieries.
Departmental Commission on Fire Brigade Services. Report. (Home Office) Cmd. 5224

Fire Protection—Hints to Household-ers.

Fire Precautions in Schools.

Fire Precaution—Requirements in Theatres and places of entertain-ment.

Air Raid Precautions in Factories and Business Premises (A.R.P. Handbook No. 6).

Auxiliary Fire Service, Uniforms and Equipment, Specifications.

Memorandum on Emergency Fire Brigade Organization.

Emergency Fire Brigade Appliances.

Canadian

Air Raid Precautions—General Information for Civil Authorities.

Air Raid Precautions—General Information.

Organization and Instruction Manual—Ontario Civilian Defense Com-mittee.

Many of these can be adopted for use by local authorities in the United States, thus eliminating much preliminary work and research.

Respectfully submitted,

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