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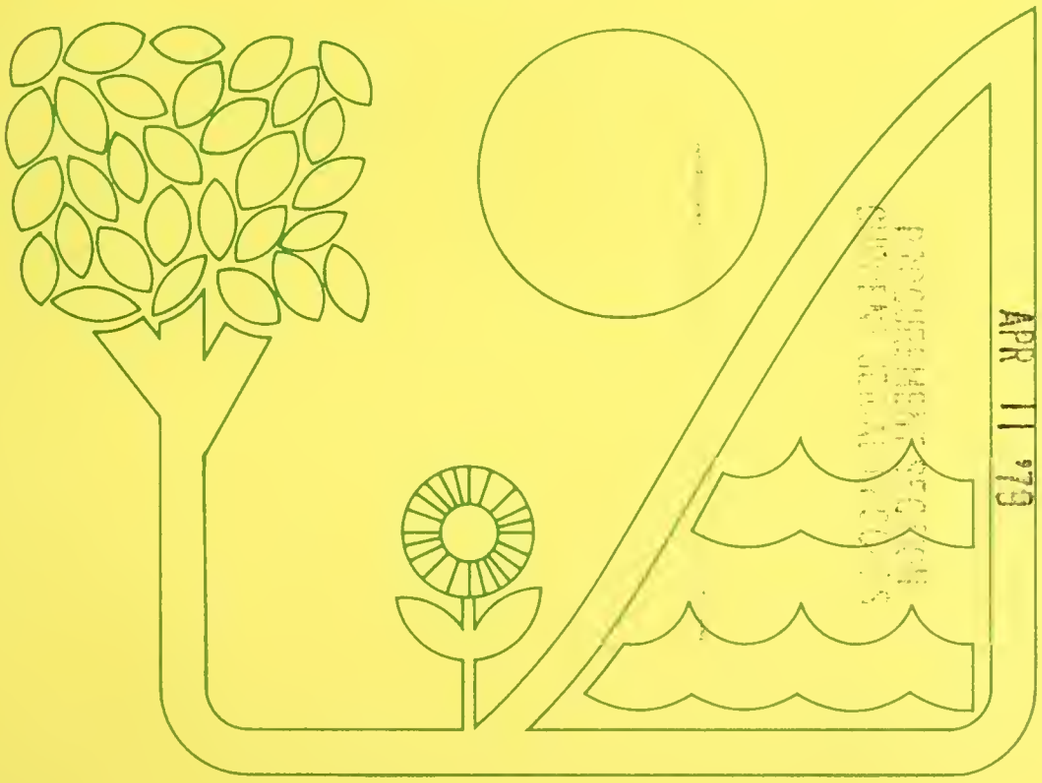

Analysis of Clean Water Act of 1977

by

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The Clean Water Act of 1977 is a compendium of amendments to Public Law 92-500 of 1972, which was a complete revision of the Federal Water Pollution Control Act. Among other things, Public Law 92-500 established a nationwide permit system for point source discharges, established time-phased, progressively more stringent, technological performance standards for all point sources, and set forth national water quality goals of "fishable, swimmable waters" by 1983 and elimination of discharges into waters by 1985. The starting point for many provisions of the Clean Water Act of 1977 is the 1976 Report and recommendations for "mid-course corrections" of the National Commission on Water Quality. The National Commission was established under Public Law 92-500 to evaluate the technological aspects of achieving, and the economic, social and environmental effects of achieving or not achieving, the effluent limitations and water quality goals established for 1983 by the same Act. The Commission found that the 1983 requirement of uniform attainment of "best available technology economically achievable" (BAT) was costly and inflexible and should be postponed. It found that--if the Nation also undertook a number of other measures (including elimination of toxic

pollutants and measures to control agricultural and nonpoint sources of pollution)--it could achieve the 1983 water quality goal of fishable, swimmable waters, while using 1977 performance standards of secondary sewage treatment for publicly owned point sources and "best practicable technology" (BPT) for industrial sources.

