

DEFENSE



IN THIS ISSUE:
WOMEN WORKERS
FOR DEFENSE INDUSTRIES
Page 3

WPA AIDS IN DEFENSE
Page 7

Friday, Oct. 18, 1940

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AS I SEE IT

THE UNITED STATES GOVERNMENT is the biggest single buyer in the world. Under normal circumstances the Government's purchasing problems require the best efforts of many specially trained public servants, and under an emergency defense program they are substantially magnified. It is easy to see, then, that the office of Coordinator of Defense Purchases is one necessarily involving many complicated problems.

The Coordinator has as one of his greatest responsibilities that of synchronizing the numerous and varied objectives of the seven members of the National Defense Advisory Commission and related agencies in procurement of defense materials. For these agencies the Federal Government buys several hundred thousand separate items, varying from paper clips and rubber bands to tanks, planes, and battleships. In all these purchases the interests of the Government must be protected, and there must be strict compliance with Government specifications and proper regard for economy.

My staff and I might, perhaps, be regarded as a consulting purchasing agent in this gigantic procurement program. Our office does no buying; we are advisers. Almost every important Government agency has its own buying machinery, and at times this has led to conflict and confusion, to failure to use production machinery efficiently, and to a raising of prices. This has been true in normal times. Under impact of the great defense program it could be more so. That is where coordination comes in.

Confusion must be eliminated. Procurement and delivery must be expedited. Success of the defense program will depend upon having the required material at the place where it is needed at the proper time.

It has been said that the process of organizing peacetime industrial activities into a competent defense pattern cannot be done efficiently under our democratic

system. It is said that routine and red tape foreclose possibility of direct action; that the democratic process fails in an emergency to protect the consuming public, labor, and agriculture. All of this, I say, we are proving untrue.

In simplest terms, the broadest problem involved in coordinating Government purchasing activities relates to the fitting of our military defense requirements to our productive capacity with minimum interference with normal business. To assure a more orderly procurement procedure, the Defense Commission has adopted a series of general principles to control approval of defense contracts, which takes into consideration, in addition to price, the problems of assuring maximum utilization of the human and material resources of the Nation.

First consideration is speed. Also of prime importance is quality, under specifications that coincide as nearly as possible with commercial standards so that existing productive machinery can be used wherever possible. Paramount, too, is the matter of utilizing off-season production, causing the military program to dovetail into civilian requirements.

Geographical distribution must be considered, and here it must be emphasized that the Commission does not determine location of plants. This is the responsibility of the armed services, which decide where, in view of material resources, labor, and transportation facilities, plants should be located in relation to a strategic national pattern.

It is our purpose to guard against needless sacrifices of peacetime privileges. Given a Nation sincerely united behind the defense effort, I have little doubt of ultimate success.

DONALD M. NELSON,
Coordinator of Defense Purchases.

COVER: Woman worker at Philadelphia's Frankford Arsenal tapers .50-caliber antitank gun cartridge cases.—National Defense Advisory Commission photo by Palmer.

CONTENTS

	PAGE		PAGE
As I See It (Nelson)	2	The Week in Defense	5
Women Workers for Defense Industries	3	Inventors Council	6
The States and Cities	4	"You Asked Us"	6
		WPA Aids in Defense	7

DEFENSE

BULLETIN of the ADVISORY COMMISSION
TO THE COUNCIL OF NATIONAL DEFENSE
Division of State and Local Cooperation.

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Volume I

Friday, Oct. 18, 1940

Number 8

U. S. GOVERNMENT PRINTING OFFICE

Women Workers for Defense Industries

NOT FAR FROM 2,000,000 women are immediately available for defense work, according to Miss Mary Anderson, Director of the Women's Bureau, United States Department of Labor.

"This is a conservative estimate, covering women actively seeking jobs through the Employment Security Bureau and those on Work Projects Administration rolls," states Miss Anderson. Almost one-sixth of the total are skilled or have work experience that would enable them to adapt themselves easily.

In addition, probably another half million women, only partially employed, would be available for further work.

