

ATTACHMENT 1

CLEAN WATER ACT (CWA)

CWA OBJECTIVE: To restore and maintain the chemical, physical, and biological integrity of the nation's waters.

GOAL: Eliminate discharge of pollutants into navigable waters by 1985.

POLICIES:

- Discharge of toxic pollutants in toxic amounts be prohibited.
- Federal financial assistance for construction of POTWs be provided.
- Areawide waste treatment management planning processes be developed and implemented to assure adequate control of sources of pollutants in each state.
- Research and Development (R&D) efforts be made to develop technology necessary to eliminate discharge of pollutants.
- Programs for control of nonpoint sources of pollution be developed and implemented.

Reference: Section 101(a)

MAJOR PROVISIONS

In keeping with the objective of restoring and maintaining water quality, the Act contains two key provisions.

- **Antidegradation** policy provides that water quality standards are minimum standards, so that where actual water quality exceeds standards, it does not mean that additional pollutants may be allowed.

Section 303(d)

- **Antibacksliding** provides that permit modifications or renewals may not contain effluent limits that are less stringent than the previous permit.

Section 402(o)

WATER QUALITY STANDARDS

Section 303 of the CWA requires that states establish water quality standards as goals to be achieved, and that these standards be reviewed every three years ("Triennial Review"). Standard setting involves two steps:

- Designating uses to be protected, and
- Determining the water quality level needed to support those uses ("criteria").

Water quality criteria may be numeric or narrative, and may be based on EPA water quality criteria documents or done by the states using EPA approved methods. Opportunities for public involvement are part of this standard setting process.

Protected uses must meet CWA requirements, which means they must be "fishable and swimmable" or else the state must demonstrate that those uses are not attainable for a particular water. Water quality criteria are now required for toxic pollutants as well as conventional and non-conventional pollutants.

[Conventional pollutants include BOD, suspended solids, fecal coliform, pH; non-conventional pollutants include ammonia, phosphorus, chlorine and total phenols.]

EFFLUENT LIMITATIONS

In order to protect water quality and designated uses, Section 301 of the CWA makes discharge of pollutants unlawful unless it is permitted under the CWA. Provision is made for establishing effluent limitations based on (1) available technology and (2) water quality criteria for the waters into which the effluent is discharged.

For industrial discharges, technology-based limitations under Section 301 now require application of "Best Available Control Technology economically achievable" for that class of industry. Effluent limitations for publicly owned treatment works are based on secondary treatment. New sources are required to meet standards of performance reflecting the greatest degree of effluent reduction achievable at the time they begin discharge (Section 306).

In cases where application of technology-based effluent limitations does not allow attainment of water quality standards, more stringent controls may be required under Section 302.

For industrial dischargers to publicly owned treatment works, effluent limitations may be different from those required for discharge directly to a receiving water. These effluent limitations, or pretreatment standards, are established by the EPA to prevent the discharge of pollutants through treatment works. If, however, treatment by the POTW removes toxic pollutants contained in the industrial discharge, and those toxic pollutants do not violate the POTW's effluent standards or sludge use/disposal, then the POTW may adjust its requirements of the industrial discharger accordingly.

CONTROL OF DISCHARGES/EFFLUENT LIMITATIONS

Section 301 of the CWA prohibits discharges to surface waters except as permitted under the Act. Section 402 establishes the National Pollutant Discharge Elimination System (NPDES) program to issue permits which apply and ensure compliance with established effluent limitations. This program is administered by the EPA in cooperation with the states. Before a permit may be issued, the state must certify under Section 401 that the discharge will not result in violation of water quality standards, effluent limitations, pretreatment requirements or total maximum daily loads.

Section 405 prohibits disposal of sewage sludge except in accordance with a NPDES permit and requires the EPA to develop regulations and provide guidelines for sludge disposal.

Amendments to the CWA in 1987 expanded the NPDES program to include municipal and industrial stormwater discharge (Section 402 (p)). Permits for industrial stormwater will meet technology-based effluent limitations, while municipal permits will require controls to reduce the discharge of pollutants to the maximum extent practical. Implementation of this new provision will begin with industrial activities and municipal storm sewer systems serving a population of 250,000 or more, followed by municipal systems serving populations of 100,000- 250,000. Runoff from oil, gas and mining operations and agricultural return flows do not require permits.

The NPDES program deals with discharge of wastewater, including stormwater, into surface waters. To protect waters from pollution associated with discharge of other materials, the CWA established a permit program under Section 404 for discharge of dredged or fill material into navigable waters. This program is administered by the Army Corps of Engineers. As with the NPDES program, the states must certify that permitted discharges will not result in violations of water quality standards or total maximum daily loads.

