WPA Reports Findings on Industrial Changes and Unemployment.

Labor displacement, changes in the type of labor needed and often permanent unemployment for older workers, are the immediate effects of changes in industrial techniques, although these changes later be followed by increased production and employment, according to a summary of findings to date by the National Research Project of the Works Progress Administration, Administrator Harry L. Hopkins announced today.

Technological changes during the last decade have been largely of a labor-saving rather than plant expansion character, Corrington Gill, Assistant WPA Administrator, pointed out in transmitting the report to Mr. Hopkins. Continued increases in productivity without the necessity for large outlays for capital equipment are foreseen by Mr. Gill for the immediate future. Until capital outlays increase substantially, he finds, "government must continue to assume large responsibilities to meet the need for expanding purchasing power and to provide for the necessary expansion of investment."

Mr. Gill's statement follows:
"I am transmitting herewith a summary of findings to date of our National Research Project on Reemployment Opportunities and Recent Changes in Industrial Techniques. The Works Progress Administration initiated this project in an effort to study the influence of changes in industrial techniques on employment and unemployment, particularly in recent years. The studies, though not yet completed, throw light on problems of unemployment which we now face.

"Despite the expansion of industrial activity during 1933-37, most unemployment estimates never fell below 8 millions at any time during the period. Technology, of course, is only one of the many influences which affect the volume of unemployment. In the past, technological changes have, in the long run, been followed by increased production and employment. Nevertheless, the problem of labor displacement is an ever-present shortrun consequence of industrial change. Thus, a distinction must be made between the immediate and the long-run effects of changes in industrial techniques. The immediate effects involve displacement of labor, changes in the type of labor needed, and occupational obsolescence. These, in turn, present a problem of destitution and unemployment relief.

"Whenever production has risen to new and higher levels, technological changes have served primarily to expand productive facilities. This process has involved heavy demand for the production of capital goods and has provided increased employment and income to workers in the capital goods industries and increasing demand for consumption goods. During periods of curtailed production, however, the technological changes introduced are directed toward economies in
the utilization of labor and are not accompanied by plant expansion. Such technological changes involve relatively small demand for employment in the production of capital goods.

"The studies of the National Research Project, so far as they have been completed, present a mass of information covering changes in technology and productivity during the last two decades or more. During the last 8 to 10 years the emphasis has been on technological changes of a labor-saving rather than plant-expansion character. This is reflected in the Project's findings on recent types of changes and on productivity in mining, manufacturing, transportation, communication, and power production. Notwithstanding the fact that with curtailed production many factors operate to reduce productivity, the findings show that productivity continued to increase in most industries during the decline after 1929. With rising production, increases in productivity became even more rapid. Even at the recent peak of production in 1937, most industries failed to obtain the full benefits of the improvements in technology which have been adopted during the last few years. Continued increases in productivity without the necessity for large outlays for capital equipment are therefore foreshadowed for the immediate future.

"A consideration of prospective sources of demand for expansion of capital facilities, and thereby of employment in the production of capital goods, is thus of special interest. The capital goods industries as a whole were growing during the decade of post-war expansion, but available evidence indicates that their growth was at a slower rate than before. The major mineral industries no longer require large-scale employment for development work, with the sole exception of
the petroleum industry which produces competing fuel with much less labor than is required for coal. At the same time, output per man in the mineral industries continues to increase in spite of increasing natural and physical difficulties. The manufacturing industries as a whole did not require as rapid an expansion of capital facilities for the post-war expansion of production as during the previous decade. Electric power production and telephone communication, which were expanding more rapidly than ever before until the onset of a depression in 1929, have since been providing little demand for employment in the capital goods industries. Railroad and water transportation and housing construction have received governmental aid in the development of outlets for employment in capital goods production. Since the bottom of the depression, 1932-33, governmental outlays have contributed heavily through capital construction to the revival of employment and of purchasing power for consumer goods. Moreover, the specially large expenditures for highways and farm-to-market roads have stimulated the use of auto, truck and bus transportation, and the program of airway and airport construction has aided in the development of aviation.

"Whatever may be the trends in production and employment at any time, the first effects of changes in techniques are the displacement of workers, changes in the kind of labor required, obsolescence of particular skills and occupations, and a drop in the demand for labor in particular localities. These often result in the need for unemployment relief even though, eventually, there may be increased demand for another type of labor somewhere else. The effect has been different in different occupations. There is a tendency toward a
surplus of agricultural population. This arises on the one hand from a relatively high birth rate in rural districts, coupled with increasing productivity of agricultural labor, and on the other hand from the relatively stable demand for agricultural products. These factors underlie the tendency for workers to migrate to industrial areas.

Technological changes have favored semiskilled jobs at the expense of both the highly skilled and the unskilled workers. In many cases new skills must be learned. Frequently the new jobs are lower in the occupational scale. Often it is a matter of months and sometimes a year or several years, before reemployment takes place. For the older worker it frequently means permanent unemployment.

"The reabsorption of technologically displaced workers is, of course, influenced by general business conditions. In a period of declining industrial activity, the worker displaced by technical changes stands little chance of being reemployed. Until private capital outlays increase substantially, government must continue to assume large responsibilities to meet the need for expanding purchasing power and to provide for the necessary expansion of investment. This expansion of investment can take the form of direct public capital expenditures which meet such pressing needs as low-cost housing, and the development of capital facilities which tend to stimulate business enterprise, for instance, airports, roads, streets, and sewage systems. As long as we are faced with the existence of a large number of unemployed or of groups unemployed for long periods of time, the government must care for these jobless. Moreover, it should afford them work experience in order to maintain their skills and to help them toward absorption by private industry."
The National Research Project is directed by David Weintraub, with Irving Kaplan as Associate Director.

(A copy of the Summary of Findings to Date, March, 1938, is attached.)