

Still another technical alternative is the storage of waste-water effluents and scheduling of their release in accord with variations of streamflow. This practice is creatively suited to take advantage of hydrologic variability in the management of river quality.

These are but a sampling of technological methods that may be used separately or in combination to optimize pollution control endeavors. The opportunity of applying them is hindered, however, because Government policy and the existing laws and institutions for its implementation are wedded almost exclusively to the exercise of regulatory functions; namely, the promulgation of prohibitions and their enforcement.

Under these circumstances conditions are not compatible for the exploitation of the new tools and techniques for systems design and operation in the management of river quality.

Among other technological matters that lay claim for attention from the standpoint of public policy, there are three that deserve comment: Storm-sewer separation, deep-well disposal of wastes, and mine-acid drainage control.

Storm-sewer separation.—On the basis of what must be regarded as incomplete evidence of benefits to be derived the Federal panic button has been pushed concerning the pollution of rivers caused by overflow from community sewers during storm periods. The Congress has been told that cities must be equipped with two separate sewer systems—the existing network modified to exclude the entry of anything but sewage and a new one added for the exclusive purpose of conducting rain runoff directly to the river. The cost—to be financed by substantial Federal grants—is estimated to amount to \$25 to \$30 billion, or even more. (See “Pollution Effects of Stormwater and Overflows From Combined Sewer Systems,” U.S. Department of Health, Education, and Welfare, Public Health Service Publication No. 1246, November 1964.)

With commendable prudence the Congress has not yet committed itself to wholehearted acceptance of this proposal. But it did provide in the 1965 amendment to the Water Pollution Control Act its authorization of \$20 million annually for the next 3 years for the purpose of assisting demonstration projects related to methods for controlling discharge of inadequately treated wastes from sewers that carry storm water.

The issue is this: If storm water runoff is segregated will the benefits be commensurate with the investment required? All we know is that storm overflows bypassed by sewage-treatment plants may contribute—at the most—about 2 percent of the total pollution load entering the Nation's streams. Those who are advocating storm-sewer separation might be challenged on another point: Simply to segregate such flow for direct diversion into a stream would seem to have dubious value because storm water, at least in its first flushing, carries a considerable amount of pollution originating from debris on streets and roofs.

Deep-well disposal of wastes.—Searching for ways to minimize the cost of keeping difficult-to-treat liquid wastes out of streams, industrial enterprises are evidencing a lively interest in using deep wells for this purpose. This practice was pioneered by oil-well operators and