

RECENT DEVELOPMENTS IN WATER POLLUTION CONTROL LEGISLATION

by

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The Federal Government's direct involvement in water pollution control dates back to 1956 when Congress passed the first permanent Water Pollution Control Act--P. L. 660. That Act--which is still the legislative basis of the current program--authorized Federal activities in certain specified areas. Essentially these included (1) financial and technical assistance to States in the conduct of their programs; (2) a Federal grant program for the construction of municipal waste treatment facilities; and (3) establishment of a Federal enforcement procedure against interstate pollution.

In 1961 the Law was amended to strengthen the enforcement provisions, increase the municipal waste treatment grants, authorize the preparation of comprehensive river basin plans, and authorize a large scale research and development program. In 1965 and 1966, further amendments to the Law called for the establishment of water quality standards by the States, again increased the municipal treatment grants, expanded the research and development activities, and authorized grants to local and State agencies for water quality management planning. In 1970, the Act was again amended to include Federal responsibilities in oil and hazardous materials pollution, vessel pollution, acid mine drainage, and directed all Federal agencies to ensure compliance with water quality standards of all their facilities which they fund or license.

While there have been a number of amendments to the 1956 Act, the Law has basically remained the same. Its purpose has been to enhance the quality and value of the water resource. Its strategy has been to allow the States to take primary responsibility with Federal technical and financial support, and its scope has been limited to interstate waters and municipal and, to a degree, industrial point source discharges.

Within the past few months both the Senate and the House have passed legislation which would completely change the thrust and scope of the Federal water pollution control program. I would like to address the rest of my remarks to what those changes are and how they will affect the Federal program.

The Act's most sweeping changes will result from a redefinition of the Nation's water pollution control goals. We are presently working with a system in which the levels of pollution control are tailored to the resulting condition of receiving waters--rivers, lakes, and estuaries. The new measures now appear to modify, perhaps abandon, the concepts of water-use classification in favor of applying our best available technologies and/or zero discharge of pollutants. Such a change would have far-reaching technical and financial consequences. It will force a reappraisal of almost all regional solutions to waste management; i.e., the optimum treatment to transportation ratio will change in many cases. The concept of "flow augmentation" as a treatment supplement should become completely out-moded, although low-flow control may be desirable for other reasons.

The new pollution control measures also recognize that attainment of clean water goals will require control of pollution from all sources. Language appears throughout both bills calling for new efforts in the control of wastes associated with combined sewers, agriculture, transportation, and mining. The exact programs which will be developed cannot now be predicted; however, they are going to require a new technology for the design, construction, and operation of facilities and programs associated with these "new" areas of pollution control.

The dollars associated with the new water pollution control Act are almost incomprehensible when viewed in terms of past efforts. Four years ago, in FY 68 (July 1967 - June 1968), the national annual investment in sewerage systems was \$203 million, with a total of 1,850 plants under construction. In 1971 the construction of water and sewerage facilities was the third or fourth largest segment of the construction industry. The 4,000 projects now under design or construction have a total cost of about \$8 billion. By way of comparison, the peak year for the space budget (FY 65) was \$5.25 billion.

Although the specifics are not yet developed, the House bill authorizes \$26 billion for the four-year period ending June 30, 1975, which is the largest non-military bill ever passed by the U.S. or for that matter by any other country. The Senate Bill authorizes about \$20 billion.

Action by the Administration and the Congress makes it very clear that a major construction program will have to be sustained for the next several years. For example, the Senate Bill calls for the following goals:

- 1976 - Achievement of best practicable waste treatment technology.
- 1981 - Achievement of recreational quality waters and of best available technology.

1985 - No discharge of pollutants into navigable waters.

The House Bill calls for a comprehensive study by the National Academy of Sciences of the economic, social, and environmental costs of meeting the 1981 and 1985 goals and an evaluation by the Congress of the study before these dates are adopted.

Other provisions of the House and Senate measures will result in increased pollution control efforts by industry, agriculture, and mining, and thereby increased work load pressures on official agencies, consulting engineers, and contractors. Examples from the House and Senate Bills include:

- Development of comprehensive water and land resources waste management plans. Both bills emphasize regional waste treatment management and authorize some \$450 million, mostly in the form of grants to develop management plans. The Senate Bill requires Governors and local officials, in cooperation with EPA, to develop such plans in areas with critical water pollution control problems. In addition to municipal and industrial waste, these areawide plans would include procedures to control agricultural runoff, surface and underground mine runoff, construction runoff, and disposal of pollutants on land and in excavations. The House Bill would direct the Water Resources Council to complete comprehensive new river basin plans by January 31, 1980, with \$200 million authorized for the Council to complete its task.
- Establishment and implementation of effluent limitations on point sources of wastes. Both bills require establishment of effluent standards. In the House Bill, States would be required to establish effluent standards limiting all industrial discharges into U.S. waters by 1976. In the Senate Bill, EPA would set uniform standards of performance for new point sources of pollution. The Standards would have to reflect the maximum reduction of pollutants possible through use of the best available technology and would cover some 28 types of industries.
- Permit program for industrial discharges into navigable waters. Both bills would transfer the 1899 Refuse Act industrial permit program currently administered by the Corps of Engineers to EPA. In the House Bill, EPA could delegate the permit authority to the States.

