



Water Quality Issues in the 110th Congress: Oversight and Implementation

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Specialist in Resources and Environmental Policy

November 25, 2008

Congressional Research Service

7-....

www.crs.gov

RL33800

Summary

Although much progress has been made in achieving the ambitious goals that Congress established more than 35 years ago in the Clean Water Act (CWA) to restore and maintain the chemical, physical, and biological integrity of the nation's waters, long-standing problems persist, and new problems have emerged. Water quality problems are diverse, ranging from pollution runoff from farms and ranches, city streets, and other diffuse or "nonpoint" sources, to toxic substances discharged from factories and sewage treatment plants.

There is little agreement among stakeholders about what solutions are needed and whether new legislation is required to address the nation's remaining water pollution problems. Several key water quality issues exist: evaluating actions to implement existing provisions of the law, assessing whether additional steps are necessary to achieve overall goals of the act that have not yet been attained, ensuring that progress made to date is not lost through diminished attention to water quality needs, and defining the appropriate federal role in guiding and paying for clean water infrastructure and other activities. For some time, efforts to comprehensively amend the CWA have stalled as interests have debated whether and exactly how to change the law. Congress has instead focused legislative attention on enacting narrow bills to extend or modify selected CWA programs, but not any comprehensive proposals.

For several years, the most prominent legislative water quality issue has concerned financial assistance for municipal wastewater treatment projects, and it has been in focus in the 110th Congress, as well: the House passed three bills dealing with wastewater infrastructure financing (H.R. 720, H.R. 700, and H.R. 569), and the Senate Environment and Public Works Committee approved another, S. 3500. At issue is how the federal government will assist states and cities in meeting needs to rebuild, repair, and upgrade wastewater treatment plants, especially in light of capital costs that are projected to be as much as \$390 billion.

Also of interest have been programs that regulate activities in wetlands, especially CWA Section 404, which has been criticized by landowners for intruding on private land-use decisions and imposing excessive economic burdens. Environmentalists view these programs as essential for maintaining the health of wetland ecosystems, and they are concerned about court rulings that narrowed regulatory protection of wetlands and about related administrative actions. Many stakeholders desire clarification of the act's regulatory jurisdiction, but they differ on what solutions are appropriate. In the 110th Congress, committees held hearings on legislation that seeks to provide that clarification (H.R. 2421, S. 1870).

Other issues discussed in this report that also have been of interest in Congress include implementation of current programs to manage stormwater discharges and nonpoint sources of pollution, as these are major contributors to water quality impairments across the country; implementation of rules governing discharges of wastes from large animal feeding operations; and implications of court rulings for the scope of the act's discharge permit requirements.

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Introduction

Although much progress has been made in achieving the ambitious goals that Congress established 30-plus years ago to restore and maintain the chemical, physical, and biological integrity of the nation's waters, long-standing problems persist, and new problems have emerged. Water quality problems are diverse, ranging from pollution runoff from farms and ranches, city streets, and other diffuse or "nonpoint" sources, to "point" source discharges of metals and organic and inorganic toxic substances from factories and sewage treatment plants.

The principal law that deals with polluting activity in the nation's streams, lakes, estuaries, and coastal waters is the Federal Water Pollution Control Act (P.L. 92-500, enacted in 1972), commonly known as the Clean Water Act, or CWA. It consists of two major parts: regulatory provisions that impose progressively more stringent requirements on industries and cities to abate pollution and meet the statutory goal of zero discharge of pollutants; and provisions that authorize federal financial assistance for municipal wastewater treatment plant construction. Both parts are supported by research activities, plus permit and enforcement provisions. Programs at the federal level are administered by the Environmental Protection Agency (EPA); state and local governments have major responsibilities to implement CWA programs through standard-setting, permitting, and enforcement.¹

The water quality restoration objective declared in the 1972 act was accompanied by statutory goals to eliminate the discharge of pollutants into navigable waters by 1985 and to attain, wherever possible, waters deemed "fishable and swimmable" by 1983. Although those goals have not been fully achieved, considerable progress has been made, especially in controlling conventional pollutants (suspended solids, bacteria, and oxygen-consuming materials) discharged by industries and sewage treatment plants.

Progress has been mixed in controlling discharges of toxic pollutants (heavy metals, inorganic and organic chemicals), which are more numerous and can harm human health and the environment even when present in very small amounts—at the parts-per-billion level. Moreover, efforts to control pollution from diffuse sources, termed nonpoint source pollution (rainfall runoff from urban, suburban, and agricultural areas, for example), are more recent, given the earlier emphasis on "point source" pollution (discharges from industrial and municipal wastewater treatment plants). Overall, data reported by EPA and states indicate that 45% of river and stream miles assessed by states and 47% of assessed lake acres do not meet applicable water quality standards and are impaired for one or more desired uses.² In 2006 EPA issued an assessment of streams and small rivers and reported that 67% of U.S. stream miles are in poor or fair condition and that nutrients and streambed sediments have the largest adverse impact on the biological condition of these waters.³ Approximately 95,000 lakes and 544,000 river miles in the United States are under fish-consumption advisories (including 100% of the Great Lakes and their connecting waters), due to chemical contaminants in lakes, rivers, and coastal waters, and one-third of shellfishing beds are closed or restricted, due to toxic pollutant contamination. Mercury is

¹ For further information, see CRS Report RL30030, *Clean Water Act: A Summary of the Law*, by (name redacted).

² U.S. Environmental Protection Agency, "National Water Quality Inventory: Report to Congress, 2002 Reporting Cycle," EPA-841-R-07-001, October 2007, 39 p.

³ U.S. Environmental Protection Agency, "Wadeable Streams Assessment, A Collaborative Survey of the Nation's Streams," EPA 841-B-06-002, May 2006, 1 vol.

a contaminant of growing concern—as of 2003, 45 states had issued partial or statewide fish or shellfish consumption advisories because of elevated mercury levels.

The last major amendments to the law were the Water Quality Act of 1987 (P.L. 100-4). These amendments culminated six years of congressional efforts to extend and revise the act and were the most comprehensive amendments since 1972. Authorizations of appropriations for some programs provided in P.L. 100-4, such as general grant assistance to states, research, and general EPA support authorized in that law, expired in FY1990 and FY1991. Authorizations for wastewater treatment funding expired in FY1994. None of these programs has lapsed, however, as Congress has continued to appropriate funds to implement them. EPA, states, industry, and other citizens continue to implement the 1987 legislation, including meeting the numerous requirements and deadlines in it.

The Clean Water Act has been viewed as one of the most successful environmental laws in terms of achieving its statutory goals, which have been widely supported by the public, but lately some have questioned whether additional actions to achieve further benefits are worth the costs. Criticism has come from industry, which has been the long-standing focus of the act's regulatory programs and often opposes imposition of new stringent and costly requirements. Criticism also has come from developers and property rights groups who contend that federal regulations (particularly the act's wetlands permit program) are a costly intrusion on private land-use decisions. States and cities have traditionally supported water quality programs and federal funding to assist them in carrying out the law, but many have opposed CWA measures that they fear might impose new unfunded mandates. Many environmental groups believe that further fine-tuning is needed to maintain progress achieved to date and to address remaining water quality problems.

Congressional Activity after P.L. 100-4

Following enactment of amendments in 1987, no major CWA legislative activity occurred until the 104th Congress (1995). The House approved a comprehensive reauthorization bill, H.R. 961, that was opposed by environmentalists and the Clinton Administration. H.R. 961 would have amended many of the regulatory and standards provisions of the law, required EPA to use extensive new risk assessment and cost-benefit procedures, and increased flexibility with regulatory relief from current clean water programs. Critics said that the bill would undermine the existing framework for protecting U.S. waters. The Senate did not take up H.R. 961 or other CWA legislation; thus, no legislation was enacted.

Since the 104th Congress, no comprehensive reauthorization legislation has been introduced, but beginning in the 106th Congress, a number of bills dealing with specific water quality issues and programs in the law have been enacted. Congress first passed a bill to strengthen protection of coastal recreation waters through upgraded water quality standards and coastal waters monitoring programs (P.L. 106-284). Congress also passed a bill (P.L. 106-457) that reauthorized several existing CWA programs (i.e., Chesapeake Bay cleanup, clean lakes, and the National Estuary Program), and a bill to authorize CWA grant funding for wet weather sewerage projects (included as a provision of the FY2001 Consolidated Appropriations bill, P.L. 106-554).

