

In a similar manner, it is obvious that the questions of standards and criteria will involve choices between alternative uses for land and for water. As in the case of institutions, the kind of technology required and certainly the cost of the technology will depend on the degree to which contaminants or refuse must be suppressed, which in turn depends on the end uses of the body of land or water used for disposal. One needs to know what are the real desires of the people, how much they are willing to pay for the satisfaction of these desires, both in money and in the sacrifice of other things such as convenience or accessibility.

The Division of Behavioral Sciences of the NRC is working with us on the examination of such questions. Such questions as how does the individual perceive the environment. What does he consider tolerable, desirable or undesirable? We have asked each of the engineering committees to compile a list of nontechnological factors which inhibit the application of known or existing technology.

So far we have a reply only from our Committee on Water Quality management, the other committees are preparing their replies. But the reply of this Committee on Water Quality is so informative and instructive that I think it is worthwhile quoting those parts which refer to institutions and legal procedures:

It is neither prudent nor practical to continue to rely primarily on the promulgation of prohibitions governing discharges at individual waste sources for mitigating pollutional effects. This traditional approach is hardly suited for the exacting task of managing water quality. Management of quality invites consideration of a variety of technological alternatives (such as mechanical aeration of streams, low flow augmentation and programmed discharge of effluents) which alone or in combination offer promise of maintaining desired quality conditions at lowest social cost.

Although this concept has been gaining recognition, its application is handicapped because the functioning of state and federal agencies is geared primarily for the exercise of regulatory activities. In brief, the need exists for revamped institutions that are empowered to plan, design, finance, build and operate facilities within a systems-context for the management of water quality.

Opportunities for the creation of such institutions may be visualized within the framework of interstate compacts, conservancy districts, or special authorities. Some innovations are being developed, as exemplified by the Delaware River Basin Commission and proposed Susquehanna federal-state compacts; the recent creation of the State Pure Waters Authority in New York; the proposed Maryland Waste Acceptance Service Authority; and expansion of the rôle of the Miami Conservancy District in Ohio.

The Water Quality Management Committee would also point to the desirability of an inquiry looking toward improvement of judicial practices. They do list a number of specific recommendations that perhaps should be looked at by lawyers, but I think since they really need legal attention, I would rather not cite them at this moment.

In addition, the subcommittee would invite discussion of the merits or limitations involved in the establishment of quasi-judicial boards or commissions for the adjudication of pollution control cases.

I have outlined for you the scope of our responsibilities, the nature of the mechanisms by which we hope to fulfill these responsibilities and some of our more general views of the ways in which solutions to the problems of the environment should be sought. I should now like to describe for you some of the difficulties we have encountered in dealing with specific proposals for additional research and development. I shall cite two specific examples.