Both of these permit programs require public notice and opportunity for comment. The states may, and are encouraged to, submit proposals to administer their own NPDES and Dredge and Fill Permit programs.

NONPOINT SOURCE MANAGEMENT PROGRAMS

Previously discussed water pollution control programs focus on point source discharges to surface waters. In 1987, the CWA was amended to include a major new section (Section 319) to identify nonpoint sources of pollution and to develop Best Management Practices and other measures to control various categories of nonpoint source pollution. States were required to identify waters which cannot be expected to meet water quality standards without additional action to control nonpoint source pollution, and to identify nonpoint source categories contributing to that pollution. Processes for identifying control measures and state and local programs were to be described, and state management programs developed. Management programs are to be developed to the extent practical on a watershed basis in cooperation with local water quality management planning agencies. This section also establishes a grant program for implementation of management programs.

WATER QUALITY MONITORING AND IMPLEMENTATION OF STANDARDS

Each state is required to prepare a biennial report which describes the quality of its navigable waters and analyzes the extent to which it protects wildlife and recreational use and the extent to which pollutant discharges have been achieved. This "305(b) Report" shall also describe nonpoint sources of pollution and make recommendations for control of those sources.

The CWA (Section 303) also requires states to identify waters for which effluent limitations are not stringent enough to meet water quality standards. Based on a priority ranking of those waters, states are to establish Total Maximum Daily Loads (TMDLs) necessary for pollutants to meet applicable standards.

If point source discharges, with effluent limitations, would interfere with attainment of water quality to assure protected uses, additional effluent limitations, including alternative effluent control strategies, must be established under Section 302.

Section 304(l) requires states to identify waters which cannot reasonably be expected to meet water quality standards due to toxic pollutants, even after application of technology-based controls. For each of these, states must identify responsible point sources and develop individual control strategies to reduce discharge of toxic pollutants within three years.

PLANNING

Section 208 provides for development of areawide waste treatment plans which identify treatment works necessary to meet anticipated municipal and industrial waste treatment needs over a 20-year period and also provides for designation of waste treatment management agencies to implement portions of those plans. These "208 Plans" are also to include a process for identification of certain nonpoint sources of pollution.

Section 303(e) requires states to have a continuing planning process, approved by the EPA, which includes effluent limitations and total maximum daily loads with schedules of compliance, priority rankings of waste treatment works needs, and elements from applicable areawide waste treatment plans.

FUNDING FOR WASTE TREATMENT WORKS

Title II of the Act provides for a grant program to fund construction of publicly-owned waste treatment works. Section 201 outlines requirements for facility plans and provides for planning funds for facilities receiving grants for construction.

In 1987, Title VI was added which provides for grants to the states for establishment of revolving funds for construction of treatment works and for implementation of nonpoint source management programs. State Revolving Fund programs replace the federal construction grant program.

DISCUSSION OF IMPACTS

Implementation/Reauthorization of the Clean Water Act

Reauthorizing legislation for the Clean Water Act was introduced into the Senate in May of 1991 (S 1081 sponsored by Senators Baucus and Chafee). Hearings have been held by the House Public Works Subcommittee on Water Resources and by the Senate Environment Subcommittee on Environmental Protection.

The Environmental and Energy Study Conference's Weekly Bulletin for July 22, 1991 refers to a GAO study on the EPA's "toxic hot spots" program which found "less than 3 percent of waters identified as toxic hot spots have been addressed with more stringent pollution controls." It also found shortcomings in monitoring and enforcement. Part of the problem is due to lack of funding, and the GAO recommends that Congress consider new ways of providing funding for implementation of the CWA.

Section 1081 would allow EPA and the states to charge fees for issuing NPDES permits. It would also require EPA to impose fees on industry and municipal wastewater treatment facilities to recover the majority of the cost of developing effluent limits and would direct states to charge fees for administration of their water quality programs.

In its "toxic hot spots" study, the GAO also recommends increased emphasis on pollution prevention. According to the Environmental and Energy Study Conference's June 24, Weekly Bulletin, Section 1081 "would put more emphasis on pollution prevention than the current law does, directing the EPA to consider changes within industrial facilities as well as end-of-the-pipe treatment when setting technology-based pollution limits." Control of nonpoint source pollution from agriculture and urban runoff through reduced pesticide use and increased street cleaning may also be considered.