The 107th Congress enacted the Great Lakes Legacy Act (P.L. 107-303). It amended existing Great Lakes provisions (CWA Section 118) to authorize \$50 million annually for FY2004-FY2008 for EPA to carry out projects to remediate sediment contamination in the Great Lakes.

The bill also reauthorized CWA provisions concerning the Lake Champlain Basin program (Section 120).

The 108th Congress enacted legislation amending the act to extend the National Estuary Program (NEP, CWA Section 320) through FY2010 (P.L. 108-399). The NEP, authorized by the 1987 CWA amendments, is directed at improving the quality of estuaries of national importance.

The 109th Congress enacted two CWA measures. In December 2005, Congress passed H.R. 3963 (H.Rept. 109-293), authorizing \$40 million per year to extend the Long Island Sound program in Section 119 of the act for six years (through FY2010). President Bush signed it on December 22, 2005 (P.L. 109-137). In November 2006, Congress passed H.R. 6121, a bill to reauthorize the Lake Pontchartrain Basin program in Section 121 of the act through FY2011. President Bush signed it on December 12 (P.L. 109-392).

Since the 107th Congress, the dominant CWA issue has been water infrastructure financing—i.e., extension and modification of provisions of the act authorizing financial assistance for municipal wastewater treatment projects. House and Senate committees have approved bills, but none has been enacted, because of varied controversies (see “Authorization of Wastewater Infrastructure Funding,” below). In addition to the enacted legislation described here, throughout this period since the 1987 amendments, a number of bills dealing with other specific CWA programs have been reported by House and Senate committees; some of these were passed by one house of the Congress, but were not enacted.

The remainder of this report discusses key CWA issues that were of particular interest during the 110th Congress, including legislation that was introduced in several of the areas. It first discusses issues that were most prominent on the CWA agenda in Congress, including water infrastructure funding, regulatory protection of wetlands, regulating wastewater discharges from vessels, and extension of the Great Lakes Legacy Act. It then discusses several other issues of interest: stormwater discharges, management of sewer overflows, wastewater security, management of nonpoint sources of pollution, and regulation of waste discharges from animal feeding operations. The report concludes with a brief discussion of appropriations for water quality programs.

Legislative Issues in the 110th Congress

The year 2007 marked the 35th anniversary of passage of the Clean Water Act and 20 years since the last major amendments to the law. While, as noted, there has been measurable clean water progress as a result of the act, observers and analysts agree that significant water pollution problems remain. However, there is less agreement about what solutions are needed and whether new legislation is required. Several key water quality issues exist: evaluating actions to implement existing provisions of the law, assessing whether additional steps are necessary to achieve overall goals of the act that have not yet been attained, ensuring that progress made to date is not lost through diminished attention to water quality needs, and defining the appropriate federal role in guiding and paying for clean water infrastructure and other activities. For some time, efforts to comprehensively amend the act have stalled as interests have debated whether and exactly how to change the law. Many issues that might be addressed involve making difficult tradeoffs between impacts on different sectors of the economy, taking action when there is technical or scientific uncertainty, and allocating governmental responsibilities for implementing the law.

These factors partly explain why Congress has recently favored focusing legislative attention on narrow bills to extend or modify selected CWA programs, rather than taking up comprehensive proposals. Other factors also are at work. These include a general reluctance by most Members of Congress to address controversial environmental issues in view of the slim majorities held by political parties in the House and the Senate; lack of presidential initiatives on clean water issues (neither the Clinton nor the Bush Administration proposed CWA legislation); and, since the terrorist attacks of September 11, 2001, more prominent congressional focus on security, terrorism, and Iraq war issues than on many other topics, including environmental protection.

As a result of the 2006 mid-term elections and changed congressional leadership, many observers anticipated that the 110th Congress would pursue oversight of clean water and other environmental programs. A particular legislative focus is water infrastructure financing legislation, specifically reauthorization of the act's financial aid program. Also on the congressional agenda was consideration of the geographic reach of the Clean Water Act over the nation's waters and wetlands, in light of court rulings—including two Supreme Court decisions—that have narrowed the law's regulatory jurisdiction, but in ways that are somewhat unclear. A number of other issues of interest included implementation of current programs to manage stormwater discharges and nonpoint sources of pollution, as these are major contributors to water quality impairments across the country; implementation of rules governing discharges of wastes from large animal feeding operations; and implications of a number of court rulings concerning the scope of the act's discharge permit requirements.

Authorization of Water Infrastructure Funding

Meeting the nation's needs to build, upgrade, rebuild, and repair wastewater infrastructure is a significant element in achieving the Clean Water Act's water quality objectives. The act's program of financial aid for municipal wastewater treatment plant construction is a key contributor to that effort. Since 1972 Congress has provided more than \$78 billion to assist cities in constructing projects to achieve the act's requirements for secondary treatment of municipal sewage (equivalent to 85% reduction of wastes), or more stringent treatment where required by local water quality conditions. State and local governments have spent more than \$25 billion of their own funds for construction, as well.

Still, funding needs remain very high: an additional \$202.5 billion nationwide for all types of projects eligible for funding under the act, according to the most recent Needs Survey estimate by EPA and the states, released in January 2008, an 8.6% increase above the estimate reported four years ago.⁴ EPA reported several reasons for increased needs: problems due to aging infrastructure, treatment plant improvements needed to meet more protective water quality standards, and additional capacity required to handle wet weather flows. This current estimate includes \$134.4 billion for wastewater treatment and collection systems (\$10.5 billion more than the previous report), \$54.8 billion for combined sewer overflow corrections (\$1.5 billion less than the previous estimate), \$9 billion for stormwater management (\$2.8 billion more than the previous estimate), and \$4.3 billion to build systems to distribute recycled water (a new category in this report). The estimate does not explicitly include funding needed to address security issues (discussed below), needs related to growth and expansion in regions that are experiencing

⁴ U.S. Environmental Protection Agency, *Clean Watersheds Needs Survey 2004, Report to Congress*, Washington, January 2008, 1 vol. Available at <http://www.epa.gov/owm/mtb/cwns/2004rtc/toc.htm>.

population growth, or funding possibly needed for treatment works to adapt to climate change impacts.

In September 2002, EPA released a study called the Gap Analysis that assesses the difference between current spending for wastewater infrastructure and total funding needs (both capital and operation and maintenance).⁵ In that report, EPA estimated that, over the next two decades, the United States needs to spend nearly \$390 billion to replace existing wastewater infrastructure systems and to build new ones. Funding needs for operation and maintenance (not eligible for Clean Water Act funding) are an additional \$148 billion, the agency estimated. According to the Gap Analysis, if there is no increase in investment, there will be about a \$6 billion gap between current annual capital expenditures for wastewater treatment (\$13 billion annually) and projected spending needs of approximately \$19 billion. The study also estimated that, if wastewater spending increases by 3% annually (essentially meaning a doubling of rates), the gap would shrink by nearly 90% (to about \$1 billion annually). At issue has been what the federal role should be in assisting states and cities, especially in view of such high projected funding needs.

Debate over the nature of the nation's efforts regarding wastewater infrastructure was a central and controversial part of the 1987 amendments to the act. The amendments extended through FY1990 the traditional Title II program of grants for sewage treatment project construction, under which the federal share was 55% of project costs. The 1987 law initiated a program of grants to capitalize State Water Pollution Control Revolving Funds (SRFs), which are loan programs, in a new Title VI. States are required to deposit an amount equal to at least 20% of the federal capitalization grant in the Fund established under Title VI. Under the revolving fund concept, monies used for wastewater treatment construction would be repaid by loan recipients to the states (repayment was not required for grants under the Title II program), to be recycled for future construction in other communities, thus providing an ongoing source of financing. The expectation in 1987 was that the federal contributions to SRFs would assist in making a transition to full state and local financing by FY1995. Although most states believe that the SRF is working well, early funding and administrative problems and continuing large funding needs have delayed the anticipated shift to full state responsibility. Thus, SRF issues have been prominent on the Clean Water Act reauthorization agenda in recent Congresses.⁶

SRF monies may be used for specified activities, including making loans for as much as 100% of project costs (at or below market interest rates, including interest-free loans), to buy or refinance cities' debt obligation, or as a source of revenue or security for payment of principal and interest on a state-issued bond. SRF monies also may be used to provide loan guarantees or credit enhancement for localities. Loans made by a state from its SRF are to be used first to assure progress towards the goals of the act and, in particular, on projects to meet the standards and enforceable requirements of the act. After states achieve those requirements of the act, SRF monies also may be used to implement nonpoint pollution management and national estuary programs. Since the SRF program began, states have used \$2.6 billion to assist more than 8,650 nonpoint management projects; none has gone to estuary management activities.

