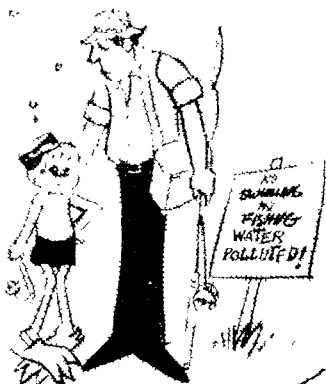


# Clean Water: Understanding the Law





Water pollution has been recognized as a problem in this country since before the turn of the century. Although valiant efforts to maintain water quality were made in many states, many water pollution problems were so wide ranging that often they were beyond the individual capabilities of state and local governments.

As the 1970s began, two events occurred that were destined to change the scope and the priority of water pollution control in this country: The first was creation of the U. S. Environmental Protection Agency (EPA), centralizing responsibility for water pollution control. The second was passage of the Federal Water Pollution Control Act Amendments of 1972, which mandated a sweeping federal-state campaign to prevent, reduce, and eliminate water pollution. Additional substantive amendments were passed in 1977.



### Everybody's Problem

Water pollution is caused by everyone—by the way people live and work and use the water and the land. Water becomes polluted when it is used in homes, in factories, and in businesses. When wastewater is discharged through pipes or sewers it is called a “point source,” and this form of pollution is controlled through a national permit system which issues individual permits prescribing the types and the amounts of pollutants that a municipality or an industry can discharge into waterways. Historically, management and control of point-source waste discharges have been the major emphases of the national water pollution control program.

Now, however, there is increasing concern over other pollution that comes from “nonpoint sources”—pollution that is carried over land by rainwater or melting snow or which seeps through the earth and enters waterways in a general manner, not through a pipe or sewer. Examples of such pollution include:

- Rainwater running off buildings and streets and carrying with it oil, grease, trash, salts, lead, and other pollutants, which becomes an *urban stormwater* problem.
- Rainwater washing fertilizers and pesticides and topsoil into waterways, which produces *agricultural runoff*.
- Earth which is washed into streams, rivers, and lakes from erosion, which comes often from *construction runoff*.
- Water in contact with certain minerals in mined areas, which often becomes pollution called *acid mine drainage*.

- Water washing sediments from where the earth has been disturbed from logging and timber operations, which is termed *silviculture runoff*.

Nonpoint pollution also comes from septic tanks, poor landfills, or underground waste areas where water seeps through the soil, picking up pollutants and carrying them into waterways and groundwater. Unlike point sources, these sources of water pollution generally cannot be collected and treated. Nonpoint pollution can only be reduced by more careful management of our water and land resources.

### **Public Law 92-500**

On October 18, 1972, the Federal Water Pollution Control Act Amendments became Public Law 92-500 and initiated the most comprehensive program of water pollution control in the world.

The law established national goals to be achieved, assigned direct responsibility for implementation of those goals, and authorized funding by the federal government. It also established detailed program planning responsibilities for state and areawide governments and agencies.

The primary objective of the act is to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” To achieve this objective and to attain the national goals, the act provides for a number of authorities, including the following programs:

- Uniform, enforceable national standards for clean water and regulations to enforce those standards.

- A national permit program for discharges from all point sources—industrial, municipal, commercial, agricultural, and other facilities that release pollutants through pipes and sewers.

- Federal funds for construction of sewage treatment systems.

- State and areawide planning and management programs to coordinate broad-based pollution control decisions and to implement feasible methods to achieve clean water over the long term.

## **The Public Role**

One of the major expectations of Public Law 92-500 is that the public play a key decision-making role in all water pollution control activities. Section 101 (e) of the act provides, in part, that “*Public participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan or program established by the Administrator (of the Environmental Protection Agency) or any State under this Act shall be provided for, encouraged, and assisted by the Administrator and the States.*” It can take only a few committed people to awaken a community to a new opportunity; members of the public can be the initiators and catalysts who bring a diversity of interests together to work on a shared goal. Local government officials have a significant opportunity to secure the benefits of federal and state programs for their communities, and with this opportunity there is the responsibility to encourage public participation to ensure maximum benefit from the programs.