Many of these women workers live in or near communities where defense industries are located or planned. Distribution of a group of a quarter of a million unemployed women, according to a preliminary report on 33 States, shows the Middle West has the largest percentage of skilled or semiskilled women—34 percent. Next in order come Middle Atlantic States, 22 percent; New England, 20; Southeast, 14; Far West and Southwest, 8 percent. These figures exclude New York and California, only major industrial States not included in this report.

Special Skills

Occupations in defense industries for which women are particularly fitted are those requiring:

1. Care and constant alertness, good eyesight, use of light instruments—work calling for little physical exertion. Needed for inspection of castings, machinings, and finished parts; for routine powder analysis; for testing electrical equipment.

2. Dexterity and speed in work permitting the individual to set her own tempo and to sit at the job. Possible in operation of machines to finish small and irregular parts; in assembling delicate instruments and machines; loading shells, filling powder bags.

3. Skill but little strength. Required in operation of drilling and milling machines, lathes, machines grinding and polishing small parts.

4. Heavy work facilitated by use of lifting devices and pneumatic chucks.

To take one example: Women do much of the skilled work in manufacture of certain textiles and clothing needed in the defense program. As these industries expand, large numbers of women can be used. According to the U. S. Bureau of Labor Statistics, women comprise the following proportions of skilled workers:

	<i>Percent</i>
Knitted outerwear	76
Hosiery (full-fashioned)	52
Knitted underwear	30
Boots and shoes (not rubber)	22
Cotton goods	21

Women should be trained for those jobs in defense industries for which experience shows them to be fitted, the Women's Bureau recommends. Intensive training may be required in some cases, since vocational school courses have not always given girls the same opportunity as boys to secure general mechanical training.

Plant training should be in a special section, according to the Bureau. This permits weeding out of unsuitable workers and prevents slowing up of production.

Role of Woman Worker

First of a series of reports has been issued by the Women's Bureau, in cooperation with its Labor Advisory Committee on Standards for the Employment of Women in the Defense Program. To date, this committee has representatives from: Amalgamated Clothing Workers of America, International Association of Machinists, International Brotherhood of Electrical Workers of America, National Women's Trade Union League, Steel Workers Organizing Committee, Textile Workers Union of America, United Automobile Workers of America, and United Rubber Workers of America.

"Efficient production, where women are involved, calls for their employment at jobs they can do well, under safe working conditions, and with sound labor policies," states the first report.

"Employment policies must be carefully

worked out from the viewpoint both of the defense program and of normal manufacture of goods," Miss Anderson says. Effort should be made to prevent drawing workers from regular jobs into expanding defense industries. Unemployed men and women are available for the new jobs.

Health and safety measures conducive to best work include: (1) Carefully guarded machines, (2) protection against industrial poisons, (3) special lighting equipment for fine work, (4) right kind of seats adjustable to worker and job, (5) good plant sanitation, (6) practical work clothing, (7) an 8-hour day with two 10-minute rest periods, and a 40-hour week to prevent excessive fatigue, (8) maintenance of minimum-wage standards for women and fair wage policies commensurate with services rendered, and (9) no industrial home work.

"Industrial history during the last World War and since, including recent experience in Great Britain, proves that moderate working hours lead to increased production and better quality of goods, conserve workers' energies, and enable them to produce steadily under pressure over a long period," says the Women's Bureau Director.

This Bureau was organized in July 1918 as a war service and made permanent in 1920. Its scope now covers 11 million women gainfully occupied in the United States.

State Standards

Compliance with State safety, sanitary, and factory inspection laws should be required of defense industries, according to the Women's Bureau. In the 30 States with divisions of industrial hygiene, these can be consulted on particular problems.

Where labor standards have not been established by a State, the Federal Public Contracts Act governs working conditions, wage rates, and related matters on work for the Government.

For industries engaged in interstate business, a floor for wages and a ceiling for hours are required on a Nation-wide scale by the Fair Labor Standards Act.

The States and Cities

Maine Defense Act

MAINE appears to be the first State during the present emergency to adopt an act providing for creation of a State defense council. Rather, it has amended an old law. Maine's act stresses military responsibilities of its council. This emphasis differs somewhat from the present role of the 1940 national and most State defense advisory councils, which advise on industrial, agricultural, and other functional activities conducted by established government departments.