⁵ U.S. Environmental Protection Agency, *The Clean Water and Drinking Water Infrastructure Gap Analysis*, September 2002, EPA 816-R-02-020, 50 p.

⁶ For further information, see CRS Report 98-323, *Wastewater Treatment: Overview and Background*, by (name redacted).

All states have established the mechanisms to administer the new loan programs and have been receiving SRF capitalization funds under Title VI. Many have complained that the SRF program is unduly complicated by federal rules, even though Congress had intended that states were to have greater flexibility. Congressional oversight has examined the progress toward reducing the backlog of wastewater treatment facilities needed to achieve the act's water quality objectives, while newer estimates of future funding needs have drawn increased attention to the role of the SRF program in meeting such needs. Although there has been some criticism of the SRF program, and debate continues over specific concerns, the basic approach is well supported. Congress used the clean water SRF as the model when it established a drinking water SRF in 1996 (P.L. 104-182).⁷

While the initial intent was to phase out federal support for this program, Congress has continued to appropriate SRF capitalization grants to the states, providing an average of \$1.35 billion annually in recent years, but that amount has been declining since FY2005. **Table 1** summarizes wastewater treatment funding under Title II (traditional grants program) and Title VI (capitalization grants for revolving loan programs) since the 1987 amendments.⁸

Table 1. Wastewater Treatment Funding
(billions of dollars)

Fiscal Year	Authorizations		Appropriations	
	Title II	Title VI	Title II	Title VI
1986	\$2.4	—	\$1.800	—
1987	2.4	—	2.360	—
1988	2.4	—	2.300	—
1989	1.2	1.2	0.941	0.941
1990	1.2	1.2	0.967	0.967
1991	—	2.4	—	2.100
1992	—	1.8	—	1.950
1993	—	1.2	—	1.930
1994	—	0.6	—	1.220
1995	—	—	—	1.240
1996	—	—	—	2.070
1997	—	—	—	0.625
1998	—	—	—	1.350
1999	—	—	—	1.350
2000	—	—	—	1.345

⁷ For further information, see CRS Report RS22037, *Drinking Water State Revolving Fund (DWSRF): Program Overview and Issues*, by (name redacted).

⁸ Note: **Table 1** does not include appropriations for special project grants in individual cities. Issues associated with special project grants are discussed in CRS Report RL32201, *Water Infrastructure Projects Designated in EPA Appropriations: Trends and Policy Implications*, by (name redacted).

Fiscal Year	Authorizations		Appropriations	
	Title II	Title VI	Title II	Title VI
2001	—	—	—	1.350
2002	—	—	—	1.350
2003	—	—	—	1.341
2004	—	—	—	1.342
2005	—	—	—	1.091
2006	—	—	—	0.887
2007	—	—	—	1.084
2008	—	—	—	0.689

One issue of continuing interest is impacts on small communities. These entities in particular have found it difficult to participate in the SRF loan program, since many are characterized by narrow or weak tax bases, limited or no access to capital markets, lower relative household incomes, and higher per capita needs. They often find it harder to borrow to meet their capital needs and pay relatively high premiums to do so. Meeting the special needs of small towns, through a reestablished grant program, other funding source, or loan program with special rules, has been an issue of interest to Congress.

Because remaining clean water funding needs are still so large nationally, at issue is whether and how to extend SRF assistance to address those needs, how to allocate SRF funds among the states, and how to prioritize projects and funding. Additionally, there is concern about the adequacy of SRF or other funding specifically for high-cost projects dealing with problems of overflows from municipal combined and separate sewers which can release partially treated or untreated wastewaters that harm public health and the environment. EPA estimates that the cost of projects to control sewer overflows, from combined and separate sanitary sewer systems, and manage stormwater runoff, is nearly \$64 billion nationwide. And more recently, wastewater utilities have sought assistance to assess operational vulnerabilities and upgrade physical protection of their facilities against possible terrorist attacks that could threaten water infrastructure systems.⁹

Bush Administration officials have said that infrastructure funding needs go beyond what the federal government can do on its own, and the President's budget for several years has advanced the concept that federal funding would cease after 2011 and that state and local self-financing would occur thereafter. While saying that federal and state funding can help water utilities meet future needs, EPA's principal water infrastructure initiative has been to support other types of responses to help ensure that investment needs are met in an efficient, timely, and equitable manner. In particular, since 2003 EPA has promoted strategies that it terms the Four Pillars of Sustainable Infrastructure, based on concepts of better management, full-cost pricing, efficient water use, and watershed approaches to protection.¹⁰ EPA is pursuing a Sustainable Infrastructure Leadership Initiative in partnership with water utilities to promote the Four Pillars. The purpose

⁹ For additional information on many of these issues, see CRS Report RL31116, *Water Infrastructure Needs and Investment: Review and Analysis of Key Issues*, by (name redacted) and (name redacted).

¹⁰ U.S. Environmental Protection Agency, *Sustainable Water Infrastructure for the 21st Century*. See <http://www.epa.gov/waterinfrastructure>.

of the initiative is to identify new and better ways of doing business in the water and wastewater industries and promote them widely, and thus ensure sustainability of water systems. For example, EPA is working to encourage rate structures that lead to full cost pricing and will support water metering and other conservation measures. EPA also is encouraging consumers to use water-efficient products (e.g., residential bathroom products), with the intent of reducing national water and wastewater infrastructure needs by reducing projected water demand and wastewater flow, thus allowing deferral or downsizing of capital projects.

Legislative Responses

Congress has considered water infrastructure funding issues several times since the 107th Congress. In that Congress, House and Senate committees approved bills to extend the act's SRF program and increase federal assistance (H.R. 3930; S. 1961, S.Rept. 107-228). A report on H.R. 3930 was not filed. Neither bill received further action, in large part due to controversies over application of prevailing wage requirements of the Davis-Bacon Act and over the formula for allocating SRF grants among the states.

The issue of the applicability of the Davis-Bacon Act to SRF-funded projects has affected consideration of water infrastructure legislation for some time, because that act has both strong supporters and critics in Congress. Critics of Davis-Bacon say that it unnecessarily increases public construction costs and hampers competition, while supporters say that it helps stabilize the local construction industry by preventing competition that would undercut local wages and working conditions. Under the original SRF program authorization enacted in 1987, the Davis-Bacon Act applied to so-called "first use" monies provided by a state from its SRF (that is, loans made from initial federal capitalization grants, but not subsequent monies provided from repayments to the SRF). When that authorization expired at the end of FY1994, Davis-Bacon requirements also expired. Thus, the recent issue has been whether to restore the applicability of those requirements.

In the 108th Congress, four bills to reauthorize the Clean Water Act SRF program were introduced (S. 170, S. 2550, H.R. 20, H.R. 1560). In addition, separate bills to reauthorize funding for sewer overflow grants (CWA Section 221) were introduced (H.R. 784, S. 567). In October 2004, the Senate Environment and Public Works Committee reported legislation authorizing \$41.25 billion over five years for wastewater and drinking water infrastructure programs, including \$20 billion for the clean water SRF program (S. 2550, S.Rept. 108-386). The bill included a new formula for state-by-state allocation of clean water SRF grants, renewal of the Clean Water Act's sewer overflow grant program, and provisions such as extended loan repayments and subsidies for disadvantaged communities.

Prior to the Senate committee's action, in July 2003, the House Transportation and Infrastructure Subcommittee on Water Resources and Environment approved H.R. 1560 (legislation similar to H.R. 3930, the bill approved by that committee in the 107th Congress), but no further action occurred. H.R. 1560 did not include language specifying that the Davis-Bacon Act shall apply to SRF-funded projects, while S. 2550 did include such a requirement. Other factors that clouded these bills were Administration opposition to authorization levels in both bills and disputes over funding allocation formulas.

In the 109th Congress, the Senate Environment and Public Works Committee approved S. 1400, the Water Infrastructure Financing Act, in July 2005 (S.Rept. 109-186). The bill was similar to S. 2550 in the 108th Congress; it would have authorized \$20 billion for grants to capitalize the Clean

Water Act SRF program and \$15 billion for Safe Drinking Water Act SRFs through FY2010. As approved by the committee, S. 1400 would have revised the CWA formula for state-by-state allocation of SRF monies and also specified that the prevailing wage requirements of the Davis-Bacon Act shall apply to all projects financed from an SRF (as similarly provided in the committee's bill in the 108th Congress). No further action on this bill occurred.