**Annual State Program.** Section 106 mandates that states annually assess statewide water quality problems and authorizes federal resources to help solve those problems. An annual state program is to have at least five parts:

- A summary of water quality problem areas in the state.
- A description of individual state program elements (such as management of municipal facilities, permits, compliance schedules, planning, public participation, etc.).
- A five-year projection of resources needed to conduct the state program as estimated in the state strategy. This projection will provide a basis for continuous water quality program planning and budget justification. Included should be general financial and man-year resource requirements for each year of the five-year cycle.
- A table showing projected outputs for each program element during the next fiscal year.
- A detailed resource summary sheet showing specific financial and man-year allocations for each program element during the fiscal year.

Public input into the annual state program process can produce a tangible result, since the program includes the allocation of state resources to solve water quality problems. The preliminary state program is submitted by the state to the appropriate EPA regional office on May 1, along with the state strategy and any revisions to the continuing planning process. These are considered and modified, and a final state program is worked out by September 1.



**Facility Construction Grants.** Section 201 provides for federal grants of 75 percent of the cost of planning, improving, or building sewage treatment plants and sewers. The 1977 amendments authorize grants of 85 percent of construction costs if the facility will utilize innovative or alternative wastewater treatment processes and techniques. The program is the largest single, federally assisted public works program developed in this country since the federal aid to highways program.

Construction grant authorizations are distributed to states by Congress. Pursuant to the 1977 amendments, management of the construction grants program is to be transferred to the states. State agencies rank projects by priority according to the severity of pollution problem, population served, and other factors. Applications with sufficient priority for available funds are forwarded to the appropriate EPA regional office for further review and funding. After a federally funded facility is in operation, the local government must recover operation and maintenance expenses through a user-charge system. It must also recoup from industrial users an appropriate proportion of the federal outlay that went into its construction.

The 1972 legislation allows the construction of treatment works to be funded in three steps: first, for basic planning and selection of a solution; second, engineering, architectural designs,

drawings, and specification; and third, actual construction.

Guidelines for the construction grant program, revised after the passage of the 1977 amendments, specifically require that the public be involved in the planning of sewage treatment facilities.

Citizen participation should begin at step 1. In this planning phase, decisions affecting size of the treatment plant, the level of treatment, and the size and location of interceptors and trunk sewers are made. These decisions, which will affect growth rates and development patterns, are of vital concern to citizens.

The planning requirements for municipal wastewater treatment facility development, most of which are in Section 201, are known as "facility planning requirements" and are linked to Section 208, which is oriented to regional or statewide planning. Section 201(c) requires that "to the extent practicable, waste treatment technology shall be on an areawide basis and provide control or treatment of all point and nonpoint sources of pollution."

**Water Quality Management.** Section 208 is perhaps the most comprehensive program Congress established under Public Law 92-500. The program can tie together the various water pollution control and abatement requirements, including municipal, industrial, residual waste, runoff, and groundwater pollution control. The law places the responsibility for developing and carrying out solutions to these problems with state and local governments.

Congress considered several points in insisting on development of state and local decision-making powers. First, the complex technical and political problems of water quality protection vary so widely across the nation that long-term solutions to these problems, especially where the solution is not suited to a national standard, depend on actions by state and local governments. And second, much of the commitment needed to resolve water quality problems rests with these same state and local governments. Implementation of 208 programs may also require new legislation or institutional arrangements for water quality control.

Under Section 208, geographic areas with significant water quality problems are singled out for areawide planning. An agency of local



governments is selected by the governor to do the planning, and EPA then provides funding to develop a comprehensive program. A state must perform the 208 planning in all non-designated areas *within* its borders and must



coordinate its planning with that going on in the designated areas.

In short, the purpose of the 208 program is to provide information for sound decision making by state and local officials so that they can take the initiative. Management is the key to the process. A 208 management plan should be cost-effective, politically feasible, and, above all, practical. What makes 208 unique is that state and local governments must develop an approved plan, with the commitment to undertake whatever action is necessary to achieve the 1983 goals.

Section 208 essentially provides the only authority presently available under federal law to study, manage and control nonpoint-source pollution. This type of pollution is a difficult problem. Because solutions are not always obvious or easy to correct, more innovative approaches will be required than for any other aspect of the act. While EPA will do research and provide technical assistance to 208 planning agencies, the answer to nonpoint-source problems must be tailored to each region by management in that area. The 1977 amendments authorized funds for the United States Department of Agriculture to share costs with rural landowners and operators for instituting best management practices to control nonpoint source pollution in accordance with approved 208 plans (Section 208j).

