

One of the most significant areas needing attention and which has the potential of a significant contribution to water pollution control is the program of advanced waste treatment research. This research effort is directed toward the development of new waste treatment processes. The objective is to develop by 1975 feasible techniques for complete removal of all point source wastes.

The Administration's advanced waste treatment program for accomplishing this has received the highest priority from the Committee on Water Resources Research, Federal Council for Science and Technology, and its panel of experts has recommended a greatly accelerated program.

To carry out an accelerated research and development program in advanced waste treatment, a 10-year \$190 million expenditure is recommended to begin, in fiscal year 1967. This would provide for \$26 million for direct research, \$130 million for contract research, and \$34 million for constructing field evaluation plants. In 1967, the Administration's laboratory research program will be well underway; contractors are even now prepared to undertake large-scale research, and several treatment processes will be ready for field evaluation.

Question 9: Are present methods for sewage and waste treatment adequate to eliminate the spread of disease by viruses? If not, what are you doing about it?

Answer: Conventional primary and secondary sewage treatment procedures used today by most communities do not completely eliminate viruses from sewage. Primary treatment removes some virus, and activated sludge treatment (secondary treatment) will remove even more, but field tests show that even when the effluents from activated sludge plants are chlorinated, viruses can still be detected. This is because chlorine is inactivated by certain of the impurities in the effluents.

The complete removal of viruses from sewage will require well-operated, more consistent secondary treatment, probably some form of tertiary treatment to remove the impurities that interfere with chlorination, and perhaps utilization of a disinfectant other than chlorine. Preliminary studies in this area have already been undertaken and a modest program is currently underway in research to remove viruses from waste effluents more effectively. Research in this and other areas relating to the removal of refractory components of wastes will be increased in fiscal year 1967.

Question 11: Your agency has responsibilities with respect to the amount of storage in Federal reservoirs under the 1961 amendments. Do you have similar responsibility with respect to locally constructed reservoirs? If you do not have this authority, would it be desirable to have it in view of the limited number of reservoir sites that are available and the need to make sure that such sites are not preempted by inadequate reservoirs?

Answer: While the Federal Water Pollution Control Administration has responsibilities in connection with provision of storage in Federal reservoirs under authority of the 1961 amendments, it has no such authority for locally constructed reservoirs. Similar responsibilities for locally constructed reservoirs would be highly desirable.