For some time, interest has been growing in identifying and developing new mechanisms to help localities pay for water infrastructure projects, beyond federal grants or SRFs, which appear insufficient to fully meet funding needs. In June 2005, the House Transportation and Infrastructure Subcommittee on Water Resources and Environment held hearings on alternative means to fund water infrastructure projects in the future. At the first hearing, witnesses focused on one way to increase funding for water infrastructure that has recently been advocated by some groups, creating a national clean water trust fund that would conceptually be similar to trust funds that exist for highway and aviation projects. Witnesses and subcommittee members discussed difficulties in identifying potential revenue sources that would be deemed fair and equitable. The second hearing addressed other financing options, such as expanded use of tax-exempt private activity bonds, and more efficient management techniques, such as asset management programs and sustainable infrastructure initiatives. In the 109th Congress, legislation was introduced to establish a \$7.5 billion federal trust fund for wastewater infrastructure improvements. This bill, H.R. 4560, proposed to use a concept for funding such projects that has been promoted by wastewater treatment industry officials, other stakeholders, and some environmentalists, who argue it could provide a new source of money for necessary system upgrades amid dwindling federal funds. The bill contemplated a system of user fees to create the fund, but the source of revenue was not specified in the bill. Congress did not act on this legislation.

110th Congress

Wastewater infrastructure financing again received attention in the 110th Congress. In March 2007 the House approved three bills addressing the following issues; however, the Senate did not act on any of them.

- H.R. 720, the Water Quality Financing Act of 2007, was passed by the House on March 9, 2007. It is substantially similar to legislation that the House Transportation and Infrastructure Committee's Water Resources and Environment Subcommittee approved in the 108th Congress (H.R. 1560).¹¹ It would authorize \$14 billion for the clean water SRF program for FY2008-FY2011.¹² It includes several provisions intended to benefit economically disadvantaged and small communities, such as allowing extended loan repayments (30 years, rather than 20) and additional subsidies (e.g., principal forgiveness and negative interest loans) for communities that meet a state's affordability criteria. It includes provisions to require communities to plan for capital replacement needs and to

¹¹ For background information on this earlier legislation, see CRS Report RL32503, *Water Infrastructure Financing Legislation: Comparison of S. 2550 and H.R. 1560*, by (name redacted) and (name redacted).

¹² The original version of H.R. 720, approved by the Transportation and Infrastructure Committee on February 7, authorized \$20 billion over FY2008-FY2012 for the SRF program. In order to comply with budget compliance rules of the House, the committee approved a substitute version of the bill on March 1 with a lower authorization level over a four-year period. The substitute also includes a provision restoring vessel tonnage duties that were in effect from 1990 to 2002 on certain cargo-carrying vessels that enter or depart from U.S. ports; the additional tonnage duties are intended to offset the cost of H.R. 720.

develop and implement an asset management plan for the repair and maintenance of infrastructure that is being financed. One key difference between this bill and the earlier legislation is the specification in H.R. 720 that the Davis-Bacon Act prevailing wage requirement shall apply to all projects financed in whole or in part through an SRF. This issue was extensively debated during subcommittee and full committee markups of the bill, and amendments to delete the requirement and to request a GAO study of impacts of the Davis-Bacon Act were defeated. H.R. 720 includes provisions requesting that GAO prepare a report for Congress on alternative public and private mechanisms to fund water infrastructure, and a report on potential funding mechanisms for a clean water trust fund. During debate on the bill, the House rejected an amendment that would have deleted the Davis-Bacon requirements in the bill and adopted several other amendments, including one directing EPA to study U.S. and Canadian wastewater discharges to the Great Lakes and another directing states to give funding priority to existing needs before investing in projects for additional wastewater treatment capacity.

- H.R. 569 would reauthorize CWA Section 221 to authorize for projects to correct municipal sewer overflows (H.Rept. 110-16). It is similar to legislation approved by the Transportation and Infrastructure Committee in the 109th Congress (H.R. 624). The House passed this bill on March 7, 2007. As passed, the bill would provide \$1.7 billion over five years.
- H.R. 700 would reauthorize CWA Section 220 to extend a pilot program to develop alternative water source projects (H.Rept. 110-15). It would authorize a total of \$125 million for Section 220. The House passed this bill on March 9, 2007.

The Senate Environment and Public Works Committee held an oversight hearing on wastewater infrastructure needs in September 2007 and later took up a specific legislative proposal dealing with financing issues. In September 2008, the committee approved the Water Infrastructure Financing Act (S. 3617), a bill that is similar to a measure that the committee approved in the 109th Congress (S. 1400). S. 3617 authorizes \$20 billion for grants to capitalize the Clean Water Act SRF program and \$15 billion for Safe Drinking Water Act SRF capitalization grants through FY2012.¹³ The bill expands eligibility for clean water SRF assistance including, for example, projects that implement stormwater management, water conservation or efficiency projects, and water and wastewater reuse and recycling projects. The measure includes a number of provisions to make the clean water and drinking water SRF programs more parallel, such as allowing SRF assistance to be used by private as well as public wastewater treatment systems. It also includes several provisions to benefit small or economically disadvantaged communities, such as through new technical assistance and more generous loan terms. The committee approved an amendment adding Davis-Bacon Act language similar to that in House-passed H.R. 720, specifying that prevailing wage requirement shall apply to all projects financed in whole or in part through an SRF.

¹³ These amounts do not reflect an amendment approved during committee markup to reduce all authorizations in the bill by 2%.

Regulatory Protection of Wetlands

How best to protect the nation's remaining wetlands and regulate activities taking place in wetlands has become one of the most contentious environmental policy issues, especially in the context of the CWA, which contains a key wetlands regulatory tool, the permit program in Section 404. It requires landowners or developers to obtain permits for disposal of dredged or fill material that is generated by construction or similar activity into navigable waters of the United States, including wetlands. Section 404 has evolved through judicial interpretation and regulatory change to become one of the principal federal tools used to protect wetlands, although that term appears only once in Section 404 itself and is not defined there. At the same time, its implementation has come to be seen as intrusive and burdensome to those whose activities it regulates. At issue today is how to address criticism of the Section 404 regulatory program while achieving desired goals of wetlands protection.¹⁴

Unlike the rest of the act, the permit aspects of Section 404 are administered by the U.S. Army Corps of Engineers, rather than EPA, although the Corps uses EPA environmental guidance. Other federal agencies including the U.S. Fish and Wildlife Service (FWS) and Natural Resource Conservation Service (NRCS) have more limited roles in the Corps' permitting decisions. Tension has existed for many years between the regulation of activities in wetlands under Section 404 and related laws, on the one hand, and the desire of landowners to develop property that may include wetlands, on the other hand. The conflicts over wetlands regulation have for the most part occurred in administrative proceedings, as Congress has not amended Section 404 since 1977, when it provided exemptions for categories of routine activities, such as normal farming and forestry. Controversy has grown over the extent of federal jurisdiction and impacts on private property, burdens and delay of permit procedures, and roles of federal agencies and states in issuing permits.

Judicial Proceedings Involving Section 404

One issue involving long-standing controversy and litigation is whether isolated waters are properly within the jurisdiction of Section 404. Isolated waters—wetlands which are not physically adjacent to navigable surface waters—often appear to provide only some of the values for which wetlands are protected, such as flood control or water purification, even if they meet the technical definition of a wetland. On January 9, 2001, the Supreme Court ruled on the question of whether the CWA provides the Corps and EPA with authority over isolated waters. The Court's 5-4 ruling in *Solid Waste Agency of Northern Cook County (SWANCC) v. U.S. Army Corps of Engineers* (531 U.S. 159 (2001)) held that the Corps' denial of a 404 permit for a disposal site on isolated wetlands solely on the basis that migratory birds use the site exceeds the authority provided in the act.

The full extent of impacts on the regulatory program resulting from this decision remains unclear, even five years after the ruling, in part because of different interpretations of SWANCC reflected in subsequent federal court cases. While it continues to be difficult to fully assess how regulatory protection of wetlands will be affected as a result of the SWANCC decision and other possible changes, the remaining responsibility to protect affected wetlands falls on states and localities.¹⁵

¹⁴ For additional information, see CRS Report RL33483, *Wetlands: An Overview of Issues*, by (name redacted).

¹⁵ For additional information, see CRS Report RL30849, *The Supreme Court Addresses Corps of Engineers Jurisdiction Over "Isolated Waters": The SWANCC Decision*, by (name redacted).

Environmentalists believe that the Court misinterpreted congressional intent on the matter, while industry and landowner groups welcomed the ruling. Policy implications of how much the decision restricts federal regulation depend on how broadly or narrowly the opinion is applied. Some federal courts have interpreted SWANCC narrowly, thus limiting its effect on current permit rules, while a few read the decision more broadly.