The Maine Military Defense Commission replaces the Armory Commission, which was composed of the Adjutant General and four line officers of the National Guard. The new Commission consists of the Adjutant General as chairman and six other members appointed by the Governor for staggered terms.

This Commission continues to exercise general supervision and control over all armories, drill rooms, headquarters offices, stables, and State-owned or controlled realty used for military purposes.

Phrasing in the amended act stresses cooperative relationships with Federal and local governments and grants new powers, as follows: "The Commission is further authorized and directed to cooperate with the Federal Government and, or municipalities, under direction of the Governor, in establishing and coordinating national defense in the State of Maine, especially in the providing of equipment, training facilities, suitable quarters for troops and supplies, and buildings and lands for military purposes. The Commission may acquire real property by right of eminent domain in the manner prescribed by law for the taking of land for highway purposes, and both real and personal property by purchase, gift, or otherwise, for the purpose of construction and/or maintenance of armories, airports, and other military facilities for military purposes and the procuring of equipment and supplies for military purposes."

The Municipal Airport Law of 1931 was also amended to permit the acquisition of land, whether within or without the limit of the city, town, or county in question, and such land may be acquired by eminent domain proceedings after consent of the municipal offices of the town or city in which such land is located is obtained.

The new act is designated as "An act providing for improvement in military preparedness" (Maine Legislative Docu-

ment No. 1246, S. P. 756; approved by the Governor, June 27, 1940).

Kentucky

Home defense, particularly to protect city utilities and other plants of strategic importance, was stressed at the recent convention of the Kentucky Municipal League in Frankfort.

Indiana

Establishment of a Planning and Defense Council for Charlestown and a similar council for Clark County was recommended to the Governor by the Indiana Joint Defense Committee on October 11. Purpose of these bodies would be to solve, through local and State cooperation, various problems arising in Charlestown area as result of national defense activities.

Other recommendations were:

1. Appointment of an executive secretary or coordinator to be paid out of State funds, to serve as liaison between local, State, and national defense councils.

2. Designation by the Governor, as chairman of the State Defense Council, of the Planning Board as planning agency for the Council with assignment of necessary technicians.

3. Designation by the Governor of the State Housing Board as the housing arm of the Defense Council, its secretary to be named as coordinator.

Wisconsin

On October 1 Governor Julius P. Heil appointed the Wisconsin Council of National Defense, under chairmanship of Mr. R. S. Kingsley, Kenosha publisher. A representative of the Division of State and Local Cooperation met with the 12-member council on October 11 in Milwaukee.

"The municipality's responsibility under the national defense program" was discussed at the annual convention of the League of Wisconsin Municipalities in Milwaukee October 9-11.

Michigan

National defense, registration for conscription, city employment problems, and Federal aid for municipal airports were discussed at the Michigan Municipal League's annual meeting in Jackson October 9-11.

California

Through its committee on human resources and skills, the California Council of Defense sponsored two conferences on personnel problems created by the Selec-

tive Training and Service Act and the National Guard Act. Meetings were held October 10 in San Francisco and October 12 in Los Angeles.

Personnel officers of both public and private agencies, and others, considered problems which will arise from loss of employees to emergency service, concessions that might be made to persons on civil service eligible lists, and problems of recruiting, selection, placement, and training closely associated with the emergency.

Arkansas

Committees on preparedness are being set up in Arkansas home demonstration clubs, it is reported to the Consumer Division. A State committee of five home demonstration clubwomen was set up in September. County committees were to follow in each of the 77 county home demonstration councils, with plans for committees of 3 to 5 members in each of the 2,100 clubs in the State. Nonhome demonstration communities will also have committees.

Committee members are to be chosen from local leaders in foods, nutrition, and production phases of the Extension program. Training meetings will have been held by late November. First duty of these women will be to make an inventory of the Live-at-Home and food-production activities of families in their communities.

Nutrition Program

With the slogan, "A balanced diet is necessary for a balanced democracy," Mount Vernon, N. Y., has launched a "good nutrition" program. Municipal officials, State health officers, and 125 civic, fraternal, church, school, and social organizations are now participating. Physicians, dentists, and dietitians have volunteered to speak on health and nutrition. Copies of the "Food and Defense" issue of the *Consumers' Guide* have been furnished by the Consumer Division of the National Defense Advisory Commission.

