

has too low a priority in our national planning. We should raise this priority.

In the national planning and its implementation, I firmly believe that industry should be given a larger role. Industry is responsible, in part, for the existence of the pollution problem. At the same time it has done much to eliminate pollution. Industry is close to the problem and is knowledgeable in the water pollution field. I believe it should expand research and development programs and I believe the Federal Government should support this expansion in dollars and cents and technical services.

We are barely able to keep pace with water pollution problems as they arise at the present level of effort. Certainly, there is need and justification for at least tripling our research and development to contain the pollution problems at hand. We may have to increase our present efforts tenfold if we are to make significant advances toward a final solution.

It is abundantly clear that new ideas, new approaches are required in the field of waste collection and treatment to keep level with population and industrial growth. And this is why the Federal Government can no longer be niggardly in underwriting research and development programs.

At the same time we must push ahead with our present programs, particularly in the fields of treatment plant construction and in the field of enforcement. We must continue to fight with the tools we have until we have better tools. For example, I have pointed out that it would cost some \$30 billion to separate the Nation's combined sewers. Obviously we have a cost barrier here, because we can't accumulate \$30 billion to eliminate them on a crash program. So we are calling upon the researchers and the technologists to come up with a new approach to the problem while recommending a standby partial solution—bar construction of combined sewers in urban renewal areas. Incidentally, in the Rochester area you had this enormous problem. It was relieved to some degree by the construction of impounding basins, retarding dams, to reduce flow at the time when the treatment plants could accommodate the excessive flow, but notwithstanding all that, the problems are still enormous and, of course, a city like Chicago would require over \$2 billion to eliminate the problem, it would be impossible to get sufficient drainage catch basins; we could construct layers of gravity flow sufficiently to eradicate that problem. So in answer to your question, Mr. Vivian, the great economies that will be perfected in this, can be perfected by your committee of even encouraging research and development to reduce this \$30 billion in research planning down to a nominal figure that can be dealt with by the combined efforts of industry, local governments, and the Federal effort.

Over the long term, however, we must raise our standards for treatment of waste waters of all kinds and if we are to do so we must evolve new and more effective waste treatment processes.

What is the point of removing organic materials from sewage and leaving minerals and other nutrients (such as phosphates, nitrates) in the effluent—to nourish growth of algae and other offensive organisms in receiving waters? We have been doing just part of this in our treatment job.