The 208 plan will focus on the area's most critical water quality problems. It must address the items listed below in some detail:

- *Population, household, and economic projections* for a 20-year period.

- A summary of *existing land uses* (residential, commercial, and industrial) within the planning area.

- A *classification of all streams* and other navigable waters into two types of segments: those which meet state water quality standards now or which will meet them after limiting the amount of pollutant discharges on the basis of national uniform requirements (called effluent-limited segments), and those segments which will not meet applicable state water quality standards even with nationally based discharge limitations (called water-quality-limited segments). For the latter type, the state water pollution control agency, under Section 303 of the law, will establish more stringent requirements on allowable pollution.

- *An inventory of pollution* from all point sources—such as municipal and industrial waste treatment outlets—and from nonpoint sources, such as erosion caused by stormwater and agricultural runoff. Nonpoint sources control will be necessary in most areas to meet the law's goals; in some areas, in fact, nonpoint sources are the major water polluters.

- *Identification of new and expanded municipal sewage treatment plants* necessary to handle the area's wastes for the next 20 years and meet the state water quality standards.

- *Identification of methods to keep sludge* from polluting both surface waters and groundwater.

- *Identification of new and improved stormwater systems* for urban and industrial runoff problems, with special emphasis on land management controls (on-site detention storage, for example, would receive more emphasis than, say, the construction of new pipes and conduits for off-site treatment).

- *Identification of all regulatory programs and land-use measures to control nonpoint pollution* such as zoning, subdivision regulations, floodplain regulations, and performance standards—and an assessment of the time required to achieve the desired results.

- *Identification of public agencies with the administrative, legal, and financial capabilities to construct, operate, and maintain treatment facilities and/or to implement the regulatory programs on nonpoint sources.* These are the agencies that will be responsible for actually implementing the 208 plan.

- *An assessment of the social, environmental, and economic impacts of the plan.*

**Water Quality Standards.** Pursuant to section 303, Federal-state water quality standards set forth specific beneficial uses of stream sections, the water quality criteria necessary to support such uses, the policies which will prevent deterioration of water quality, and, in some cases, methods for water quality improvement. These standards provide the goals for the water quality management plans, the pollution discharge permit program, dredge material discharge programs, construction grant programs, land-use controls, and other efforts designed to improve or maintain water quality.

Before 1972 the law required that state water quality standards contain an implementation timetable for the construction of necessary treatment facilities. Enforcement was by standard setting or enforcement conferences. In effect, the major national pollution control effort was based on the enforcement of water quality standards.

In developing Public Law 92-500, Congress realized that pollution controls based only on the setting and enforcement of water quality standards were cumbersome and not particularly effective. It changed the law from one based principally on a quality standard to one based on the control of discharges through effluent limitations.

Water quality standards must be responsive to the needs of society. The law and the EPA regulations and guidelines for water quality standards recognize this need and have ample provision for public participation. In addition, the law forces such a response by requiring the states to review and revise, if necessary, their water standard at least every three years.

The review and revision effort is a primary function of the states; but, to better know what changes are needed in the standards, others

should become involved. Citizen groups, outdoor recreational associations, fishing and hunting organizations, resource-oriented associations, and other groups are sources of information. By using these outside sources and its own expertise, the state agency is better able to revise proposed standards. The revisions then are made available for further public comment at public hearings held at appropriate lo-



cations in the state.

The federal government also approves water quality standards. The state will usually ask EPA to review the proposed standard at or before public hearings. After analyzing the comments received from public hearings and from EPA, the state adopts the standards and asks for federal approval. If a state does not establish water quality standards that are consistent with national goals, the federal government has the authority to set different standards which will be consistent.

People concerned with or affected by water quality should be aware of and participate in the water quality standard review and revision process. There are several points for contributions: the first is during the Section 208 water quality management program. Here, information on an improper use classification or a vague criterion can be made known to the head of the appropriate 208 planning agency. The public hearing is another opportunity for the general public and federal, state, and city agencies to provide comments and support.

