

Basement

federal civil defense guide

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IDENTIFICATION (SURVEY) OF FALLOUT SHELTER IN EXISTING BUILDINGS



DEPARTMENT OF DEFENSE
OFFICE OF CIVIL DEFENSE

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The initial step in providing fallout shelter protection for everyone is to determine the inherent radiation protection of existing structures throughout the Nation.

The Office of Civil Defense has developed survey programs for evaluating and locating fallout shelter space in existing structures. These are the:

1. National Fallout Shelter Survey (NFSS).
2. Home Fallout Protection Survey (HFPS).

Each survey is discussed separately below:

The National Fallout Shelter Survey (NFSS)

A nationwide survey to locate fallout shelter space in existing structures was begun by the Department of Defense, Office of Civil Defense, in September 1961. This program was designated, "The National Fallout Shelter Survey (NFSS)." The initial phase of this activity was completed in 1962. The survey is a continuing process which periodically updates information on shelter space gained (or lost) through new construction, building modification, demolition, and other changes. As in the initial phase, updating is directed by OCD through the U.S. Army Corps of Engineers (CE) and the U.S. Naval Facilities Engineering Command (NAVFAC) District offices.

The survey is conducted in two steps. The first includes a visit to the potential shelter facility and the completion of a shielding analysis form (SAF) by an OCD certified fallout shelter analyst or a shelter survey technician under the direct supervision of an analyst. On the SAF form are recorded significant structural data for the facility and information pertaining to the surrounding terrain. This form is transmitted to the Bureau of the Census (in a survey booklet called the "Facility Booklet"), where it is converted into a computer tape. The tape data are processed by the OCD com-

puter at the National Civil Defense Computer Facility (NCDCF). (Certain special facilities such as mines, caves, and tunnels do not lend themselves to computer evaluation of shelter and are calculated manually.) The output from the NCDCF computer consists of a printout which describes the shelter available on each floor of the surveyed facility.

The second step of the survey operation consists of a review by the surveying office of the computer printout together with data on floor-space availability, ventilation, and special features gathered during the field visit. Based on this evaluation, a determination is made of the net shelter available on each floor of the facility. This net shelter is then recorded on a data collection form (DCF) which is transmitted to the Bureau of the Census and then to NCDCF. This DCF constitutes the inventory document for the shelter facility. At NCDCF, the data are maintained in a master shelter inventory.

Row houses, and one-, two-, and three-family detached houses are not included in the NFSS.

As shelter licensing and marking data are gathered, these data are entered into the computer record. Licensing and capacity data are provided to the Defense General Supply Agency, Richmond, Va., for initiation of shelter stocking requisitions.

Sample NFSS survey, marking, and stocking report formats, with explanations, are presented in OCD publication FG-C-2.1, "National Fallout Shelter Survey and Home Fallout Protection Survey: Explanations of Survey Computer Reports."

The updating survey is conducted on an area-priority basis. The scheduling of updating survey activities by the CE/NAVFAC is coordinated with the Community Shelter Planning Programs. For each potential Community Shelter Planning area where an updating survey is to be conducted, the local civil defense

director should provide CE/NAVFAC field office representatives with a list of facilities that should receive attention. The list should include facilities (1) with potential shelter spaces that may not have been recorded previously, or (2) which have been modified to the extent that the radiation protection factor (PF) or capacity may have changed. CE/NAVFAC should also be informed of buildings previously surveyed that have been destroyed or demolished in order that they may be deleted from the inventory.

The CE/NAVFAC field office responsible for conducting the survey maintains records on each facility surveyed, and provides State and/or local government with the following:

1. A copy of the book cover (of the Facility Booklet) which provides descriptive information.
2. A copy of the Data Collection Form (DCF).
3. A building sketch, or sketches, by floor, showing shelter space located.

Questions on the above should be directed to the CE/NAVFAC field office concerned, through State civil defense.

Criteria for public fallout shelters have been established by OCD. The CE/NAVFAC field offices perform their survey functions in accordance with these criteria. Generally, the purpose of the NFSS is to locate shelter with a PF of 40 or greater in facilities which contain 50 or more spaces in accordance with the OCD technical requirements. Where necessary, best-protected space of less than PF 40, and shelter for fewer than 50 persons, are also identified.

As part of the National Fallout Shelter Survey (NFSS), data were also gathered (fiscal year 1964 thru December 1968) on availability of water, food, and waste disposal capabilities in public fallout shelters. As these data became available, they were sent to local civil defense directors—who then determined the amount of inherent supplies that could be substituted for shelter supplies provided by OCD. Responsibility for collecting these data now rests with local civil defense directors.

Military Installation Surveys

The NFSS survey of fallout shelter space on military installations is accomplished by the

CE/NAVFAC field offices in the same manner as for local political subdivisions. However, for sensitive and restricted areas, commanders may use their own qualified personnel to conduct installation surveys. Data gathered must be processed through the appropriate CE/NAVFAC field office concerned. Homes on military installations are also surveyed in a program similar to the civilian "Home Fallout Protection Survey (HFPS)," discussed next.

Home Fallout Protection Survey (HFPS)

The Home Fallout Protection Survey (HFPS) is directed to the individual householder—and makes use of computer analysis of the construction characteristics of 1-, 2-, and 3-family homes with basements. Experience has shown that in nearly all cases, home shelter that provides acceptable levels of fallout radiation protection is located only in belowground, basement areas.

Home Fallout Protection Surveys usually are conducted for a State, upon request. Each mail Survey is conducted for the Office of Civil Defense by the U.S. Bureau of the Census. Questionnaires are mailed to householders, using lists compiled by the Bureau of the Census. The householders are requested to return the completed questionnaires to the Census Bureau.

Data obtained from the questionnaire are processed by Census Bureau computers to determine the inherent radiation protection afforded by individual basements. Results are computer-printed on labels. Information on each label, for a particular basement, includes (1) the degree of fallout protection provided in the basement, (2) the measures required to raise the degree of protection of the basement to an acceptable level if necessary, (3) or that little protection exists in the home, and that plans should be made to use public shelter.

The printed labels are affixed to a special OCD publication about protection in homes with basements and mailed to the individual householder whose home meets the provisions of 1 and 2, above. Householders whose homes are included under 3, above, receive a copy of an emergency information booklet.

After HFPS is completed in a State, and the findings analyzed, the State and its local gov-

ernments are provided statistical area summaries of homes with fallout protection. Specific information concerning the individual home is released *only* to the householder.

The statistical area summaries show total residents in each community who could be protected from fallout radiation in the basements of their own homes. This information is part of the input to community shelter planning.

Recommended State and Local Action

State and local governments should:

- Request through State to Regional Directors fallout shelter surveys as needed to support Community Shelter Planning.
- Provide CE/NAVFAC with lists of buildings that need to be surveyed, and shelter facilities destroyed or demolished.
- Assist CE/NAVFAC personnel conducting the surveys by making initial contacts with the building owners.
- Determine supplies normally available in shelter facilities, as substitutes for OCD-furnished supplies.
- Use HFPS results in Community Shelter Planning and in Emergency Operations Simulations and similar exercises.

Distribution:

OCD Regions and Staff College, State and local CD directors, 4A, 4B, 6C, 7D, 8, 8A, 8B, 8C, 9, 21, and 60C; and to military activities and installations as determined by the Departments of the Army, Navy, and Air Force.