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HOME GUARDS

Congressional action was completed on the home guard bill when the House concurred in Senate amendments. The bill would amend section 61 of the National Defense Act of 1916 by adding a proviso permitting States to organize military units not a part of the National Guard when the National Guard is on Federal duty. Under the bill, the Secretary of War is authorized to issue arms and equipment for use by these groups.

The Week in Defense

TOTAL CONTRACTS cleared by the National Defense Advisory Commission for Army and Navy orders rose during the week to more than \$8,480,000,000. Contracts or letters of intent call for 36,000 planes by 1942.

The following production statistics were made available:

The United States will receive more than 900 military type planes this month and 2,400 aircraft engines. Plane production rate is expected to reach 1,250 by January 1, and 1,500 by July 1. Light tank production is up to better than 100 a month. More than 2,000 of the new semi-automatic rifles are being produced a week.

Arsenals and 17 airplane factories are working on a 24-hour-a-day schedule.

This week several important steps were taken to assure the Nation of adequate supplies of raw materials.

Wool Storage

The National Defense Advisory Commission has announced that arrangements are being made to bring an emergency reserve supply of 250 million grease pounds of British-owned Australian wool to this country for storage in bond.

Ownership of the wool will remain with the British. No depletion of the reserve will be possible except under conditions where deficiencies appear in the supply of American wool or normal imports are interrupted. The plan under which the reserve enters the country provides maximum protection at minimum cost without jeopardizing the position of domestic wool growers.

Wool is defined as a critical material by the Army and Navy Munitions Board. As such it became necessary for the Commission to arrange for an adequate reserve as it has done in cases involving other critical materials.

To avoid dislocation in the domestic-wool situation a plan was worked out on the basis of securing a strategic reserve without buying it. The wool, to be stored in bond, may not enter the market without approval of the appropriate American officials. The present requirements for domestic wool in Government purchases as provided in existing regulations are not affected by this transaction.

At the termination of the emergency the United States and British Governments will determine the ultimate disposal of the reserve.

Steel, Aluminum, Bauxite

Steel industry representatives assured the Commission that there is no justification for any run-away price development in steel or steel scrap or any occasion for concern over securing adequate supplies of scrap for defense.

Plans were announced for further increase in production of aluminum in sufficient volume to meet military requirements of the defense program, as well as for civilian needs. It was also announced that an adequate supply of bauxite, principal raw material used in manufacture of aluminum ingots, is available in this country.

Tin Smelter

Eight proposals submitted to the Metals Reserve Company for the building of a tin smelter in this country are being studied by a committee appointed by E. R. Stettinius, Jr., Industrial Materials Commissioner of the National Defense Advisory Commission. The committee personnel was recommended by the National Academy of Science and is composed of Clyde Williams, director of the Battelle Memorial Institute, Columbus, Ohio, chairman; Walter C. Smith, metallurgist, Cerro de Pascoe Copper Corp., New York City; John F. Thompson, executive vice president, International Nickel Co., Inc., New York City; and F. W. Willard, president, Nassau Smelting & Refining Co., New York City.

Mr. Stettinius reported that the Nation now has on hand or easily accessible more than a 2-year supply of manganese and more than a 1-year supply of tin, both indispensable in the manufacture of munitions.

Report on Zinc

Although zinc stocks in hands of producers have decreased by slightly more than 50 percent between the end of April and the latter part of September, consumers' stocks have diminished only about 12,000 tons, or 13 percent, during the same period, it is announced by Leon Henderson, head of the Price Stabilization Division of the National Defense Advisory Commission.

Selective Service

President Roosevelt named Clarence Dykstra, President of the University of Wisconsin, as Director of Selective Service.

Navy

Secretary Knox announced the Navy has authorized 19 concerns to build with

Federal funds additional ordnance and shipbuilding facilities to cost \$96,146,000. The facilities will be privately operated, with the Government retaining title. Locations are: Newport News, Va.; San Francisco. Los Angeles, San Pedro, Calif.; Quincy, Mass.; Staten Island, N. Y.; Chickasaw, Ala.; Bath, Maine; Camden and Kearney, N. J.; Seattle, Wash.; Groton, Conn.; Orange, Tex.; and Manitowoc, Wis.

