

which is built into the system going into the treatment plant, brings the storage tanks into play. They hold those rainwater flood discharges, later releasing them, at a low rate, into the sewer that goes to the treatment plant.

In other words, their assumption is that barring a catastrophic runoff, which the tanks might be too small to retain, you would catch about 85 percent of your normal rains, which normally would have gone overboard into the nearest tributary. With such storage the liquid is ultimately released at a low rate to the treatment plant.

Mr. MOSHER. Where are they doing this?

Dr. WOLMAN. In the State of Michigan. I think their requirement dates back 4 or 5 years, and they have been building them.

I could summarize this very quickly. To get it into your record, by reference to the recent paper by Mr. Reed of the Public Health Service on the very question you raise. The paper spells out, and spells out very maturely, the alternatives to complete separation.

Mr. DADDARIO. I use this only as an example, merely to show that we ought to be thinking about alternate propositions in many instances.

The matter of automobile exhausts and the \$50 gadget is an example I think where the public will be expending about half of a billion dollars and no one really knows if the problem will be solved or not. We must also recognize that if the device does not remove all of the effluent, the absolute amount of effluent will eventually increase.

Dr. WOLMAN. Yes.

Mr. DADDARIO. What are your thoughts, Dr. Wolman, about the effects local pollution will have on the entire country? Take, for example, all of the pollution activity in New York City. Doesn't this affect all of us rather than just New York City itself? Shouldn't we be thinking about some proposal which would direct us toward the alleviation of pollution blights of this kind as a general way to get rid of a problem which in fact affects all of us, even though it emanates from one small section of the country?

Dr. WOLMAN. Well, let's first make this comment. New York City has spent until now something of the order of \$1 billion on sewage treatment. It has not resolved all of its problems. The estimate on the additional amount that it needs to spend may be something of the order of another half a billion.

It has done a job of protecting a very large series of its recreational areas very successfully. Its beaches have had most of the sewage removed. It has, because it is an old city, in all of its boroughs the combined system. It has therefore begun at considerable expense the actual installation of the tanks that I speak of, because they could not tear up all of Brooklyn, all of the Bronx, and all of Manhattan. I would say it would be physically impossible. They have turned to the alternative of trying to put these floodwater tanks at the terminals of their systems.

Now it would be to the advantage not only of New York but of Chicago, where the conditions are entirely different—it would be to the advantage of all of them if there were improved technology of municipal waste treatment. There is no question about that.

The search for this has not been either too intensive or too revealing. Within reason perhaps the search moved particularly on the Federal