Most of the Clean Water Act's provisions, like those of Public Law 92-500, are concerned with municipal and industrial point sources, although the Act of 1977 contains more provisions that potentially affect agriculture than previous water pollution laws. Keeping the act in perspective calls for analysis of major nonagriculture related sections of the act before agriculture related sections. It is probably also true that, if the non-agriculture related sections result in achievement of water quality goals, less attention will be paid to agricultural pollution control.

Point Source Performance Standards

The Clean Water Act postpones the 1977 deadline for secondary treatment for municipal treatment plants (this was necessitated by the fact that the deadline is past and less than half the facilities are in compliance). The Act provides that the deadline for secondary treatment can be postponed a maximum of six years, until July 1, 1983--if necessary construction cannot be finished in time or if authorized Federal funding is not made available. 1/ EPA may give a comparable extension to the compliance requirements for an industrial point source that made good faith arrangements, before July 1, 1977, to have its effluent treated by a municipal treatment plant that has fallen behind its construction schedule. 2/

1/ SEC. 45, Pub. L. 95-217, 91 Stat. 1516, 1585, § 301(i)(1) Federal Water Pollution Control Act as amended (hereinafter citations to this statute will consist of a section of Public L. 95-217 and the corresponding section of the Federal Water Pollution Control Act).

2/ SEC. 45, § 301(i)(2)

Funding authorities for treatment plant construction grants have been extended five years. The authorization is $4.5 billion for fiscal 1978 and $5 billion for each of the following four years. 3/

The Clean Water Act also provides for postponement of the 1977 (BPT) requirement for some industrial sources, which will allow them to remain in business. (The great majority of industrial sources are, at least on paper, in compliance with this requirement). The Act gives EPA discretion to extend the 1977 deadline if the company is acting in good faith, has the facilities under construction, and has made a commitment of resources (in the form of contracts or other securities) to achieve compliance not later than April 1, 1979. The extension must not result in the imposition of additional controls on any other source. 4/

With respect to the old 1983 deadline for industrial point sources to install BAT, the Clean Water Act divides such sources into three categories: (1) conventional (including biological oxygen demanding pollutants, fecal coliform, suspended solids and pH); 5/ (2) toxic pollutants; 6/ (3) non-conventional pollutants (that is all pollutants that are neither conventional nor identified as toxic--less dangerous chemicals and metals, for example). 7/

For conventional pollutants the Clean Water Act has created a new acronym--BCT, for "best conventional pollution control technology" to be defined by EPA regulations and gives industrial sources until July 1, 1984 to comply. 8/ EPA regulations defining BCT are required to take into

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3/ SEC. 30, § 207
4/ SEC. 56(c), § 309(a)(5)(B)
5/ SEC. 48(a), § 304(a)(4)
6/ SEC. 53(a), § 307(a)
7/ SEC. 42(a), § 301(b)(2)(F)
8/ SEC. 42(a) § 301(b)(2)(E)

account the reasonableness of the relationship between the costs of attaining effluent reductions and the benefits of effluent reduction, the age of equipment and facilities and other factors. 9/ But there are no waivers for conventional pollutants, which means there will be no further hearings on case-by-case exemptions. 10/ However, it will take some time to determine what BCT is. It is at least as high as BPT and is expected to be a higher standard than BPT in some industries but may not be as high as BAT would have been in others.

Toxic Pollutants

The changes the Clean Water Act has made in control of toxic pollutants are considered very significant. Public Law 92-500 required EPA to set effluent standards for such substances that provided an "ample margin of safety" and could amount to outright prohibition, where appropriate. But because the law required EPA to hold a hearing before putting a single substance on the toxic pollutants list and to provide enough scientific data to sustain the burden of proof, EPA made little progress in setting such effluent standards. This resulted in several court suits against EPA by environmental groups and a consent decree in 1976 which identified a list of suspected "toxics" and classes of toxics and directed EPA to write effluent limitations for those pollutants. 11/ The Clean Water Act has incorporated this list of toxics into the Act and authorized EPA to add or remove pollutants from the list without necessity for hearing. Judicial review of EPA's decision in revising the list is limited to the question of whether it was arbitrary. 12/

9/ SEC. 48(b) § 304(b)(3)(B)
10/ SEC. 43, § 301(9)(1)
11/ Nat'l. Resources Defense Council vs Train, No. 75-172, 8 ERC 2120(DDC June 9, 1976).
12/ SEC 53(a), § 307(a)(1).