The President signed a bill authorizing appointment of naval R. O. T. C. graduates to the line of the regular Navy.

The new \$15,000,000 Jacksonville, Fla., air station was commissioned October 15 and will begin to train about 50 pilots a month who have passed a 1-month preliminary course at Naval Reserve aviation bases.

Army

The War Department announced reorganization of the expanding land forces into four field armies, each to be made up of three corps of 60,000 men each.

Health

President Roosevelt will call a national conference of health and educational leaders to work out a physical education program, aimed at developing a "tougher America."

Housing

Allocation of \$45,762,500 for a minimum of 13,000 defense housing units for the Army was made to the Public Buildings Administration by Federal Works Administrator John M. Carnody.

The allocation was made after the Secretary of War requested the Federal Works Agency to carry out the program under the Army's share of the \$100,000,000 provided for defense housing in the second supplemental National Defense Appropriation Act.

A total of 70 projects is designated to date—8, consisting of 1,950 units, for civilian workers, the rest for married Army personnel. Projects are located in 28 States, Hawaii, and Puerto Rico and will be constructed under direction of Public Buildings Commissioner W. E. Reynolds.

Sites for 19 of the projects already are owned by the Army. Construction contracts will be negotiated under the cost-plus-limited-fixed-fee provisions set up in the act.

The average unit will consist of living room, combination dining room-kitchenette, two bedrooms, and bath.

Inventors Council

THINK YOU'VE INVENTED a contraption that positively will make enemy airplanes explode in midair?

Tell it to the National Inventors Council, Department of Commerce.

Or rather, don't tell it, write it.

The National Inventors Council was set up under chairmanship of Dr. Charles F. Kettering, chief of research, General Motors Corporation, to serve as a clearing house for suggestions or inventions from civilians relating to the national defense. Further, it acts in an advisory capacity to the War and Navy Departments with respect to such suggestions or inventions.

Don't send just any invention to the Council. All it will look at are ideas relating to national defense. Patent mouse traps are out.

Nothing Oral

The suggestions must be in writing and in such detail that the objectives and proposed methods of carrying them into effect are clearly and definitely stated. Each suggestion should be made in a separate document, clearly written, preferably typewritten and, when necessary, accompanied by suitable drawings.

Here is the information that must accompany suggestions or inventions:

- (1) Full name and address of sender;
- (2) Is the suggestion worked out in detail, or an idea or device requiring further development?
- (3) Is the invention patented? If so, forward copy of patent;
- (4) Is an application for the invention pending in the United States Patent Office? If so, state serial number and filing date;
- (5) Has the inventor assigned to any person or corporation any rights to the invention?
- (6) Is the sender the sole inventor?
- (7) Is the sender acting as agent for the owner?
- (8) Has the sender submitted the disclosure to any other Government department? If so, identify it, and name the officer(s) with whom correspondence has been conducted;
- (9) Has the invention been divulged to the government of a foreign country? If so, name it.

No Chemicals

All correspondence must be conducted in English and models must not be forwarded unless they are specifically requested by the Council. Chemical samples will be destroyed without examination. No patent rights or other protection are secured by submitting suggestions to the Council.

About compensation—the Council has no authority to consider the question of compensation for the use of a suggestion or invention by any Government department nor is it in a position to make recommendation in that connection. Each department has its own method of dealing with the subject.

However, the Council says, "In many instances, suggestions and inventions made by civilians are tendered by them to the Government for free use by and for it, in a spirit of patriotism, and such tender is accepted with grateful appreciation."

The Council is without funds for actual working out of inventions or for conducting experimental work.

All inquiries should be addressed to the Secretary, National Inventors Council, Room 7420, Department of Commerce Building, Washington, D. C.

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PRODUCTION MOUNTS

Industrial production during September, stimulated by the defense program, was up 11 points over the corresponding period in 1939 and 14 points above the average for 1929, the Federal Reserve Board reports. The Board fixed the total industrial production index for the month at 124, which is approximately the same "inventory high" level of last December.

