

Wastewater Permitting and Finance: New Issues in Water Quality Protection

By Larry Morandi, Program Manager

Reprinted with permission from the National Conference of State Legislatures (NCSL) State Legislative Report, May 1992.

Congressional passage of the 1972 Federal Water Pollution Control Act (Clean Water Act) established a national program to control the discharge of pollutants into surface waters. The legislation required a National Pollutant Discharge Elimination System (NPDES) permit for discharging pollutants from *point* sources to U.S. waters—generally industrial process wastewater and sewage from municipal treatment plants. States could assume authority over the program once their permit systems were approved by the Environmental Protection Agency (EPA). Thirty-eight states (plus the Virgin Islands) currently operate EPA-approved NPDES programs (see Appendix A); EPA issues wastewater discharge permits in the remaining 12 states.

The 1987 Clean Water Act amendments expanded the scope of NPDES coverage, increasing state permitting responsibilities and the costs of administering the program. Stormwater discharges, often viewed as a *nonpoint* source of pollution caused by urban runoff and construction activities, have, in fact, been recognized as point sources by the courts but have not been specifically covered under EPA regulations. The 1987 congressional legislation changed that, however, requiring NPDES permits for large and medium municipal storm sewer discharges, stormwater discharges associated with industrial activities, and those that contribute to violations of water quality standards. States with NPDES authority must now incorporate stormwater requirements into their permit programs if they are to retain program authority.

Combined sewer overflows (CSOs)—untreated pollutant discharges from systems that collect both stormwater and domestic sewage—have not been properly regulated in the past. In 1989, the EPA adopted a national CSO strategy that confirms that discharges from combined sewer systems are point sources of pollution requiring a permit for continued operation. States with combined sewer systems must now include appropriate CSO controls in NPDES permits. While a state's administrative costs may not be as high for CSOs as for stormwater regulation (because of the lower number of systems involved), the capital costs incurred by local governments to construct necessary infrastructure could be significant. State financial assistance may be required if municipalities are to comply with new EPA regulations.

This report examines three issues that increasingly are occupying a greater share of a state's water pollution control efforts: (1) stormwater management, (2) combined sewer overflows, and (3) alternative funding mechanisms to administer water quality programs and provide financial assistance for new facilities. The funding issue clearly dominates state water administrators' concerns—especially as the majority of states wrestle with substantial general fund budget shortfalls—and is treated both as a separate section and integrated into the case study discussions throughout the report. The report makes extensive use of state case studies and emphasized recent state legislation to describe how states are attempting to manage increasing wastewater permitting responsibilities. This report is part of a project supported under a grant agreement with the United States Environmental Protection Agency, Office of Wastewater Enforcement and Compliance (X- 819181-01-0), to assist states in implementing wastewater permitting programs.

Reinterpreting the Clean Water Act

Stormwater

Pollutants in stormwater discharges from separate storm sewers, urban runoff, construction activities, waste disposal and natural resources extraction account for roughly 30 percent of current water quality standards violations. They may contain heavy metals, fecal coliforms, pesticides, suspended solids and nutrients. The 1987 Clean Water Act amendments required EPA to develop a permit program for stormwater runoff that would be authorized to those

states with NPDES authority. The federal regulations require all industrial stormwater discharges that enter waters of the United States, including municipal separate storm sewers, to obtain an NPDES permit. Industrial facilities subject to regulation include manufacturing facilities, construction operations, hazardous waste facilities, landfills, recycling facilities, power plants, mining operations and major transportation facilities.

Industrial facilities have three options to obtain discharge permit approval: (1) submit an application for an individual permit, (2) be a part of a group application of similar operations and discharges, or (3) file a notice of intent to be included in a general permit already issued. General permits will reduce the regulatory burden on most facilities and are encouraged by EPA and state program administrators. The application deadline for individual permits is October 1, 1992. Group applications are filed in two parts; the deadline for part one was September 30, 1991, with part two due May 18, 1992. The deadline for notice of intent applications to be included in a general permit will be set in each general permit issued.

