THE DEVELOPMENT OF WATER QUALITY STANDARDS

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The water quality standards that are being developed by the State and which must be approved by the Secretary of the Interior will go considerably beyond the application of water quality criteria for water uses in specific streams. The Water Quality Act of 1965 which requires the establishment of water quality standards calls for the States to adopt: (a) water quality criteria applicable to their interstate waters, and (b) a plan for the implementation and enforcement of the water quality criteria. All fifty States, the District of Columbia, Guam, Puerto Rico, and the Virgin Islands have indicated their intent to meet the June 30, 1967, deadline for submitting their water quality standards. The standards will then go to the Secretary of the Interior for review and approval. In the event a State's proposed standards are adjudged unsatisfactory, the Secretary may initiate action to adopt suitable water quality standards.

Last May the Federal Water Pollution Control Administration issued "Guidelines for Establishing Water Quality Standards for Interstate Waters." A memorandum, "Necessary Supporting Material and Implementation Plan Contents," was developed in December. These two documents provide the States basic guidance for developing their standards. Today, with less than three months before the deadline for submitting their standards, most States have demonstrated good progress and apparently will complete the job by June 30.

Over the past two months we have had the opportunity of meeting with most of the States in Regional meetings. To date the Federal Water Quality Standards Staff has reviewed the standards of approximately 25 States as submitted on a preliminary basis.

With this as background, I want at this time to report on items of special interest in the development of water quality standards. Specific attention will be given to Guidelines Numbers 1, 6, 7, and 8.

GUIDELINE NO. 1

Water quality standards should be designed to "enhance the quality of water." If it is impossible to provide for prompt improvement

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water quality at the time initial standards are set, the standards should be designed to prevent any increase in pollution. In no case will standards providing for less than existing water quality be acceptable.

This Guideline can be applied to moderately or heavily polluted waters by establishing criteria which would improve existing water quality and prevent any increase in pollution. Rigid application of this Guideline to high quality natural waters is more difficult, especially in areas where future development is likely to occur. Under these circumstances the Administration is encouraging the States to adopt standards which will provide for the preservation of all existing water uses, but which in fact may be less than existing water quality. The acceptability of standards providing for less than existing quality can be determined by asking two questions:

1. Are all existing water uses being preserved? and,

2. Are waste discharges which are amenable to treatment or control being treated or controlled?

If the answer to both questions is "yes" - the standard would normally be acceptable.

GUIDELINE NO. 6

The plan for implementing and enforcing the water quality criteria should be submitted in sufficient detail to describe the nature of the actions to be taken to achieve compliance, a time schedule for such compliance, the controls and surveillance for measuring compliance, and the enforcement authority and measures for ensuring compliance. It is recognized that there are a number of ways that the water quality standards can be effectively implemented and enforced by the States; achievement of the purposes of the Act, rather than the methods by which this is done, is paramount.

The Administration is asking the States to develop a detailed plan for implementing and enforcing their water quality criteria. The plan should include a construction timetable for the needed municipal industrial waste treatment facilities, scheduled over the next five years. The States have generally not given sufficient attention to the needs of each municipality or industry. The Administration, through its Regional Offices, is currently advising each State regarding the detailed implementation plans required.

GUIDELINE NO. 7

The plan should include consideration of all relevant pollutional

sources, such as municipal and industrial wastes, cooling water discharges, irrigation return flows, and combined sewer overflows.

Obviously, this Guideline is troublesome. We cannot expect that presently uncontrolled sources of pollution such as heat discharges, irrigation return waters and combined sewer overflows can be corrected or eliminated in a short period of time. However, the Administration is requesting the States to consider all relevant sources of pollution in adopting both their criteria and plans of implementation. Criteria for many interstate waters will specify numerical limits for bacteria, dissolved oxygen, temperature, toxics, salinity, sediment and other water quality parameters applicable to a particular river basin. The plan for implementation must include all relevant sources of pollution--municipal and industrial wastes, heat discharges, agricultural drainage, and others. Of particular concern here in the Southwest is the application of water quality standards to irrigation return flows. The Administration has recommended that States where irrigation does have an impact on water quality adopt criteria and a plan of implementation to deal with this type of pollution. It is recognized that the final answer to pollution from irrigation is not available today. Nevertheless, positive steps can be taken to initiate control measures.

GUIDELINE No. 8

No standard will be approved which allows any wastes amenable to treatment or control to be discharged into any interstate water without treatment or control regardless of the water quality criteria and water use or uses adopted. Further, no standard will be approved which does not require all wastes, prior to discharge into any interstate water, to receive the best practicable treatment or control unless it can be demonstrated that a lesser degree of treatment or control will provide for water quality enhancement commensurate with proposed present and future water uses.

This Guideline requires secondary waste treatment by municipalities and an equivalent high degree of water treatment or control by industries. Adequate treatment for industrial wastes can only be handled on an industry-by-industry basis. The best practicable treatment or control for a pulp mill's waste might include chemical recovery, fiber collection, primary settling, and aeration, plus lagooning of wastes during low stream flows with release of the stored wastes during high stream flow. Any lesser degree of treatment for municipal or industrial wastes can be accepted only where it can be demonstrated that a lesser degree of treatment or control will provide for water quality enhancement commensurate with present and proposed future water uses.

This Guideline has been criticized on the premise that it requires "treatment for treatment's sake." The best answer to this charge is "that, if we are serious about maintaining water quality, we must be serious about

waste treatment, control and preventive measures." Applying waste treatment technology after waters have become polluted is generally too late and certainly not in keeping with the preventive approach of water quality standards.

The four Guidelines which I have discussed are no more important than the others, but these are the ones that have generated many questions from the States.

It is important to point out that the "Guidelines" which were developed are meant to be used for guidance, and rigid application is not always practicable. The basic thrust of the water quality standards effort is enhancement and/or preservation of water quality to provide for present and future uses.

Significant in the water quality standards effort has been the appointment of five National Technical Advisory Committees for water uses. The five Committees are:

Public Water Supplies
Industrial Water Supplies
Recreation and Aesthetics
Agricultural Uses
Fish, Aquatic Life and Wildlife

The basic charge to these committees is twofold:

(a) To recommend specific water quality requirements for respective uses named, and

(b) To identify the specific research needs to develop meaningful water quality criteria.

Unfortunately, much of the data and information being developed by these Committees will not be available for use by the States before the June 30 deadline. The point of real importance, however, is that a water quality criteria program has been initiated by the Federal Water Pollution Control Administration and that the program will have the back-up of the technical committees as well as laboratory and field research.

The water quality standards program is well underway. It is anticipated that most States will meet the June 30, 1967, deadline and that Secretary Udall will proceed post-haste with review and approval of the State standards as submitted.