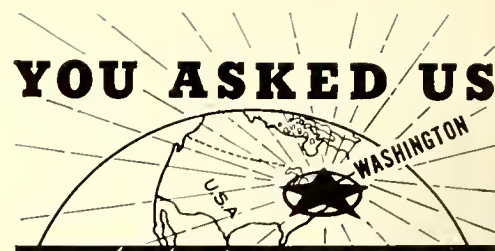
Leading the rise and climbing above last winter's high were the airplane, shipbuilding, engine, and machine-tool industries.

Metal mining during August rose 32 percent over the same period last year, while the output of durable manufactures increased 28 percent.

THE TIME ELEMENT

Speaking of the tempo of the defense procurement programs, Maj. Gen. J. H. Burns, executive aide to the Assistant Secretary of War, states that "America must not expect these to be delivered within a few months. Corresponding programs for the creation of capacity and the production of reserves cost both England and Germany some 4 years of time and if America can cut this factor in two, she will have done a remarkable job."

Production Commissioner William S. Knudson has said that progress thus far "has been mostly in getting orders into the field and manufacturers to work on them," but that "sometime late next spring or early summer we will have something to show."



Q. *What is the legal basis for the Defense Commission?*

A. The act of Congress of August 29, 1916, created a Council of National Defense and provided for appointment of an advisory commission. On May 29, 1940, the President issued an Executive order calling the act into effect. This order was printed in full in the *Federal Register* of June 4, 1940. Copies of the National Defense Act, as amended, may be obtained for 20 cents, and of the *Federal Register* for 10 cents, from the Government Printing Office, Washington, D. C.

Q. *Our community offers unusual advantages for plants producing defense goods. What can we do to get plants located here?*

A. Recommendations concerning location of new plants are made by the Site Board of the War Department. To make necessary information available in most usable form to the Site Board, the Division of State and Local Cooperation has been working with other divisions of the National Defense Advisory Commission to organize and tabulate necessary data. Since the ultimate destination of all such data is the Site Board, requests for immediate information should be directed to it.

Q. *What can I do as a patriotic citizen to help in the defense program?*

A. If you live in one of the few communities with an official advisory defense council, let its chairman know of your interest. Otherwise communicate with your State advisory defense council, or with the Governor if no official State council has been created.

Q. *If an American woman married an alien during the World War, is she subject to the Alien Registration Act of 1940?*

A. She may be. An American woman who married an alien between April 6, 1917, and July 2, 1921, lost her citizenship as of the latter date if on that date the husband was still an alien and the marriage was still in force, according to a ruling of the Attorney General on August 22, 1940. Unless she has regained her citizenship, she must register. Since the situation may be complicated in individual cases, it is best to secure official regulations and instructions, available at any post office or from the Division of Alien Registration, Department of Justice.

WPA Aids in Defense

A COORDINATED PROGRAM for national defense requires planning in many fields of public endeavor.

In addition to specialized military activities and problems of production and supply, there are the equally important secondary factors of transportation, public health, education, housing and utilities, conservation, public safety and allied activities, all of which are matters of particular concern to State and local governmental bodies.

Problems arising in these fields must be solved with the full cooperation of State and local communities. To cope with the increased demand for services in these fields will require, in many instances, extraordinary local effort. It is with the thought of providing some assistance in meeting these problems that this statement has been prepared, since the Work Projects Administration, through ability to work in partnership with State and local communities, is able to assist in performing work of value to defense.

Recognizing need for coordinating State defense activity, the Division of State and Local Cooperation of the National Defense Advisory Commission has asked the WPA to outline the various activities and services which the agency is equipped to render and to suggest types of projects which may be incorporated into an adequate State defense program.

A WPA defense project may be sponsored by a Federal agency or by a State or local governmental body. Although in some instances State or local authorities may sponsor a project with a cooperating Federal agency as co-sponsor, this article is concerned primarily with WPA projects of non-Federal sponsorship. Defense projects are in two categories:

A. "Certified" Defense Projects

Projects in this category are reviewed by the War and Navy Departments in course of approval and are certified to have direct value in the defense program. "Certified" WPA projects have priority over any other type and may receive special exemptions from usual requirements. Under these conditions work on any essential defense activity undertaken by the WPA can be expedited.

B. "Noncertified" Defense Projects

These projects are considered of value for defense but are not deemed so essential as certified projects. Such projects

may be given priority over nondefense projects, but these do not have the exemption status of certified projects.