Certain municipal separate storm sewer systems also require NPDES permits. EPA regulations cover storm sewers identified in each of 173 cities with populations in excess of 100,000, and in each of 47 counties having populations greater than 100,000 in unincorporated urbanized areas (other areas identified by EPA or states may also require regulation). The two-part application deadlines for large municipalities (250,000 or greater population) was November 18, 1991, for part one, and November 16, 1992, for part two; for medium municipalities (100,000 to 250,000 in population), May 18, 1992 and May 17, 1993.

State operation of a stormwater permit program can be expected to double or triple the number of industrial and municipal entities subject to regulation under the NPDES program. EPA estimates that as many as 100,000 industrial discharges (a conservative number based on discussions with state agency staff) will become subject to state regulation. The increased responsibilities will entail significant new state administrative costs.

Failure to adhere to EPA stormwater regulations does not necessarily mean that a state will lose authorization for the NPDES program. The amount of federal grant money under section 106 of the Clean Water Act (which comprises a significant portion of many state water quality budgets) could eventually be reduced, however, if a state were not to include stormwater management in its NPDES program.

A major impetus for states to incorporate stormwater permitting into their NPDES programs is coming from regulated industries. If industries do not have permits in place by EPA-designated deadlines, they will be out of compliance with federal regulations and be subject to penalties, including citizen suits. Only the states- not EPA- can issue stormwater permits in the 39 states with NPDES authority. Twenty-eight of those 39 states have legal authority to develop general permits for stormwater discharges, the most effective means of complying with federal regulations (see Appendix B); two have them in place, 21 are developing them. The principal legislative needs are for enabling legislation to administer stormwater permits and alternative funding mechanisms to cover administrative and infrastructure costs for stormwater management systems.

Combined Sewer Overflows

Combined sewer systems are physical structures that carry both domestic wastewater and stormwater to sewage treatment plants. During heavy rainfall or snowmelt, the volume of waste in the system may exceed the capacity of the sewage treatment plant, resulting in combined sewer overflows (untreated discharges) into receiving waters. Combined sewer overflows are located primarily in 11 states in the Northeast and Great Lakes area, accounting for 85 percent of the water quality problems associated with CSOs nationwide. States generally have not been issuing permits that properly control CSO discharges even though they are a point source of pollution subject to regulation in a manner similar to municipal and industrial wastewater discharges.

The principal costs in regulating CSOs are associated with municipal capital expenditures for construction of treatment facilities; state administrative costs are comparatively small. In FY 1991 and FY 1992, EPA made \$11.6 million available to states under section 104 of the Clean Water Act to fund CSO demonstration projects. Because CSOs are part of state wastewater treatment programs, revenue in state revolving funds (SRFs) created pursuant to the 1987 Clean Water Act amendments to fund the construction of municipal wastewater treatment plants can be

used to provide loans and other forms of financial assistance to local governments for CSO abatement facilities. Special SRFs also have been established in some states for the same purpose.

The capital costs of regulating CSOs are potentially high. Since enactment of the construction grants program by Congress in 1972 as part of the Federal Water Pollution Control Act, 9,000 grantees have received \$60 billion in federal funds for wastewater treatment facilities. For comparison, the 1,200 CSO systems currently serving 43 million people may require expenditures of \$20 billion to \$200 billion to comply with water quality standards (depending on which version of a reauthorized Clean Water Act pending before Congress is passed).

EPA issued its National Combined Sewer Overflow Control Strategy on August 10, 1989, emphasizing that CSOs are point sources of pollution subject to NPDES permits. States were required to develop statewide permitting strategies by January 1, 1990. As of April 6, 1992, 30 states had submitted CSO strategies to EPA, 28 have been unconditionally approved, two have been conditionally approved (see Appendix C). The balance of states are not required to submit a strategy either because they do not have combined sewer systems or they have demonstrated that there are no overflows from such systems.

State Implementation Case Studies

The following case studies describe state programs for stormwater management and combined sewer overflows. Because a major issue in operating each program concerns costs, it is difficult to divorce the *policy* aspects of each illustration from *funding* considerations. Unlike the case studies detailing alternative funding mechanisms in the last section of this report, these examples address financial issues linked primarily to infrastructure needs for stormwater and CSO pollution abatement.