The government's view on this key question was expressed in EPA-Corps guidance issued in January 2003. It provides a legal interpretation essentially based on a narrow reading of the Court's decision, thus allowing federal regulation of some isolated waters to continue, but it calls for more headquarters review in disputed cases. Administration press releases say that the guidance demonstrates the government's commitment to "no-net-loss" wetlands policy. However, it is apparent that the issues remained under review, because at the same time, the Administration issued an advance notice of proposed rulemaking (ANPRM) seeking comment on how to define waters that are under jurisdiction of the regulatory program.¹⁶ The ANPRM did not actually propose rule changes, but it indicated possible ways that Clean Water Act rules might be modified to further limit federal jurisdiction, building on SWANCC and some subsequent legal decisions.

The government received more than 133,000 comments on the ANPRM, most of them negative, according to EPA and the Corps. Environmentalists and many states opposed changing any rules, saying that the law and previous court rulings call for the broadest possible interpretation of the Clean Water Act (and thus a narrow interpretation of SWANCC), but developers sought changes to clarify interpretation of SWANCC. In December 2003, EPA and the Corps announced that the Administration would not pursue rule changes on federal regulatory jurisdiction over isolated wetlands. The EPA Administrator said that the Administration wanted to avoid a contentious and lengthy rulemaking debate over the issue. Environmentalists and state representatives expressed relief at the announcement. Interest groups on all sides have been critical of confusion in implementing the 2003 guidance, which constitutes the main tool for interpreting the reach of the SWANCC decision. Environmentalists remain concerned about diminished protection resulting from the guidance, while developers said that without new regulations, confusing and contradictory interpretations of wetland rules will continue.

Federal courts continue to have a key role in interpreting and clarifying the SWANCC decision. On February 21, 2006, the Supreme Court heard arguments in two cases brought by landowners (*Rapanos v. United States*; *Carabell v. U.S. Army Corps of Engineers*) seeking to narrow the scope of the CWA permit program as it applies to development of wetlands. The issue in both cases had to do with the reach of the CWA to cover "waters" that were not navigable waters, in the traditional sense, but were connected somehow to navigable waters or "adjacent" to those waters. (The act requires a federal permit to discharge dredged or fill materials into "navigable waters.") Many legal and other observers hoped that the Court's ruling in these cases would bring greater clarity about the scope of federal jurisdiction.

The Court's ruling was issued on June 19, 2006 (*Rapanos v. United States*, 547 U.S. 715 (2006)). In a 5-4 decision, a plurality of the Court, led by Justice Scalia, held that the lower court had applied an incorrect standard to determine whether the wetlands at issue are covered by the CWA. Justice Kennedy joined this plurality to vacate the lower court decisions and remand the

¹⁶ U.S. Department of Defense, Department of the Army, Corps of Engineers and U.S. Environmental Protection Agency, "Advance Notice of Proposed Rulemaking on the Clean Water Act Regulatory Definition of 'Waters of the United States' and Joint Memorandum," 68 *Federal Register* 1991-1998, January 15, 2003.

cases for further consideration, but he took different positions on most of the substantive issues raised by the cases, as did four other dissenting justices.¹⁷ Legal observers suggest that the implications of the ruling (both short-term and long-term) are far from clear. Because the several opinions written by the justices did not draw a clear line regarding which wetlands and other waters are subject to federal jurisdiction, one likely result is more case-by-case determinations and continuing litigation. There also could be renewed pressure on the Corps and EPA to clarify the issues through an administrative rulemaking.

On June 5, 2007—nearly one year after the *Rapanos* ruling—EPA and the Corps issued guidance to enable their field staffs to make CWA jurisdictional determinations in light of the decision.¹⁸ According to the guidance, the agencies will assert regulatory jurisdiction over certain waters, such as traditional navigable waters and adjacent wetlands. Jurisdiction over others, such as non-navigable tributaries that do not typically flow year-round and wetlands adjacent to such tributaries, will be determined on a case-by-case basis, to determine if the waters in question have a significant nexus with a traditional navigable water. The guidance details how the agencies should evaluate whether there is a significant nexus. The guidance is not intended to increase or decrease CWA jurisdiction, and it does not supersede or nullify the 2003 guidance, discussed above, which addressed jurisdiction over isolated wetlands in light of SWANCC.

In accompanying documents, EPA and the Corps said that the Administration was considering a rulemaking in response to the *Rapanos* decision, but they noted that developing new rules to interpret the decision would take more time than issuing the guidance. They also noted that, while the 2007 guidance provides more clarity for how jurisdictional determinations will be made concerning non-navigable tributaries and their adjacent wetlands, legal challenges to the scope of CWA jurisdiction are likely to continue. The guidance took effect immediately, but the agencies also solicited public comments for a six-month period. The agencies could make changes to the guidance based on those public comments, but they have not done so yet.

Congressional Actions

In September 2002, a House Government Reform subcommittee held a hearing on the government's response to the SWANCC decision. Committee Members and public witnesses indicated that a lack of guidance from the government clarifying its interpretation of the case had led to inconsistent regulatory decisions by Corps officials in individual regions of the country, and subsequent judicial decisions by other federal and state court have been mixed. At the hearing, Corps and EPA officials testified on their efforts to develop guidance, which subsequently was released in January 2003. Concern about lingering confusion over the SWANCC decision and Corps implementation was the topic of an oversight hearing by the Senate Environment and Public Works Committee in June 2003. Developers and others in the regulated community criticized the Corps and EPA, saying that the January 2003 guidance document had not clarified the reach of federal jurisdiction. A House Transportation and Infrastructure subcommittee also held a hearing on post-SWANCC issues in March 2004.

¹⁷ For additional information, see CRS Report RL33263, *The Wetlands Coverage of the Clean Water Act Is Revisited by the Supreme Court: Rapanos v. United States*, by (name redacted) and (name redacted).

¹⁸ The guidance and related documents are available at <http://www.epa.gov/owow/wetlands/guidance/CWAwaters.html>.

Controversies persist about the 2003 SWANCC guidance. On May 18, 2006, the House adopted an amendment to a bill providing FY2007 appropriations for EPA (H.R. 5386). The amendment (passed by a 222-198 vote) would have barred EPA from spending funds to implement the 2003 policy guidance. Supporters of the amendment said that the guidance goes beyond what the Supreme Court required in *SWANCC*, has allowed many streams and wetlands to be unprotected from development, and has been more confusing than helpful. Opponents of the amendment predicted that it would make EPA's and the Corps' regulatory job more difficult than it already is. Congress adjourned *sine die* in December 2006 without taking final action on H.R. 5386.

Legislation to overturn the *SWANCC* and *Rapanos* decisions by providing a broad definition of "waters of the United States" was introduced in the 110th Congress (H.R. 2421 and S. 1870, the Clean Water Authority Restoration Act of 2007).¹⁹ Similar legislation was introduced in the 107th, 108th, and 109th Congresses. Other legislation to narrow the definition of "waters of the United States" also was introduced in the 109th Congress (H.R. 2658). On August 1, 2006, a Senate Environment and Public Works subcommittee held a hearing on the Court's *Rapanos* decision. For now, it is unclear whether the decision in the *Rapanos* and *Carabell* cases will accelerate congressional action on legislative proposals to address uncertainties about federal jurisdiction over wetlands and other waters, but both the *SWANCC* and *Rapanos* rulings remain highly controversial.

The House Transportation and Infrastructure Committee held hearings on H.R. 2421 and related jurisdictional issues on July 17 and July 19, 2007. Another hearing was held April 16, 2008. The Senate Environment and Public Works Committee held a hearing on issues related to the *Rapanos* ruling on December 13, 2007, and held a legislative hearing on S. 1870 on April 9, 2008. Proponents contend that Congress must clarify the important issues left unsettled by the Supreme Court's 2001 and 2006 rulings and by the 2007 Corps/EPA guidance. Bill sponsors argue that the legislation would "reaffirm" what Congress intended when the CWA was enacted in 1972 and what EPA and the Corps have subsequently been practicing until recently, in terms of CWA jurisdiction. But critics question the constitutionality of the legislation and assert that it would expand federal authority, thus likely increasing confusion, rather than settling it. Prospects for the legislation are uncertain, given the divided views on how it might be interpreted by federal agencies and the courts.