In State planning of WPA defense projects, the existing labor supply in the skilled and technical category must be considered carefully in order to make best possible use of available skills. For example, even a certified project cannot be undertaken if the project cannot be adequately staffed either in the number of persons required or in available skills. It is possible in the case of certain certified projects to operate on a work-camp basis if workers cannot be obtained in the immediate vicinity, but normally this is to be avoided unless the defense need is urgent.

Conditions Vary

Because conditions vary, projects which may be certified in one community will receive only nonpriority rating in another. Projects must be of some immediate defense or military value to receive certified rating. A few possible examples are noted.

1. Projects providing for construction, reconstruction, improvement, renovations, and making habitable of new or old facilities owned or for use by War or Navy Departments, Coast Guard, Marines, National Guard, etc.

2. Airport and airway projects.

3. Clerical, survey, or research projects serving or directly affecting agencies of the Army, Navy, Marines, Coast Guard, National Guard, or defense activities of the Department of Justice, National Defense Advisory Commission, and State Defense Councils.

WPA State-program projects may be undertaken in each of these and similar fields of activity with the cooperation or co-sponsorship of a local responsible authority when a military or other Federal agency is involved. In addition, there are many other projects that may be incorporated in a well-planned State defense program. The more typical of these are discussed in detail below. The projects listed may be certified or noncertified, depending upon the local situation, but in each instance are considered of possible national defense value.

1. Transportation

A. Airport Facilities.—Of primary importance to the defense program is the development of adequate airports. Practically all WPA projects concerned with the enlargement or improvement of airports may be "considered" defense projects. Since military planes land and take

off at a far higher rate of speed than private or commercial planes, many airports which otherwise would be satisfactory are of limited military value. WPA projects are of definite value in improving and enlarging such airports and increasing length of runways.

Airports in certain sections of the country are deemed to have important strategic value for defense purposes. Local WPA authorities will usually have full identifying information on this point. In addition, a check with the regional offices of the Civil Aeronautics Authority will give the latest information on this score.

B. Highways.—These offer a large field of WPA activity. Many highways considered of definite strategic value by the War Department need considerable improvement for military purposes. Bridges may be too narrow or not strong enough to carry military loads which the strategic location of the highway might require. Underpasses may need to be built. Curves and other conditions which would hinder rapid transit or use for military purpose may need to be eliminated. Shoulders may need to be added to highways to facilitate military usage.

With expanding industrial activity, particularly in view of the War Department's desire to locate new defense industries at least 200 miles within our borders and away from crowded areas, another problem arises in building suitable roads to new plants. Troop training centers are also being established; barracks and cantonments are being enlarged. Each of these activities means increased use of existing highway facilities. WPA can play a strong part in making, improving, or repairing such highways.

The Bureau of Public Roads for the past year has been working closely with the War Department in identifying the Nation's strategic highways and has also given considerable attention to locating possible traffic bottlenecks. The Bureau of Public Roads is keeping State highway departments informed and in many communities there may be indicated a very definite need for WPA work in this category.

C. Naval facilities.—This work includes repairing, remodeling, or rebuilding dock facilities in many coastal cities. The WPA may assist also in many harbor and stream improvement activities.

(Continued on next page)

WPA Aids in Defense

(Continued)

2. Public Health

Expanding industrial activities, enlarging of Army and Navy bases, and establishing of training centers usually have brought about need for improved sanitation facilities. Migration of any considerable portion of the population from one section of the country to another may result in increase of disease or susceptibility to local conditions, toward which local residents have long built up an immunity.

Swamps may need to be drained. Sewerage facilities may need enlarging or rebuilding in these new locations. Clerical service in the medical and dental fields may need to be rendered and hospitals built or modernized where owned and operated by local governmental authorities. Perhaps new sources of water supply should be obtained or the existing supply augmented or renewed. Also possible is production of goods useful to defense, such as surgical dressings, first-aid kits, bedding, and hospital clothing.

3. Education

WPA has already undertaken a Nationwide program for training defense workers. In addition, local WPA projects in vocational or industrial training fields may assist considerably in meeting local defense needs. WPA facilities also may be utilized in connection with Americanization instruction. Persons may be trained for such defense activities as first-aid, nursing, and ambulance service. Also included may be study and preparation of camouflage designs and constructions, pamphlets and posters relating to military matters and instruction of civilian population.

