

to an acceptable level after the fullest degree of treatment available to the riparian users of water in accordance with modern engineering standards.

In the area of particular interest to this hearing there are numerous survey reports or investigations in which the Corps of Engineers has a congressionally assigned responsibility or interest which deal with more effective water usage. Many of these reports include provision for pollution control and abatement as a multi-purpose usage of our water resources. Included among the Lake Erie-Lake Ontario basin streams under study are the Cuyahoga, Buffalo, Sandusky, and Genesee Rivers. Coordination or cooperation with other Federal, State, local and private water oriented agencies is either a requirement of law or an agency established regulation. In accordance with established congressional directives and Corps' policies, the most effective water and related land resource usage for all purposes is considered in all basin, sub-basin and action plan type of reports. In coordination with FWPCA, pollution control and abatement are treated as a prime water purpose in appropriate instances. For ready reference, the major engineering and economic study and investigation program of the Corps in this area is appended hereto as inclosure 1.

Treatment to abate pollution, including estimates of the costs and enforcement thereof, is primarily the province of the FWPCA of the Department of the Interior. The role of the Corps of Engineers in this field is to cooperate and coordinate to the fullest degree, and to engineer to the maximum practicable extent effective measures which are within the realm of practicable feasibility in those projects for which the Corps has primary responsibility.

Within the Corps' own establishments, aggressive steps have been taken to equip our floating plant and shore installations with modern and effective pollution treatment facilities.

In regard to the dumping of dredge spoil in the Great Lakes, the point has been made that this practice is not in consonance with pollution control objectives. The polluted material in the harbors, of course, does not originate with the Corps of Engineers. Our work consists of moving the material from one point in the lake, i.e. the harbor, to another—deep water. Thus we believe that this practice does not add to the pollution of the lake waters.

However, we enthusiastically support the need for positive and aggressive action to cure the pollution problem and are anxious to take any steps which are feasible and practical which will contribute to the solution. With this in mind we have made a study recently on the merits of placing the material in diked disposal areas as an alternative to dumping in the lake. This preliminary study considered 15 projects on Lake Erie and the results indicate that this will be an extremely costly procedure. The first cost of providing diked disposal areas with a ten year life was estimated to be about \$110,000,000, which together with the added dredging costs would amount to an annual charge of about \$16,000,000 over and above the cost of disposal by present methods. This figure is for selected sites on Lake Erie alone and for the first ten years. Lack of suitable space after the first ten years could conceivably increase this cost materially later. When all of the Lakes are considered we are dealing in tremendous additional costs. Also this is only a partial solution and has other unsatisfactory aspects. It will not take care of polluted matter in solution or suspension and the disposal sites will not be very attractive areas on the lake front.

The basic question then is whether this additional expenditure is warranted and whether to spend the money for this purpose or to apply it on eliminating pollution at the source. The economics of providing the diked disposal areas are now under consideration by the Federal Water Pollution Control Administration of the Department of the Interior.

Another action we are taking has to do with the control and removal of floating debris as opposed to the chemical and bacteriological pollution which one normally thinks of. We are preparing such a study for Cleveland Harbor. Such a study has been completed for Buffalo Harbor and Niagara River and is presently before the Bureau of the Budget for consideration.

The Corps of Engineers joins with other Federal, State and local agencies in concern over pollution problems such as in Lake Erie and will continue to seek means to preserve our water resources.

I greatly appreciate the opportunity to make this presentation to this Subcommittee.