Regulating Discharges from Vessels

Concerns have been expressed about a court ruling on regulation of ballast water, which is used by tankers, bulk cargo carriers, and cruise ships to stabilize vessels during transport. Ballast water is often taken on in the coastal waters of one region and discharged at the next port of call, as cargo is off-loaded or added. Clean Water Act rules currently exempt ballast water and other discharges incidental to the normal operation of vessels from CWA permit requirements.²⁰ Because of the growing problem of the introduction of invasive species into U.S. waters via ballast waters, environmental groups sued EPA to force the agency to rescind the regulatory exemption. In March 2005, a federal district court ruled in favor of the groups, and, subsequently, the court remanded the matter to EPA with an order that the challenged regulation be set aside by

¹⁹ For additional information and discussion of legislation, see CRS Report RL33483, *Wetlands: An Overview of Issues*, by (name redacted).

²⁰ This regulatory exemption does not include sewage discharges from vessels, which are regulated under CWA Section 312.

September 30, 2008, requiring the EPA to issue CWA permits after that date (*Northwest Environmental Advocates v. EPA*, No. C 03-05760 SI (N.D.Cal, September 18, 2006)). The district court's ruling was upheld on July 23, but on August 31, the district court approved EPA's request to delay the court's order until Dec. 19, 2008.

Although the government appealed the district court's ruling, EPA initiated efforts to respond to the court's mandate, in case the appeal is unsuccessful. Significantly, the court's ruling applies fully to all types of vessel discharges that are covered by the regulatory exemption, including gray water (wastewater from sinks and laundries), ballast water, and bilge water. Some observers argued that legislative clarification of this issue was needed, because an appeal might not be resolved before the deadline mandated by the district court.

EPA estimated that as many as 13 million recreational boats and 98,000 commercial vessels could be affected by a permitting program. Concern over this possibility led to the introduction of several bills in the 110th Congress to statutorily exempt vessels from CWA permit requirements that EPA might adopt in response to the federal court's order. In July, Congress passed two of these bills, and President Bush signed both. One is P.L. 110-288 (S. 2766); it exempts recreational boats from CWA permit requirements and requires EPA to develop management practices for discharges other than sewage that are incidental to the normal operation of such vessels. The second is P.L. 110-299 (S. 3298); it provides a two-year permit moratorium for fishing vessels and other vessels less than 79 feet in length and requires EPA to evaluate the impact of discharges other than sewage and ballast water that are incidental to the normal operation of vessels.

On June 17, while waiting for the court of appeals or Congress to provide relief from the district court's order, EPA proposed two CWA general permits. One permit covers recreational vessels less than 79 feet in length, and the second covers commercial and large recreational vessels. Enactment of S. 2766 and S. 3298 relieved recreational boats from permit requirements, but as many as 50,000 large commercial vessels still must comply when permits are finalized by EPA in December 2008.²¹

Related to this issue, the 110th Congress also considered legislation to provide a uniform national approach for addressing aquatic nuisance species from ballast water under a program administered by the Coast Guard (S. 1578, ordered reported by the Senate Commerce Committee on September 27, and House-passed H.R. 2830). Some groups oppose these bills, because they would preempt states from enacting ballast water management programs more stringent than Coast Guard requirements under the legislation, which the CWA allows.²²

Extension of the Great Lakes Legacy Act

Significant portions of Great Lakes waters are impaired due to years of discharges of toxic chemicals that have accumulated in the sediments of the lakes. Toxic chemicals in sediment can enter the food chain and threaten the health of fish, wildlife, and humans. Together, the U.S. and Canadian governments have identified 42 specific areas of contaminated sediments throughout the lakes as Areas of Concern and have initiated a variety of remedial actions. However, concern

²¹ For additional information, see CRS Report RS22878, *Clean Water Act: 110th Congress Legislation on Discharges from Recreational Boats*, by (name redacted).

²² For additional information see CRS Report RL34640, *Regulating Ballast Water Discharges: Legislative Issues in the 110th Congress*, by (name redacted).

over the slow pace and limited funding for such projects led to enactment of the Great Lakes Legacy Act on 2002 (P.L. 107-303). It amended the Great Lakes provision of the CWA (section 118) to authorize funds for monitoring, evaluating, and remediating contaminated sediments in areas of concern in the lakes.

Authorizations under the original legislation expired at the end of FY2008. Thus, the 110th Congress enacted legislation (H.R. 6460) to extend authorizations for two years (through FY2010) at existing funding levels of \$50 million per year. In response to comments from stakeholders, the new legislation makes several procedural changes to the cleanup program to speed up the ranking, prioritization, and remediation of contaminated sites; gives EPA greater flexibility to manage funds; and allows use of cleanup funds to include habitat restoration. President Bush signed the bill on October 8, 2008 (P.L. 110-365).

Other Clean Water Act Issues

Several other issues affecting efforts to achieve the goals and objectives of the Clean Water Act also were of interest during the 110th Congress through oversight and legislation.

Implementation of the BEACH Act

In 2000 Congress enacted the Beaches Environmental Assessment and Coastal Health Act (the BEACH Act) in order to augment federal and state efforts to prevent human exposure to polluted coastal recreation waters, including the Great Lakes. This act directed coastal states to adopt updated water quality standards and EPA to develop new protective criteria and standards. It also authorized grants to coastal states to support monitoring and notification programs. In May 2007 the GAO issued a report on federal and state implementation, finding that EPA has implemented most provisions of the act, but has not yet published new or revised water quality criteria, which the law required by 2005.²³ Several bills to extend authorization of appropriations for the BEACH grants were introduced in the 110th Congress (H.R. 723, H.R. 909, H.R. 2537/S. 1506, S. 2844), and hearings on the status of implementation were held by Senate and House committees. On April 16, 2008, the House approved H.R. 2537 with several amendments (H.Rept. 110-491). The bill would allow states to use BEACH Act funds to track sources of pollution and would require states to use rapid testing methods of beach water, in order to improve public notification. It would increase grant funds to the states from \$30 million annually to \$40 million. It also directs EPA to publish revised water quality criteria for pathogens, a key pollutant of concern at beaches, as well as a list of all pathogens and pathogen indicators it has studied and observed in the course of developing those criteria.

On May 21, 2008, the Senate Environment and Public Works Committee ordered reported companion legislation, S. 2844 (S.Rept. 110-414). The Senate version would increase authorized grant funds to \$60 million per year. No further action occurred.

²³ U.S. Government Accountability Office, *EPA and States Have Made Progress in Implementing the BEACH Act, but Additional Actions Could Improve Public Health Protection*, (GAO-07-591), May 2007, 61 p.

Stormwater Discharges

EPA has struggled since the 1970s to regulate industrial and municipal stormwater discharges in a workable yet comprehensive manner. For many years, it was generally believed that stormwater was largely clean, or uncontaminated. However, studies have shown that this type of discharge carries with it large amounts of organic and toxic pollutants that can harm water quality, including oil and grease, heavy metals, pesticides, soil, and sediment. In P.L. 100-4, Congress established firm deadlines and priorities for EPA to require permits for discharges of stormwater that are not mixed or contaminated with household or industrial waste. EPA issued rules in November 1990 that addressed Phase I of the program, detailing the process of applying for stormwater permits for industries, medium and large municipalities, and construction sites larger than 5 acres. The agency worked with an advisory committee of stakeholders beginning in 1994 to develop rules for regulating smaller stormwater dischargers, which were not covered by the 1990 rules. Rules for smaller dischargers (unregulated industries, small construction sites, and small cities), Phase II of the program, were issued in October 1999. The burden of complying with the rules continues to be an issue with many industries and municipalities, especially small cities, which faced compliance deadlines beginning in March 2003.²⁴

A May 2007 GAO report examined municipalities' implementation of the Phase I and Phase II stormwater rules and burdens of the regulatory program on communities. GAO reported that issuance of some permits was delayed for years after the application deadlines: almost 11% of all communities were not permitted as of fall 2006. As a result, almost all Phase II and some Phase I communities are still in the early stages of implementation. Thus, GAO concluded that it is too early to assess the program or determine its overall burden. GAO attempted to analyze EPA's estimates of program costs, but found methodological and data problems serious enough that GAO could not use the estimates as indicators of actual program costs. Further, GAO found that municipalities' annual reports to EPA were too limited and inconsistent to permit assessing the costs of the stormwater program.²⁵

Stormwater issues were addressed in one provision of omnibus energy legislation in the 109th Congress. As the March 2003 compliance deadline approached for Phase II small construction sites to comply with stormwater permit rules, EPA proposed a two-year extension of those rules for small oil and gas construction sites to allow the agency to assess the economic impact on that particular industry. In March 2005, EPA again extended the deadline, until June 2006. During this time, Congress considered a legislative solution which it enacted in Section 323 of the Energy Policy Act of 2005 (P.L. 109-58). It provides a permanent exemption from stormwater runoff rules for the construction of exploration and production facilities by oil and gas companies or the roads that service those sites.