Stormwater Management

Florida. Although Florida does not have primacy over the NPDES program, the state has developed a stormwater permit program and issued regulations for its implementation. The Department of Environmental Regulation's (DER) stormwater discharge regulations (Chapter 17-25.001) are designed to preclude discharges that would result in violation of water quality standards. The regulations stipulate design and performance standards for storm water discharge facilities, provide for the issuance of general permits for specified classes of discharges, and require individual construction permits for those discharges not included in group applications. DER is authorized to delegate the permit program to local governments and regional water management districts. One of the state's five water management districts- the Southwest Florida Water Management District- has received delegation authority.

The Legislature also enacted legislation to deal with stormwater runoff. Senate Bill 484, passed in 1989, authorizes local governments to establish stormwater utilities empowered to levy user fees to cover the costs of planning, constructing, operating and maintaining stormwater management facilities such as sediment collection systems and storage ponds. The legislation also authorizes counties and municipalities to establish stormwater management system benefit areas and assess property owners within those areas a fee on a per-acre basis to cover the local program's infrastructure and administrative costs. At least 30 counties and municipalities have developed stormwater management programs through one or both of the options in Senate Bill 484. An additional 50 local governments are developing programs.

Senate Bill 484 originally authorized DER to assist local governments in paying for stormwater infrastructure. It expanded the coverage of the wastewater treatment SRF to make stormwater eligible for federal SRF capitalization grants and state matching funds. The SRF could be used for loan guarantees, to purchase loan insurance and to refinance local debt through the approval of new loans.

The SRF is capable of providing between \$85 million and \$95 million in financial assistance to local governments each year. The department estimates, however, that wastewater construction needs alone will amount to \$5 billion over the next 20 years (or \$250 million annually), with nonpoint source construction needs, including stormwater,

requiring an additional \$5 billion over the same period (for a total of \$500 million annually). Because of the wastewater needs, the Legislature amended the SRF in 1991 (Senate Bill 1120) to require that financial assistance be used solely for construction of wastewater treatment facilities.

Delaware. Delaware passed legislation in 1990 (Senate Bill 359) that augmented its existing sediment control law with a permit program for new stormwater discharges. The act authorizes the Department of Natural Resources and Environmental Control (DNREC) to develop a stormwater management program that includes a permit fee schedule. DNREC issued regulations in January 1991 to implement the program. The regulations promote delegation of the permit responsibility to local governments; if local governments do not want jurisdiction, the department will run the program under the state's NPDES authority.

The program has been delegated to permit-issuing authorities in each of the state's three counties. The average permit fee for new construction activities is \$80 per acre of development (because of a lack of new construction, the local programs are running slight deficits). DNREC is developing a general permit program for existing stormwater discharges required to be permitted under EPA regulations. Like Florida's law, the legislation also authorizes the creation of stormwater utility districts as an alternative funding source to sole reliance on permit fees. DNREC anticipates that it will take at least five years for utilities to be created.

New Jersey. Legislation enacted in 1988 (N.J. Stat. Ann., 59:25-29) created the Municipal Stormwater Management and Combined Sewer Overflow Abatement Fund. The fund is separate from the state's SRF for wastewater and is administered by the Department of Environmental Protection and Energy.

It was set up to provide grants to municipalities covering 90 percent of the costs of inventorying and mapping stormwater systems, and planning and design work to eliminate unpermitted connections of stormwater systems and sanitary sewers. Ninety-four municipalities in four coastal counties are eligible for the grants. The department has awarded \$1 million for planning and design work; another \$5.35 million will be provided for inventorying and mapping purposes.

To help finance facility construction needs, the Legislature passed the Stormwater Management and Combined Sewer Overflow Abatement Bond Act in 1989. The legislation authorized the issuance of \$50 million in general obligation bonds (subsequently approved by the electorate) to provide grants and low-interest loans (2 percent) to local governments to offset the costs of stormwater and CSO capital projects.