The Clean Water Act allows no waivers for cleanup requirements for toxics. 13/ All sources will have to meet BAT for toxics by July 1, 1984, the Act also gives EPA authority to develop a more stringent standard than BAT (which may amount to prohibition) in which case a hearing is available, and judicial review may consider whether EPA's decision was based on substantial evidence. 14/

Awarding Grants--Pretreatment--Controlling Spills

Other amendments give the States much of the control over selection of projects for construction grants, although EPA retains authority to hold a public hearing on the States' priority list and remove projects that will violate water quality standards. Twenty-five percent of State funds have been reserved for major sewer system rehabilitation, new collector and intercepter sewers, and correction of combined sewer overflows. 15/ (The new collector and interceptor sewers are exactly the type of projects EPA has sought to eliminate from the construction grant program as being more related to stimulating the construction industry and accomodating urban growth than controlling pollution). 16/ The act also provides for pretreatment of industrial wastes discharged into municipal systems 17/ and EPA adoption of regulations prescribing best management practices as permit conditions for industry, to control spills and leaks of toxic and hazardous substances. 18/ There is also a provision by which

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13/ SEC 43, § 301(g)(1); SEC 53(c), § 301(l)
14/ SEC 53(a), § 307(a)(2)
15/ SEC 40, § 216
16/ Environmental Quality-1976(7 CEQ Ann. Rep. 20 (1970)
17/ SEC 54(a), (c)(1), §§ 307(b)(1), 307(d), 402(b)(8)
18/ SEC 50, § 304(e)

public agencies may apply for construction grants for privately-owned sewage systems serving small residential communities or commercial establishments. 19/

Alternative Treatment Methods

The Act also contains a series of amendments intended to promote alternative wastewater treatment techniques, including land disposal techniques. EPA is directed to promulgate guidelines for identifying and evaluating "innovative and alternative wastewater treatment processes and techniques" within 180 days of enactment.20/ After fiscal 1978, EPA cannot make grants to treatment works unless the applicant has fully studied and evaluated such processes and techniques, including reclaiming and reusing water, spraying effluents on land for fertilizer, improving management systems for municipal and industrial wastes, and using confined disposal of pollutants. 21/ If a waste treatment project makes use of such methods, EPA has discretion to fund it, even if cost effectiveness studies show its life-cycle costs are up to 15 percent higher than its most cost effective alternative. 22/ Furthermore, until the end of fiscal 1981, EPA grants to treatment works making use of alternative wastewater treatment methods may amount to 85% of construction costs instead of the 75 percent for regular sewage treatment plants. 23/ Pub. Law 92-500 made land acquisition for land application of residues a cost included in construction grants. 24/ The Act of 1977 has extended this to include land acquisition for storage of treated wastewater

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19/ SEC. 14, §201(h)
20/ SEC. 49, §304(d)(3)
21/ SEC. 12, §201(g)(5)
22/ SEC. 16, §201(j)
23/ SEC. 17, §202(a)(2)
24/ SEC. 2, Federal Water Pollution Control Act Amendments of 1972, 86 Stat. 816, 844, §212(2)(A) Federal Water Pollution Control Act.

prior to land application. 25/

In addition, industrial point sources (including feedlots) may receive time extensions for compliance with BAT permit requirements up to July 1, 1987, where needed to install innovative control techniques or production processes that promise either to reduce pollution significantly below BAT requirements or to significantly reduce pollution control costs (in which case they must have potential for industry-wide application). 26/ Other alternative treatment provisions in the Clean Water Act include:

(1) An EPA report to Congress, by October 1978, on the status of the use of municipal secondary effluent and sludge for agricultural and other purposes. This must include a report on legal, public health, economic and other impediments to such use and any recommendations for legislation encouraging or requiring use of sludge for agriculture and other purposes. 27/

(2) A clearinghouse for alternative treatment information, and grants for technical evaluation of alternative treatment works and dissemination of technical information concerning them. 28/

(3) A provision that, beginning in fiscal 1980, all new Federal treatment facilities must include alternative treatment methods, unless the life-cycle cost of the alternative treatment is more than 15 percent higher than the most cose effective alternative. 29/

25/ SEC. 37, §212(2)(A)
26/ SEC. 47, §301(k)
27/ SEC. 71, §516(d)
28/ SEC. 7, §104(q)(3); Sec. 9, §105(j)
29/ SEC. 60, §313(b)(2)

(4) A provision to set aside 4 percent of the construction grant funds alloted to any state with a rural population of more than 25 percent for alternatives to conventional sewage treatment works for small communities (populations no larger than 3,500 or highly dispersed sections of larger communities). 30/

(5) A provision to establish procedures for permitting the use of requested specific waste discharges for approved aquaculture projects. 31/

The provisions for alternative treatment of point source effluents and residuals are potentially the most significant part of the Clean Water Act. They appear to have given EPA every tool Congress could think of to promote and expedite recycling of wastewater and land treatment. If toxic chemicals and metals (and economic and institutional problems) do not cause insuperable obstacles to widespread use of land treatment, these provisions will be the principal means used to achieve national water quality goals.

Section 208 Planning

The chief means for nonpoint source controls in the Federal Water Pollution Control Act remains Section 208 of Public Law 92-500, which calls for nationwide area-level point and nonpoint source waste management plans that will include technical and institutional provisions for implementation.

The Clean Water Act contains a few provisions that change Section 208. including provisions that Section 208 plans provide for identification and abatement of pollution from irrigation return flows in the same way they

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30/ SEC. 27, §205(h)
31/ SEC. 63, §318
32/ SEC. 33, §§208(b)(2)(F), 502(14), 402(1).

provide for pollution from land runoff. (The act also provides that irrigation return flows are no longer to be considered point sources or to require Section 402 permits from the National Pollutant Discharge Elimination System). 32/

Other amendments to Section 208 provide that areawide planning agencies designated after 1975 and State water quality management planning agencies may have three years from initial grant (rather than two) to complete their initial plans. 33/ This has the effect of extending the court order deadline of November 1978 for submission of all initial State plans another year. Another amendment provides that all planning grants to State and areawide agencies shall be 100 percent grants for the first two years but may not exceed 75 percent for the third year and that any subsequent "continuing planning process" grants may not exceed 75 percent. 34/

Agricultural Cost Sharing

Of greatest significance, the Clean Water Act gives USDA, acting through SCS or other agencies, authority to establish a program of contracts with farmers and other rural landowners for installation of best management practices (BMP) prescribed by approved 208 plans for nonpoint source pollution control. The contracts would be of 5 to 10 years duration and provide that USDA give technical assistance and share the cost of carrying out BMP, including labor costs. The Federal cost share would normally not exceed 50 percent but USDA may designate a higher cost share in cases where (1) the main benefits of the measures are related to improving off-site water

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32/ SEC. 33, §§ 208(b)(2)(F), 502(14), 402(1)
33/ SEC. 31(a), § 208(b)(1)(B)
34/ SEC. 31(b), § 208(f)(2)

quality, and (2) the matching share requirement would place a burden on the landowner which would probably prevent him from participating in the program. 35/

The Act authorizes appropriations of $200 million for fiscal 1979 and $400 million for fiscal 1980 to carry out the agricultural cost sharing program. 36/ But it remains to be seen whether this funding will be appropriated and obligated in time. Experience with 1973-1974 208 planning funds (which were appropriated to EPA but not obligated to planning agencies within the statutory period) indicate that, if USDA does not obtain appropriations to initiate a cost sharing program in time, new appropriations authorizations will be needed. 37/