Industry officials said that EPA's original stormwater rule created costly permitting requirements, even though the short construction period for drilling sites carries little potential for stormwater runoff pollution. The enacted provision makes EPA's temporary delay permanent and makes it applicable to construction activities at all oil and gas development and production sites, regardless of size, including those covered by an earlier Phase I of the stormwater program. Opponents

²⁴ For further information, see CRS Report 97-290, *Stormwater Permits: Status of EPA's Regulatory Program*, by (name redacted).

²⁵ U.S. Government Accountability Office, *Further Implementation and Better Costs Data Needed to Determine Impact of EPA's Storm Water Program on Communities*, GAO-07-749, May 2007, 110 pp.

argued that the provision did not belong in the energy legislation and that there was no evidence that construction at oil and gas sites causes less pollution than other construction activities. Congress passed the conference report on the legislation, with the oil and gas stormwater provision, in July 2005. President Bush signed it into law on August 8, 2005.

In June 2006, EPA promulgated a rule to conform the CWA to these provisions of P.L. 109-58.²⁶ The rule exempts oil and gas construction activities from CWA permits, including sediment-laden stormwater discharges, even if such discharges contribute to a violation of water quality standards. Environmental groups challenged the rule, saying that, because sediment is a pollutant, EPA exceeded its authority by including uncontaminated sediment in the permit exemption. In May 2008, a federal court agreed with the challengers, ruling that the regulation “constituted an impermissible construction” of the CWA, and vacated the regulation (*Natural Resources Defense Council v. EPA*, CA 9, No. 06-73217, May 23, 2008). The government’s request for a rehearing of this ruling was denied in November; EPA has not indicated how it will respond to vacatur of the rule.

Combined and Separate Sewer Overflows

A total of 772 municipalities have combined sewers where domestic sanitary sewage, industrial wastes, infiltration from groundwater, and stormwater runoff are collected. These systems serve approximately 40 million persons, mainly in older urban and coastal cities. Normally (under dry-weather conditions), the combined wastes are conveyed to a municipal sewage treatment plant.

Properly designed, sized, and maintained combined sewers can be an acceptable part of a city’s water pollution control infrastructure. However, combined sewer overflow (CSO) occurs when the capacity of the collection and treatment system is exceeded due to high volumes of rainwater or snowmelt, and the excess volume is diverted and discharged directly into receiving waters, bypassing the sewage treatment plants. Often the excess flow that contains raw sewage, industrial wastes, and stormwater is discharged untreated. Many combined sewer systems are found in coastal areas where recreational areas, fish habitat and shellfish beds may be contaminated by the discharges.

In 1994, following negotiations with key stakeholder groups, EPA issued a CSO permitting strategy. Cities were to implement nine minimum controls by January 1, 1997 (e.g., proper operation and maintenance programs for sewer systems and pollution prevention programs). Controls generally are based on combinations of management techniques (such as temporary retention of excess flow during storm events) and structural measures (ranging from screens that capture solids to construction of separate sewer systems). EPA officials stated in 1998 that only about one-half of the cities with combined sewers implemented the minimum measures called for in the 1994 strategy. EPA has been working with states to remind cities of their obligations to address CSO problems. However, a formal enforcement strategy is not contemplated.

One issue concerning some cities is the problem of overflows from municipal separate sanitary sewers (SSOs) that are not CSOs because they transport only sanitary wastes. Discharges of untreated sewage from these sewers can occur from manholes, broken pipes and deteriorated

²⁶ U.S. Environmental Protection Agency, “Amendments to the National Pollutant Discharge Elimination System (NPDES) Regulations for Storm Water Discharges Associated with Oil and Gas Exploration, Production, Processing, or Treatment Operations, or Transmission Facilities,” 71 *Federal Register* 33628, June 12, 2006.

infrastructure, and undersized pipes, and can occur in wet or dry weather. EPA estimates that there are about 18,000 municipalities with separate sanitary sewers, all of which can, under certain circumstances, experience overflows. No explicit EPA or statutory control policy currently exists. In 1995, EPA convened a stakeholders' group to discuss how to address those overflows that pose the highest environmental and public health risk first. On January 5, 2001, the Clinton Administration proposed regulations to improve the operation of municipal sanitary sewer collection systems, reduce the frequency and occurrence of overflows, clarify the existing CWA prohibition on SSO discharges, and clarify circumstances appropriate for enforcement action. The Clinton proposal was not finalized by the Bush Administration, which reportedly is continuing to consider SSO policy issues.

Funding for CSO and SSO projects is a major concern of states and cities. The most recent clean water needs survey found that the largest needs category, totaling \$55 billion and representing 27% of total needs, is to address CSOs. In December 2000, Congress passed legislation, the Wet Weather Water Quality Act, authorizing a two-year \$1.5 billion grants program to reduce wet weather flows from municipal sewer systems, both CSOs and SSOs. This bill was included in the FY2001 Consolidated Appropriations bill (Section 112 of Division B, P.L. 106-554), which codified EPA's CSO policy on sewer overflows (discussed above). Congress provided no appropriations for these wet weather grants during the two years of authorization (FY2002-FY2003). As described above, in March 2007, the House passed legislation to reauthorize this grant program (H.R. 569).

The 110th Congress also addressed a related issue, that of notification to the public when a sewer overflow event occurs. On June 23 the House passed H.R. 2452, a bill intended to ensure that sewage treatment plants monitor for and report discharges of raw sewage from combined or separate sewers. The bill would require EPA to issue criteria to guide plant operators in assessing whether a sewer overflow has the potential to affect human health or imminently and substantially endanger human health. On September 17, the Senate Environment and Public Works Committee approved S. 2080 with an amendment providing the text of House-passed H.R. 2452. No further action occurred.

Wastewater Security

Since the September 11, 2001, terrorist attacks in the United States, congressional attention has focused on security, preparedness, and emergency response issues. Among the topics of interest is protection of the nation's water infrastructure facilities (both drinking water and wastewater) from possible physical damage, biological/chemical attacks, and cyber disruption.²⁷

Policymakers have examined a number of legislative options in this area, including enhanced physical security, communication and coordination, and research. In the 107th Congress, the House passed legislation to authorize \$200 million in grants for security activities at wastewater treatment plants (H.R. 5169). Similar legislation was introduced in the Senate (S. 3037), but no further action occurred. Congress did enact legislation directing medium and large drinking water utilities to assess their vulnerabilities to terrorist attack and authorizing \$160 million in grants for these utilities to conduct assessments (P.L. 107-188).

²⁷ For information, see CRS Report RL32189, *Terrorism and Security Issues Facing the Water Infrastructure Sector*, by (name redacted).

Following on those new requirements affecting drinking water utilities, in the 108th Congress, the House passed legislation that would have authorized \$200 million in grants to wastewater utilities to conduct vulnerability assessments and an additional \$20 million for technical assistance and improved assessment tools (H.R. 866). The Senate Environment and Public Works Committee approved a similar bill (S. 1039). No further action occurred, due in part to concerns expressed by some that the legislation would not mandate vulnerability assessments and would not require that they be submitted to EPA, as is the case with drinking water assessments required by P.L. 107-188.

Wastewater security issues again received attention in the 109th Congress. In May 2006, the Senate Environment and Public Works Committee approved S. 2781 (S.Rept. 109-345). It was similar to S. 1039 in the 108th Congress in that it would have encouraged wastewater utilities to conduct vulnerability assessments and would have authorized \$220 million to assist utilities with assessments and preparation of site security plans. It also included provisions responding to a March 2006 GAO report that found that wastewater utilities have made little effort to address vulnerabilities of collection systems, which may be used by terrorists to introduce hazardous substances or as access points for underground travel to a potential target. S. 2781 would have authorized EPA to conduct research on this topic. During committee consideration of the bill, an amendment was rejected that would have required, rather than encouraged, treatment works to conduct vulnerability assessments and also would have required high-risk facilities to switch from using chlorine and similar hazardous substances to other chemicals that are often referred to as “inherently safer technologies.” No further action occurred on this bill. A bill in the 110th Congress, S. 1968, would authorize grants for vulnerability assessments and security enhancements at wastewater treatment and drinking water treatment plants and also would authorize research activities. There was no action on this bill.