Combined Sewer Overflows

Because CSO programs are being incorporated into existing state NPDES permit programs by regulatory agencies, there has been little legislative involvement in establishing such programs. Most of the state legislation provides financial assistance to local governments for the construction of CSO abatement facilities. Loan and grant programs have been developed using either SRFs established to wastewater treatment facilities or separate funding mechanisms for grant purposes to cover both infrastructure and planning and design work.

Wisconsin.

The Department of Natural Resources (DNR) is authorized by statute to provide financial assistance to municipalities for the construction of facilities to abate discharges from CSOs. The legislation (Wis. Stat. Ann., 144-242) authorizes grants of up to 50 percent of the local construction costs.

The CSO financial assistance program was set up in 1981, six years before the Clean Water Act amendments established the SRF program. The state had provided significant amounts of financial assistance through other state grant programs before 1981. Under the Outdoor Recreation Grant Program, the state made 800 CSO grant awards totaling over \$155 million to municipalities from 1969 through 1986. The separate Wisconsin Fund and the CSO financial assistance program allocated over \$1.1 billion in grants to 800 recipients during the period 1979-1991 (the CSO program accounted for \$184 million of that combined amount). The principal source of revenue for construction of CSO facilities has been general obligation bonds.

Wisconsin DNR has expressed concern over proposed provisions in the Clean Water Act amendments currently before Congress that would reestablish a federal construction grants program (which was phased out as part of the 1987 amendments) specifically for CSO abatement. The department believes that federal funds should continue to be channeled through SRFs for use in resolving state-specific environmental needs rather than being mandated for one program that the more environmentally progressive states have already addressed. DNR contends that a CSO grant program would reward those states that have failed to act and deny access to scarce federal money to those that have provided considerable financial resources to local governments to clean up their problems.

Vermont. The state's CSO program provides both loans and grants from separate accounts to local governments to finance necessary infrastructure costs. Legislation (Vt. Stat. Ann. 10-1624a) authorizes the Department of Environmental Conservation to provide zero-interest loans from the state's wastewater SRF to municipalities to cover 50 percent of facility costs (with a repayment period of 20 years), and to award grants from a separate fund to defray 25 percent of project expenses (a 25 percent local match for the balance). Since the CSO financial assistance program's inception in 1989, \$20 million has been approved for the city of Burlington's \$52 million CSO project needs. Smaller applications from other municipalities are pending.

Michigan. The Department of Natural Resources began issuing permits for discharges from combined sewer systems as part of its NPDES permit program in 1988 (one year before EPA published its national strategy). Attention was diverted to CSOs once priority wastewater treatment projects received funding from the state's SRF. The legislative involvement has concentrated on expanding the availability of financial aid. Bills being considered this session would create a Municipal Pollution Control Fund to buy down interest rates on bonds issued by municipalities for facilities that correct or separate combined sewer systems (SB 362), and would authorize municipalities to issue general obligation bonds for the construction, improvement or replacement of systems designed to eliminate CSOs (SB 364). As part of a separate funding issue, Wayne County (the Detroit area) has received a \$46 million congressional appropriation for demonstration projects to control CSOs.

Alternative Funding Mechanisms

States traditionally have funded water quality programs with general fund revenue, that is, legislative appropriations from income and sales tax receipts or bond proceeds. Given the magnitude of new federal requirements and budget shortfalls in most states, alternative funding mechanisms may have to be found. States increasingly are looking toward the use of fees to cover their program administration costs.

A fee is generally a charge for a specific service rendered or a benefit received. The use of fees to partially or fully finance water quality programs is based on three rationales: (1) fees can be an effective means to require users or beneficiaries of water quality services to pay the costs of providing them; (2) fees require those parties responsible for environmental degradation to pay for its remediation; and (3) if set high enough, fees can serve as a disincentive to continue an activity that causes water pollution.

Permit fees associated with a state NPDES program should be set at a level that will generate sufficient revenue to cover the complete costs of administering the program (unless a base level of general fund support is provided). Opposition from the regulated community may be lessened if fee revenue is dedicated to a special fund earmarked for defraying the costs of administering the program (as opposed to being deposited in the state general fund for appropriation to other programs).