4. Public Utilities and Housing

While WPA does not participate directly in housing developments, it may be of definite aid in supplying supplementary needs, such as the grading of property, laying out of recreational areas, and building of roads that permit ready access to such areas.

Many of the projects mentioned above under public health may also be included in this field, including the extension of any publicly owned utilities.

WPA may also be of assistance in expanding industrial areas, in building, remodeling, or enlarging school buildings and other public property. A very definite need for such activity is indicated by the fact that communities located near Army and Navy bases and strategic industrial points have reported increases in school enrollments of from 50 to 100 percent.

5. Conservation

In addition to types of conservation carried on by the WPA in the public health field, additional activities may be initiated in conservation of forests and natural resources. WPA may build fire trails in national and State forests, observation stations, dams, and other facilities or means for conserving resources of value for national defense purposes. Erosion-control measures may be instituted with the assistance of WPA projects, supplementing existing Federal effort.

6. Public Safety

Of the many activities that may be carried on by the WPA in this general field, a few sample activities having a direct relation to national defense may serve as illustrations of the more important:

A. There are few communities, particularly those areas whose growth has been stimulated by defense activities, that have adequate fire-fighting facilities. The WPA may assist in rebuilding or augmenting fire houses and training centers, rebuilding or repairing equipment, building practice structures, and other allied fire-training facilities.

B. Another example of service in this field is building recreational areas, supplying recreational aids, reducing child accident rate in growing communities.

C. Building, enlarging, or repairing all types of military structures including drill quarters and areas, rifle ranges, equipment sheds, etc., for defense training of home defense guards, as well as for use by the service organizations constitute useful public safety projects.

D. Another type of assistance that WPA can render in public safety results from the flexibility of WPA method of operation. Large forces of workers are available for instant assistance in times of emergency or disaster, such as floods, windstorms, and similar unpredictable occurrences that need immediate attention to avoid serious loss of or danger to life.

7. Research and Survey Projects

Research, survey, and clerical projects relating to any of the above fields may be of considerable defense value. At the request of responsible public officials, State agencies, such as the State universities, planning boards, or defense councils, may secure WPA assistance in meeting the increased demand made for their services by defense activities. Following are some activities in this miscellaneous field:

A. Research relating to mining, assaying, dressing, and processing of metallic ores.

B. Metallurgical research and experiments.

C. Research relating to oil and gasoline and to their performance in engines.

D. Meteorological investigations and processing of related records.

E. Research and records activities concerned with or relating to aviation, aeronautical or marine navigation, including the building of test apparatus for experimental and demonstration purposes in universities, colleges, and trade schools.

F. Translation of technical works covering subjects directly relating to defense that are not available in English.

G. Mapping and charting work related to defense subjects. Included are, for example, transportation facilities (railroads, highways, rivers, and air lanes), natural resources, occupational distribution of population, and automobile registrations.

H. Surveys relating to highway bottlenecks, highway and navigable river structures below minimum military standards, dredging of river channels, improvements to roads servicing cantonments, emergency air fields, and natural resources areas.

I. Occupational studies directly related to national defense industries and activities.

J. Surveys of hospital facilities and classification and availability of physicians, nurses, blood donors, etc.

K. Preparing, processing, reconditioning, and indexing records relating to persons who have been in foreign countries. Includes immigration and naturalization records, ship passenger lists, etc., and activities relating to determining, tracing, and locating aliens.

L. Preparing, processing, reconditioning, and indexing records relating to military service, and as to instructors available for training courses significant to national defense.

M. Assisting vital statistics registrars for a limited period in searching records for evidence of birth and preparing certificates of birth for defense industries requiring evidence of American citizenship.

N. The WPA may carry on research for improvement of domestic production or development of satisfactory substitutes for materials declared by the U. S. Army and Navy Munitions Board to be strategic or critical.

These are some of the activities that can be carried on with WPA assistance. Not all types of possible assistance can be outlined, but the above may serve as examples of types of activities communities may find of definite value in assisting the full development of the Defense Program.