

These estimates of new housing construction make allowance for a rising rate of replacement demand on the assumption of vigorous programs of renewal and redevelopment in the decaying areas of the larger and older cities. The 1961 Census did not reveal an extreme proportion of dilapidated housing and, in fact, the incidence of dwellings "in need of major repair" is rather less pronounced in the larger areas than for the country as a whole. Nevertheless, it appears that perhaps as many as 1,000,000 Canadians were housed as of 1967 in substandard dwellings of this kind, and that about one quarter of these were in the large cities. The Council observed:—

"With further rapid urbanization, the economic and social costs of poor housing and urban decay are bound to mount sharply unless long-range rehabilitative and preventive measures can be substantially widened and improved. Any acceleration of urban renewal, however, will clearly intensify the already pressing need for a great expansion in public housing. It will be essential to assure alternative and appropriate accommodation for the increasing numbers of people who may be displaced as a consequence of renewal projects. Successful and consistent development in both areas appear certain to require more comprehensive financial participation in total costs on the part of the senior governments, together with increased initiative, experimentation and integration in over-all planning by civic administrations."

Water Supply and Pollution Problems.—With the continued high rate of urban growth, the problems of adequate water supply and the disposal of domestic and industrial wastes are certain to grow more serious. For example, as the urban centre becomes larger it tends to use more water per resident. The average daily intake of water in Canada's 18 largest cities now is around 125 gal. per resident. It appears that by 1980 average daily consumption per person will rise to roughly 200 gal. Thus, it is estimated that, over the next 15 years, the largest cities must increase their water-supply capacity by some 1,500,000,000 gal. daily.

After use, approximately 80 p.c. of the urban intake of water for domestic and industrial purposes is discharged into the sewerage system. It is estimated that in 1960 only about 9,000,000 Canadians, or 75 p.c. of the urban population, were served by a sewerage system. Thus, a large volume of water intake in Canada is returned to streams and lakes in the form of raw or imperfectly treated sewage. Even where sewerage systems and treatment facilities exist, the prevalence of combined storm and sanitary sewers in many of our larger and older cities causes a considerable leakage of raw sewage during high-runoff periods.

The growing requirements for municipal water and sanitary facilities over the next 15 years will be added to a significant backlog of facilities in many areas. Since the 1930s, the capacity of these municipal services has grown at an annual rate of approximately 6 p.c.—or twice as fast as the growth in the urban population over the same period. If this relationship continues to apply over the next 15 years when 6,000,000 persons will be added to the urban population, it is estimated that the facilities will have to be doubled at an investment averaging roughly \$130,000,000 a year.

Air pollution problems will also mount. The major source of air pollution is the combustion of fuels such as oil, coal, natural gas and gasoline. For example, when measured in terms of weight, it is estimated that for every 100 tons of motor fuel used in combustion, almost 60 tons of carbon monoxide, hydro carbons and nitrogen oxide are discharged into the atmosphere. With the number of vehicles and traffic density increasing rapidly over the next 15 years, the prospective increase in the volume of pollutants from this source alone is massive. In some areas this air pollution threatens to be a serious health hazard. Although the relationship between air pollution and morbidity is difficult to establish, it has been estimated that in Canada 600,000 working days are lost each year as a result of chronic bronchitis and emphysema, attributable to impurities in the air.

Much remains to be learned before realistic and commonly accepted standards of air and water pollution can be established to guide a rational management or control policy, the Economic Council reported. Nevertheless, the Council regards the adoption of a set of standards as an essential first step in defining the goals for a policy of water