Permit fee structures may include any of the following components: (1) a flat fee for all dischargers within the same category regardless of the discharge volume; (2) a variable fee based on staff time and other resources used to process each fee; and (3) a discharge fee, in addition to an application fee, based on the quantity or toxicity of the discharge. New Jersey's NPDES fee system (Water Pollution Control Act Regulations, 7:14A- 1.8) illustrates how various factors may be incorporated into the actual fee. The fee equals the *environmental impact* of the discharge times a fee *rate* plus a *minimum fee*. The environmental impact represents the Department of Environmental Protection and Energy's assessment of the potential risk of the discharge to the environment. The rate is derived from a formula based on the department's total budget, minimum fees and environmental impacts of all discharges in the same category. The minimum fee for each category is set in the regulations. Similarly, the Massachusetts Water Resources Authority (a local government sewer district, not a state agency) has proposed discharge fees

ranging from \$1,300 to \$5,200 based on the toxic of each discharge. The fees would finance the agency's costs in monitoring discharges into its sewer system.

Most states set fees through an agency rulemaking process to afford affected parties an opportunity to comment on the fee levels and to provide flexibility in changing fees in response to changing program needs. The legislature may enact the fees into law based on proposed fee levels contained in an agency's budget request.

State Case Studies

The following case studies illustrate different state approaches for assessing fees to fund NPDES programs. Some states adopt the fees through legislation, others authorize an agency to establish them through a rulemaking process. Revenue generated may be dedicated to a special fund or deposited in the state's general fund for legislative appropriation. The amount of revenue raised through alternative funding mechanisms in comparison to actual program budgets is included in each case study.

New York. The permit fee scheme for New York's State Pollutant Discharge Elimination System (SPDES) is set in statute (N.Y. Env. Con. Law, 72-0602). The schedule serves as a threshold level; the Department of Environmental Conservation (DEC) sets the actual fees through regulations. The fee levels vary according to the volume of wastewater discharge. They range from \$100 to \$200 for private, commercial or institutional discharges; \$375 to \$37,500 for municipal and industrial facilities; and \$40,000 for power plants. The original fee schedule was enacted in 1983. The most recent amendment to the legislation occurred in 1989 when the fees were more than doubled for most categories of discharge (there are 17 categories in total).

Fee revenue is deposited in a segregated account but does not go back to DEC to cover the department's SPDES administrative costs. The fees have generated \$9.5 million annually; the department's SPDES budget is close to \$9 million, approximately \$3.5 million of which is a general fund appropriation with the balance part of an EPA grant. Because the SPDES program does not have access to the fee revenue and the costs of permitting discharges in New York is escalating, DEC has refused to accept permit authority for the stormwater program (the department estimates that 35,000 stormwater discharges may require permits). Since the state has NPDES delegation, EPA is precluded by federal law from issuing stormwater permits. The funding problem has resulted in inadequate regulation of a major pollution source.

Colorado. The Water Quality Division in the Department of Health has the authority to assess permit fees for the NPDES program [Colo. Rev. Stat., 8-502(l)(b)] which are subject to legislative approval through enactment in the statutes. The fees are based on category of discharge and volume of discharge, where appropriate, within each category. For example, fees for domestic wastewater from mechanical plants range from \$285 annually for less than 20,000 gallons per day, to \$11,605 annually in excess of 100 million gallons per day. Industrial discharge fees to publicly owned treatment works with pretreatment programs range from \$600 annually for less than 10,000 gallons per day, to \$1,200 annually for greater than 50,000 gallons per day.

Revenue raised from the permit fee program is dedicated to a separate Water Quality control Fund to cover the division's costs in administering the NPDES program. A portion of the division's expenses are provided from state general funds. Of note is a statutory provision that states "it is the intent of the General Assembly that a portion of the expenses of the discharge permit system be funded from the general fund, reflecting the benefit derived by the general public" [Colo. Rev. Stat., 25-8-502(b.5)(III)(C)] for fiscal year 1992, the division's NPDES permit budget is \$907,563. Fee revenue accounts for \$713,684 (or nearly 80 percent). The balance is a general fund appropriation of \$193,879.

Legislation introduced but defeated in 1991 (Senate Bill 78) would have established a separate fee schedule to fund a stormwater permit program. The division will use federal grant funds under section 104 of the Clean Water Act to start developing a stormwater program.

