

as a basis for land use planning decisions in our ARDA programs.

A farm enlargement and consolidation program for all agricultural areas of Ontario has been approved with a federal contribution of \$3,600,000. This project is to acquire land as it becomes available on the market, for consolidation and development into larger economic farm units, either by sale or lease to farmers who have demonstrated good managerial ability in their present operations and require additional land for a more viable operation. Land not suitable for agriculture will be used for forestry, wildlife, or placed in conservation reserves. It also contains provision for the retraining and re-establishment of some of those displaced by the program.

3. No.

PUBLIC WORKS EXPENDITURES, LONDON, ONT.

Question No. 1,711—**Mr. Irvine:**

What amount was spent by the Department of Public Works in the city of London for each of the years 1963, 1964 and 1965?

Hon. G. J. McIlraith (Minister of Public Works): 1963-64, \$466,038.17; 1964-65, \$343,269.88; 1965-66, \$465,148.35.

STUDIES OF GREAT LAKES POLLUTION

Question No. 1,741—**Mr. Irvine:**

1. What research projects is the government and its agencies undertaking with regard to pollution studies and surveys, and causes of and remedies for pollution in the great lakes?

2. What other bodies, corporations or agencies are studying this problem?

3. What sums (itemize) has the government considered for the above projects?

4. What boards or commissions have direct or indirect control or interest in pollution in the great lakes and what are their programs?

5. Are any of the following techniques contemplated by the government to encourage industry to curb pollution (a) special research grants for studies to avoid pollution (b) tax incentive to build or counteract pollution control systems on industrial work beds (c) civil action against industries discharging pollutants?

Hon. Jean-Luc Pepin (Minister of Mines and Technical Surveys): 1. There is a coordinated plan of research, by agencies of the Canadian government and government of the province of Ontario, concerning pollution of the great lakes. In general, the federal government is directing its studies toward the body of the lakes and the cause and distribution of pollution that does or may cross the international boundary. The Ontario agencies are

Questions

primarily concerned with the origins of pollution on land, their effects in the great lakes and their control.

Specific federal government studies include the circulation of the water; properties of the water including chemical impurities, their concentration and probable destination; rate of mixing and diffusion in the lakes; the effect of nutrient chemicals (phosphates, nitrates, etc.) on the excessive growth of algae (eutrophication) and means of alleviating such eutrophication; study of the health hazards from domestic sewage and other wastes originating on land or in boats and means of its control.

2. The Ontario Water Resources Commission is the body primarily responsible for water pollution control under Ontario laws. It conducts research to define the sources and kinds of pollution entering the lakes from industry, municipalities, agricultural drainage and small boats, the distribution of this pollution and the properties of such pollutants and their control. Under the International Joint Commission reference this work has been expanded with financial aid from the federal government.

The Great Lakes Institute of the University of Toronto is conducting surveillance surveys and special research studies of the great lakes under contracts and grants from the Department of Mines and Technical Surveys, the Fisheries Research Board, National Research Council, and the Ontario Water Resources Commission. It is provided with transportation in the ship *Port Dauphine* by the Department of Transport.

Other agencies: In the United States, many federal and state agencies and universities are conducting programs on the lakes, related to pollution and other scientific studies. Among them, major activities are in progress by the department of the interior, federal water pollution control administration; the U.S. lake survey; and the U.S. bureau of commercial fisheries. The University of Michigan, Great Lakes Research Division is a major contributor among the universities. Activities by the individual states are increasing but are somewhat limited, as yet.

Through direct contact with the above agencies, by liaison through the International Joint Commission and by scientific meetings, exchange of information and program planning are achieved on an international basis.

3. During the current fiscal year the funds supporting great lakes investigations are: Department of Mines and Technical Surveys.