**Clean Lakes Program.** Section 314 provides for direct federal matching funds to states and local units of government in designing and demonstrating specific restorative measures for publicly owned fresh water inland lakes. Applications received under the program are prioritized for funding by the states on the basis of the trophic status of the lake, the feasibility of the proposed treatment measure(s), and the anticipated public benefit. Selection for funding is made without regard to regional or state quotas by a committee of EPA staff from the headquarters research laboratory and representatives of the EPA regional offices.

**Discharge Permit System.** The National Pollution Discharge Elimination System (NPDES) may be the most significant enforcement tool contained in the Federal Water Pollution Control Act Amendments of 1972 (section 402).

NPDES is a national permit program to control the discharge of pollutants into waterways from all specific point sources, including industry; municipal sewage treatment facilities; certain agricultural, forestry, mining, and fishing operations; and other commercial activities. It is administered by EPA or by an EPA-approved state program.

Congress designed NPDES as a tight regulatory system with precise and detailed abatement requirements, enforcement procedures, and heavy penalties for violators. Included are these requirements:

- National effluent limitations and performance standards are established by EPA for sources of water pollution such as factories, power plants, sewage treatment plants, animal feedlots, and others.
- All publicly owned sewage treatment plants must provide a minimum of secondary treatment by July 1, 1977, and the best practicable technology by July 1, 1983.
- Industry use of best practicable technology is required by July 1, 1977, and best available technology by July 1, 1984, or not later than three years after the establishment of specific pollutant limitations.
- More stringent permit requirements than EPA's maximum limitations may, if necessary, be set by the state to achieve quality standards for water in rivers and streams.

Under the water law it is illegal to discharge any pollutants into the nation's waterways without a permit. The permit regulates what may be discharged and how much. Firm target dates are set. A discharger must reduce or eliminate his discharges in an orderly fashion, in specified steps, at specified times. Any violation of the permit is a violation of the law and the violator is subject to stiff penalties that are enforceable in court.

The ultimate guarantee of the permit system's effectiveness is that it must be carried out under full public scrutiny. Permit applications and proposed permits are available to the public. There is an opportunity for a public hearing on each permit application before action is taken. The permit itself, with all its conditions and requirements, is a public document, and all monitoring information that permit holders are required to report is also available to the public.

Public Law 92-500 authorizes any citizen or group of citizens whose interests are adversely affected to take court action against anyone violating an effluent standard, an effluent limitation, or an order issued by EPA or a state with respect to a standard or limitation. The NPDES program therefore enables every citizen to be a "watchdog" over our country's waterways.

***Dredging Control.*** Section 404 of the water law can help prevent or reduce damage resulting from the discharge of dredged or fill materials into United States waters and wetlands. The core of the program, which pertains to traditionally navigable waters, is relatively noncontroversial. Other portions, however, affect areas outside of traditionally navigable waters and have changed the historical concepts of water management. Operations falling under this program's influence range from the construction and maintenance of channels for boats to the promotion of aesthetic considerations such as water turbidity.

Public Law 92-500 classifies dredged and fill materials as pollutants when they are discharged into United States waters. Section 404 authorizes the Secretary of the Army, acting through the Chief of Engineers to issue permits, after public hearing, for discharging dredged or fill material into navigable water at specified disposal sites. It requires the EPA administrator to prepare

guidelines in conjunction with the Secretary of the Army to use in issuing permits. (The secretary of the army may override the EPA guidelines should there be adverse economic impact on the site and anchorage.) The EPA administrator may prohibit use of a disposal site if he determines, after a public hearing, that a discharge will adversely affect municipal water supplies, wildlife, recreation areas, or shellfish beds and fishery areas (including spawning and breeding areas). Before reaching such a decision, however, the EPA administrator must make public his findings and his reasons.

In an effort to make the 404 program manageable, environmentally protective, and minimally cumbersome, a new general permitting system is being implemented. This system will reduce the time required to initiate acceptable operations for discharging dredged or fill material. It will also minimize the effort required to process permits and to ensure that local conditions and state controls are taken into consideration. The 1977 amendments provide that a state may seek EPA approval to administer its own individual and general permit program for discharge of dredge and fill materials in certain waters within its jurisdiction. General permits are issued at the district engineer level. The public may comment on the kinds and form of general permits being considered; comments should be directed to the district engineer and to the responsible EPA regional office.

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