Section 404

The Clean Water Act also resolved disputes concerning the Section 404 program of Corps of Engineers permits for discharges of dredged or fill materials subject to EPA guidelines. The Corps remains responsible for issuing all permits required for discharges into navigable waters as traditionally defined, 38/ and retains backup authority, even after delegation of authority to States, for permitting all discharges of dredged and fill materials into other waters of the United States. 39/

Discharges resulting from certain categories of activities that USDA has advocated be exempt from permit requirements are now exempt, except where they are incidental to bringing areas of navigable waters into new

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35/ SEC. 35, § 208(j)(1),(2)
36/ SEC. 35, § 208(j)(9)
37/ Nat'l. Assoc. of Regional Councils v. Costle, 564 F 2d 583 (D.C. Cir. 1977)
38/ SEC. 67(b), § 404 (g)(1)
39/ SEC. 67(b), § 404(1).

use and actually impede the flow and circulation or limit the extent of such waters. The exempt activities include normal agricultural activities (plowing, cultivating, harvesting and so forth) maintaining drainage and irrigation ditches, constructing and maintaining farm, forest or mining roads in accordance with best management practices, and maintenance, including emergency reconstruction, of currently serviceable dikes, dams, levees, causeways, and other flood protection and transportation structures. 40/ The Corps is also given authority to issue general permits on State, regional or nationwide bases for nonexempt categories of activities that have minimal individual and cumulative environmental effects. 41/

The Act provides that the Corps shall delegate authority to administer the 404 permit program to qualified States, where discharges into U.S. waters other than those traditionally considered navigable waters are concerned. 42/ However, EPA must approve administrative and enforcement provisions of proposed State programs, taking into account the comments of the Fish and Wildlife Service. State permit programs are required to comply with the requirements of Section 404, including guidelines concerning toxic pollutants and ocean discharge criteria, provision for public hearings, inspection and monitoring and, in general, be as stringent as the Corps programs. 43/

40/ SEC. 67(b), § 404(f)
41/ SEC. 67(b), § 404(e)
42/ SEC. 67(b), § 404(g)
43/ SEC. 67(b), § 404(h)(1)

EPA retains certain supervisory powers over State programs. After public hearings it can withdraw approval of State programs that are not complying with the requirements of Section 404, in which case the Corps shall resume jurisdiction for permitting discharges into the waters included in the State program. 44/ EPA is also authorized to review all applications for State permits (after obtaining and considering comments from the Corps and Fish and Wildlife Service) except those relating to categories of discharges that it waives when it approves the State program or that its own regulations have specified it will not review. 45/ If EPA objects to the issuance of a permit and the State disagrees, EPA must hold a public hearing on the issue. EPA's decision then governs. If the State refuses to revise the permit according to EPA decision, the Corps may reassume jurisdiction and issue such revised permit. 46/

Another amendment to Section 404 provides that discharge of dredged or fill material as part of the construction of a Federal project cannot be regulated under Section 404. However, the environmental impact statements for such projects must include the same information that would be required for a permit application and must be submitted to Congress before the actual discharge of dredged or fill material and before authorization of such project or appropriation of funds for construction. This exemption does not apply if the discharged material contains toxic pollutants. 47/

44/ SEC. 67(b), § 404(i)
45/ SEC. 67(b), § 404(j), (k),(l)
46/ SEC 67(b) § 404(j)
47/ SEC 67(b) § 404(r)

Other provisions amending Section 404 provide that the Corps obtain Fish and Wildlife Service review of all permit applications 48/ and that compliance with the 404 permit requirement be used to implement (and accepted as) compliance with provisions of the act concerning water quality standards, toxic discharges and ocean discharges. 49/ The act also provides that interagency agreements be drawn up between the Corps, EPA, USDA, Commerce, Interior, and Transportation to eliminate duplication, needless paperwork and delays in issuance of Section 404 permits. 50/

48/ SEC 67(b) § 404(m)
49/ SEC 67(b) § 404(p)
50/ SEC 67(b) § 404(q)