Oregon. The Division of Water Quality in the Department of Environmental Quality is by statute to establish a fee schedule through rule making to support the NPDES program (Ore. Rev. Stat., 468.065 and 468.740). Revenue raised from the permit fees is deposited in the state and credited to the department. The fees are “continuously appropriated” (a provision that authorizes the earmarking of revenue on a yearly basis since the legislature only meets every other year) to cover the department’s administrative costs in running the program.

The division's rules establish a fee schedule composed of three different assessments. A \$50 filing fee must accompany all applications. An application processing fee for five discharge categories, ranging from \$600 for minor domestic discharges to \$20,000 for major industries, is attached to new applications (permit renewals and modifications are lower). The third fee is an annual compliance determination fee that ranges from \$185 for small sewage disposal systems (less than 20,000 gallons per day), to \$20,860 for sewage disposal systems in excess of 50,000,000 gallons per day; there are 17 domestic waste source categories, and 20 industrial, commercial and agricultural source categories.

The fees have been generating roughly \$1.4 million every year from municipal (\$600,000) and industrial (\$800,000) sources. General funds contribute approximately \$500,000 to the permit program's annual budget. The department envisions having to increase the fee levels substantially in the near future (possibly by as much as \$1 million per year for municipal sources alone) to keep pace with rapidly increasing program responsibilities.

Washington. The Division of Water Quality in the Department of Ecology is required by statute to assess fees against municipal, county, commercial and industrial dischargers to support the NPDES program (Wash. Rev. Code, 90.48.465, 90.48.160, 90.48.162 and 90.48.260). Revenue raised is deposited in the Water Quality Account of the state treasury. The legislature then appropriates revenue in the account to the department for use solely to cover the costs of administering the NPDES program.

Permits for industrial facility categories (38 in number with several subcategories) range from \$100 annually for small animal feed lot operations to \$74,250 annually for chemical pulp mills in fiscal year 1992. The annual permit fee for municipal and domestic facilities is based on the number of residential equivalents that contribute to the facility times a specific dollar- or fraction of a dollar- amount; the residential equivalent categories are for systems serving less than 250,000 residents and those serving more than 250,000 residents.

The department’s most recent fees were issued in draft form in September 1991 and became effective in February 1992. They increased nearly all industrial facility category rates significantly in each of fiscal years 1992 and 1993 over what they had been in FY 1991. Fees had been generating \$14.5 million in revenue for the program for each two-year budget period. The net effect of the new schedule is a doubling of rates over the two years. As stated in the narrative section of the regulations, the new fees represent the department’s “true estimate of fee eligible permit program costs and reflect the department’s commitment to fully recover all eligible expenses.” (Wash. Adm. Code, 17-224-015).

Appendix A
States With EPA-Approved NPDES Programs

Alabama
Arkansas
California
Colorado
Connecticut
Delaware
Georgia
Hawaii
Illinois
Indiana
Iowa
Kansas
Kentucky
Oregon
Pennsylvania
Rhode Island
South Carolina
Tennessee
Utah
Vermont
Virginia
Washington
West Virginia
Wisconsin
Wyoming

Appendix B
States With Authority to Develop General Permits for Stormwater Discharges

Alabama
Arkansas
California
Colorado
Georgia
Hawaii
Illinois
Indiana
Kentucky
Maryland
Minnesota
Mississippi
Missouri
Montana
Nebraska
New Jersey
North Carolina
North Dakota
Oregon

Pennsylvania
Rhode Island
Tennessee
Utah
Virginia
Washington
West Virginia
Wisconsin
Wyoming

Appendix C
States with EPA-Approved CSO Strategies

California
Colorado
Connecticut
Delaware
District of Columbia
Georgia
Illinois
Indiana
Iowa
Kansas
Kentucky
Maine
Maryland
Massachusetts
Michigan
Missouri
Nebraska
New Hampshire
New Jersey
New York
Ohio
Oregon
Pennsylvania
Rhode Island
South Dakota
Tennessee
Vermont
Virginia
Washington
West Virginia