Wetlands protection under Section 404 of the CWA is a controversial issue, with developers and business interests arguing that current regulations "protect lands of marginal ecological value at a great economic cost" while environmental groups are looking for more stringent protection measures. Congress has tried to address this issue through separate legislation. One proposal (HR 1330, S 1463) would rank wetlands according to ecological value, restrict EPA's role in the regulatory process, and allow developers to destroy a wetland if mitigation activities (restoration or creation of an equivalent wetland) are performed." (Reference: Environmental and Energy Study Conference Special Report, August 6, 1991, p. 16). Another bill (HR 251) would strengthen Section 404 of the CWA. It appears likely that changes may be made to definitions of wetlands, reducing the areas that would qualify as wetlands.

Federal Nonpoint Source Program

The GAO published a report in October of 1990, Water Pollution: Greater EPA Leadership Needed to Reduce Nonpoint Source Pollution and also testified before the House Public Works Subcommittee on Investigations and Oversight in May 1991 and during this update process major barriers to effective nonpoint source efforts were identified, including:

1. The inherent conflicts that exist between some federal agencies' policies and states' water quality goals,
2. Insufficient monitoring data on the scope and impact of the problem and the effectiveness of potential solutions,
3. Insufficient technical information available to the states to set state water quality standards for non-point source pollution,
4. Limited resources available to state and local governments in comparison with the magnitude of the problem, and,
5. The political sensitivities involved in controlling local land use issues that indirectly cause water pollution.

While resource constraints were identified as an underlying problem, the GAO considered this to be a reflection of overemphasis of point source programs compared with nonpoint source programs, particularly

in view of the EPA's findings that risks posed by nonpoint source pollution are greater than those by point sources. The GAO reported Section 319 funding from FY 1988-1991, showing that while \$400 million was authorized by the CWA, only \$22 million was requested and approximately \$90 million was appropriated.

GAO testimony supported the EPA's Nonpoint Sources: Agenda for the Future (January 1989) to deal with nonpoint source pollution over a five-year period, but contended that this could not be implemented due to budgetary constraints.

Pretreatment Program

The National Pretreatment Program was established by the CWA to prevent (1) interference with POTW operations resulting from discharge of pollutants the system cannot treat; (2) pass-through of untreated pollutants into receiving waters; (3) contamination of sewage sludge to the extent that various disposal options are either ruled out or become more expensive; and (4) exposure of POTW workers to chemical hazards. (Reference - "Water Pollution: Improved Monitoring and Enforcement Needed for Toxic Pollutants Entering Sewers.") The current emphasis of this program is on controlling toxic priority pollutants listed by the EPA.

All treatment plants larger than five Million Gallons per Day (MGD) are required to have pretreatment programs as a condition of their NPDES permits. Smaller plants may also be required to have pretreatment programs if nondomestic waste causes any of the problems mentioned above. The EPA has established federal standards which prohibit discharge of certain types of pollutants as well as categorical standards which apply to industrial users in specific industrial categories. The National Pretreatment Program also allows POTWs to set local discharge limits as needed to meet water quality standards or to comply with sludge management regulations.

Pretreatment programs are controlled by the POTW, which determines which of its industrial users should be regulated, issues permits with discharge limits, monitors compliance, and takes enforcement actions when necessary. Pretreatment programs must be approved by either the state, if it has NPDES and pretreatment program primacy, or the EPA.

In its 1989 report, the GAO found that industrial users were in considerable noncompliance with discharge limits but POTWs were lax in enforcing pretreatment program requirements. POTWs were reluctant to publish the required list of significant violators several reasons, including concern about potential liability if the limit violated was challenged and found not to be technically sound, or concern that users might become less cooperative. The GAO did find that some local limits may not be technically sound and that problems with monitoring programs may result in some discharge limitations not being detected.

Pretreatment programs may be affected by programs to control toxic pollutants and requirements for individual control strategies where waters are not expected to meet water quality standards because of point source discharges of toxic pollutants. Once federal standards are approved for allowable levels of toxics in sludge, pretreatment programs may have to be revised as well.

CWA Enforcement

In May 1991, the GAO provided testimony to the House Public Works Subcommittee on Water Resources "Observations on EPA and state enforcement under the Clean Water Act." Several GAO reports were cited which "consistently identified a reluctance on the part of EPA and the states to take strong enforcement actions," specifically on the NPDES program and the pretreatment program. One major issue identified was need for criteria to determine when noncompliance is "significant" enough to warrant an enforcement action. At one time this was a problem with enforcement of pretreatment program requirements, but the EPA has since established a definition. However, this has not been done for sludge management even though lack of criteria was identified as a problem in the GAO's 1990 report on the EPA's interim sludge management program. The GAO testimony also recommends that the EPA develop criteria as to what constitutes "timely and appropriate" action when a violation occurs, and that EPA provide greater oversight of regional and state enforcement activities.