- Massive attack on pollution from oil, hazardous substances, and vessels. The House Bill would modify existing provisions of the law dealing with oil pollution to add liability for the cleaning up of any hazardous material discharged into navigable waters. The Senate Bill would make it unlawful to dump or otherwise dispose of any radiological, chemical, or biological warfare agent, or high-level radioactive wastes into the oceans or waters on the contiguous zone (3 to 12 miles) and the territorial seas (0 to 3 miles).
- User charges for waste treatment services to assure sharing of costs. Both bills would require wastewater construction grantees to adopt a system of user charges to assure that each class of sewage collection and treatment users help pay the costs of operation and maintenance, including replacement of plants financed with Federal funds. Each industrial user must agree by contract to pay back the portion of Federal share of construction costs allocated to the industrial user's waste.
- More direct enforcement procedures. Both bills would essentially repeal all existing enforcement procedures, including conferences and 180-day notices for violation of water quality standards. Instead, the enforcement procedure would be based on discharge permits and effluent limitations. Under the Senate Bill, EPA is authorized to enforce permit violations immediately, or if a State fails to act within 30 days after receipt of a notice of violation, EPA may issue an order to comply or go to court against the polluter. Both Bills carry a penalty of \$50,000 per day of violation, and/or two years in prison, for each violation. Under the Senate Bill, citizens themselves may go to the U.S. District Courts against polluters who violate standards or orders. Also, citizens may go to court against EPA for failure to carry out non-discretionary duties under the law.

These are but the highlights of the proposed legislation. As can be readily seen, they are almost all inclusive and will have a great impact on how we do business in the field of water pollution control.

I would like to discuss some of the technical impacts that these legislative changes will have. Many of these changes will have far-reaching consequences for public and corporate officials and for the engineers involved in planning, designing, constructing, and operating waste treatment plants. In many instances the financial magnitude and short time scheduling of the new National program will amplify these consequences. Some of the major changes include reliability, cost-effective design, reuse and recycling,

land disposal of sludge and treatment plant effluent, and realistic waste disposal systems for rural, suburban, and recreational areas.

Recognition that wastewater is a potential water resource is becoming increasingly apparent to agriculture, industry, and municipalities.

In many parts of the Nation it will be advantageous and necessary to consider this relationship in water resource management plans.

In the case of industry, the requirement of "no discharge" of toxic pollutants, new Federal penalties for accidental discharge of oil or hazardous substances, and a January 1, 1976, requirement of best practicable technology will force many plants to consider the advantages of a full recycle system.

Admittedly these requirements will present us with new problems in such areas as treatment plant design, process changes, ultimate disposal, and sustained stream flow. These problems are already being addressed. Many municipalities, including Denver, Los Angeles, Orange County (California), Miami, Fairfax County (Virginia), Dallas-Ft. Worth, and Washington, D. C., are now considering how municipal waste streams can be converted into clean water which can be reused in some manner--irrigation, industry, agriculture, ground water recharge, or indirect recycling to a municipal system. In the Miami-Dade County area our office is working very closely with State and local officials in developing a water use plan which will include wastewater reuse. We have also put several industries in our Region on notice that they will have to consider closed systems within the next four to five years.

There is, at last, an awareness that the waste management problems of small communities, rural and suburban areas, are substantially different from those of the urban areas. The House and Senate Bills both call for accelerated research programs in these areas, and the House Bill would, in effect, extend the scope of the program to the entire Nation.

There is a growing interest in land disposal of waste. Many small communities in the Nation have used land for disposal of all or a portion of their waste for many years. In September of 1970, the Environmental Protection Agency awarded a grant to Muskegon, Michigan, for the construction of a relatively large system for land treatment of municipal sewage. The system is now under construction and should be completed by about December 1977. An associated research project extending through December 1977 is designed to investigate the cropping system which will work best for the soil-climate conditions prevailing in southeastern Michigan. The system, designed to utilize agricultural production to offset a part of the

operating costs, represents a full-scale EPA effort to evaluate such a system. The Corps of Engineers has apparently concluded that this land disposal system could be immediately applicable in large urban areas and is conducting a series of studies designed to investigate how land disposal systems could be used for large metropolitan areas. I believe that this approach could have widespread application in our southern States where agriculture is still a predominant industry. But, again, our technology will have to be considerably expanded to accommodate this approach.

There are other provisions of the legislation which, frankly, are too numerous to mention. Suffice it to say that we are entering a new era in water pollution control.

The public has made its wishes known, and the Administration and the Congress are responding. The machinery--both legislatively and organizationally in the EPA--has been established, and we now have the job of implementing it. You can be assured that it is the intention of our agency to involve all levels of government, as well as the private sector, in seeing to it that the job gets done. We look forward to working with the various groups and individuals present at this meeting today in finally turning the corner in the water pollution control field and heading down the road of CLEAN WATER!