Nonpoint Pollution Management

Prior to the 1987 CWA amendments, the act’s requirements focused primarily on controlling pollution from “point” sources, that is, discharges from wastewater treatment plants and industrial facilities. Yet, as industrial and municipal sources have abated pollution, uncontrolled nonpoint sources have become a relatively larger portion of remaining water quality problems—perhaps contributing as much as 50% of the nation’s water pollution. Nonpoint pollution is rainfall or snowmelt runoff from farm and urban areas, as well as construction, forestry, and mining sites. In 1987 Congress added a new Section 319 to the act to strengthen the law regarding this major contributor to water pollution by requiring states to develop and implement programs to control nonpoint sources of pollution. States were required to identify waters not expected to meet water quality standards because of nonpoint source pollution and to implement plans for managing pollution from runoff. Federal grants totaling \$400 million were authorized to cover as much as 60% of the costs of implementing a state’s management plan.

At issue today is what progress is being made to manage nonpoint source pollution and what additional efforts may be needed involving Section 319 or other public and private activities. Several concerns have been raised about the program, such as whether state plans have comprehensively addressed their nonpoint pollution problems. Some observers are critical of the largely voluntary nature of the Section 319 program, consisting of “all carrot but no stick,” while others argue that the types of individual land management decisions that are needed to manage nonpoint source pollution cannot be regulated in the same ways that industrial sources are controlled.

Funding has become an important issue as states moved from assessment and plan development to management, since Congress intended that Section 319 funds be used primarily to implement nonpoint pollution controls on the ground. Precise estimates of management costs are not available, because so much depends on the site-specific nature of problems and solutions. However, in 1994 EPA estimated that current and planned spending by private sources, states, and cities under provisions of current law is between \$750 million and \$1.1 billion per year. Without adequate funding to implement state management plans, it is doubtful that much will be achieved under Section 319 to control nonpoint source pollution.

Because agricultural activities are known to be a significant source of nonpoint pollution nationwide, the adequacy of efforts to address these sources has received much attention. Questions have been raised about the 319 grant program's efficacy and overlap with farm bill conservation funding. In particular, the White House Office of Management and Budget (OMB) found that EPA had not demonstrated results under the program and has urged the agency to shift its focus away from implementing projects in agricultural areas and toward implementing plans in impaired waters. State officials have been concerned that OMB is not fully aware of the extent to which Section 319 funds address a range of nonpoint pollution control needs beyond the agricultural sector.

Strategy Concerning Animal Feeding Operations

As noted previously, EPA's water quality reports identify agricultural activities as the leading contributor to water quality impairments nationwide. Animal feeding operations (AFOs) are only a subset of the agriculture category, but because more than one-half of the states specifically identify AFOs as contributing to impairments, public and policy attention has increased on how to minimize public health and environmental impacts of runoff from them. AFOs are agricultural facilities that confine livestock and their feeding activities, thus concentrating animal populations and waste. Animal waste is frequently applied to land for disposal and to utilize the nutrient value of manure to benefit crops. If not managed properly, however, it can pose risks to water quality and public health, contributing pollutants such as nutrients, sediment, pathogens, and ammonia to the environment.

Clean water regulations issued in the 1970s required discharge permits for the largest AFOs, termed confined animal feeding operations (CAFOs). However, EPA acknowledged that compliance and enforcement of these permit rules was poor (less than one-third of covered facilities actually have permits) and that the regulations themselves were outdated. In December 2002, EPA issued revised rules to regulate waste discharges from CAFOs. Among the key elements, the rules include requirements for development of nutrient management plans to better manage land application of manure. EPA estimated that 15,500 CAFOs would be regulated by the rule, at an annual compliance cost of \$335 million. Farm groups said that the regulations are generally workable and consistent with environmental initiatives in the 2002 farm bill (P.L. 107-171), but environmental groups criticized the rule for inadequately addressing animal waste runoff problems.²⁸ A January 2003 GAO report concluded that the rules will be ineffective unless

²⁸ For additional information, see CRS Report RL31851, *Animal Waste and Water Quality: EPA Regulation of Concentrated Animal Feeding Operations (CAFOs)*, by (name redacted).

EPA increases its oversight of state regulatory programs, which have primary responsibility for ensuring compliance by feedlot operators.²⁹

In February 2005, a federal court issued a ruling in a set of challenges to the CAFO rule (*Waterkeeper Alliance, American Farm Bureau, et al. v. EPA*, 399 F.3d 486 (2d Cir. 2005)). The litigation involved challenges to the permitting scheme of the rule, the type of discharges subject to regulation, and the effluent limitations established in the rules. The court upheld major parts of the EPA rule, held in favor of some of industry's challenges, held in favor of several of environmentalists' challenges, and in some cases directed EPA to explain more fully why it did or did not do certain things with regard to specific provisions of the rule. In October 2008, EPA issued final revisions to the 2003 CAFO rule in response to the court's decision.³⁰

Other Implementation Issues

Also of legislative interest are the impacts of court rulings in several cases concerning implementation of existing provisions of the law and involving questions of whether certain activities require a Clean Water Act discharge permit. A fundamental element of the act is the requirement that the "discharge of a pollutant" from a point source shall be carried out pursuant to a permit authorized by the National Pollutant Discharge Elimination System (NPDES) program under Section 402 of the law. In 2004, the Supreme Court held that the transfer of polluted water from one waterbody to another requires a permit, notwithstanding that no new pollutant is added in the process of transfer (*South Florida Water Management District v. Miccosukee Tribe of Indians*, 124 S. Ct. 1537 (2004)).³¹ The decision raised concerns in agricultural areas where such transfers often occur in supplying irrigation water, presently without a permit. Congress has not held oversight hearings on impacts of the Court's decision, and legislation that might address the ruling has not been introduced. In response to the Court's ruling, in June 2008, EPA promulgated a rule defining categories or types of water transfers that the agency believes do not require NPDES permits. The rule, which supports EPA's long-standing legal interpretation of the CWA, is controversial and was quickly challenged in federal courts by the Miccosukee Indian Tribe of Florida and environmental advocates.

Decisions of federal courts in two cases have held that aerial application of a pesticide over and into U.S. waters requires a CWA permit, even when the pesticide use meets other requirements of federal law, including the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). These and related decisions drew the attention of many pesticide applicators, including public health entities such as mosquito control districts, concerned with how the rulings might affect their need to control pests associated with diseases such as the West Nile virus. In November 2006, EPA finalized a rulemaking seeking to resolve the conflict over the regulatory scope of the CWA and FIFRA related to pesticide use, in light of the recent litigation, by promulgating a regulation to clarify circumstances under which a CWA permit is or is not required for activities carried out pursuant to FIFRA. Legal challenges to this rule are pending in federal court. Congress examined these issues in oversight hearings, one by a House Transportation and Infrastructure

²⁹ U.S. Government Accountability Office, *Increased EPA Oversight Will Improve Environmental Program for Concentrated Animal Feeding Operations*, GAO-03-285, January 2003, 42 p.

³⁰ For additional information, see CRS Report RL33656, *Animal Waste and Water Quality: EPA's Response to the Waterkeeper Alliance Court Decision on Regulation of CAFOs*, by (name redacted).

³¹ For information, see CRS Report RL32569, *The Supreme Court Revisits the Environment: Seven Cases Decided or Accepted in the 2003-2004 Term*, by (name redacted).

subcommittee in October 2002 and another by a House Government Reform subcommittee in October 2004. Legislation intended to affirm that a CWA permit is not required for use of FIFRA-approved pesticides and to broaden EPA's 2006 regulatory policy was introduced in the 109th Congress, the Pest Management and Fire Suppression Flexibility Act (H.R. 1749, S. 1269). A House Transportation and Infrastructure subcommittee held a hearing on H.R. 1749 on September 29, 2005. No further action occurred.³²

Continuing Issue: Appropriations

Clean water funding questions continue to arise and be addressed by Congress in the context of appropriations.³³

FY2008

The President's FY2008 budget request was presented to Congress on February 5, 2007. The budget requested \$687.6 million for clean water SRF grants, the same amount requested for FY2007. The budget sought reduced funding for several other water quality programs below levels enacted for FY2007 in P.L. 110-5, including nonpoint pollution management grants (proposed 5% cut), grant funding for states for watershed protection (proposed to be eliminated), and funds for the National Estuary Program (proposed 28% cut). Other water quality programs would receive increased funding under the proposal, including cleanup of contaminated sediments in the Great Lakes (proposed 21% increase), funds for the Chesapeake Bay program (30% increase), and grants to states for water quality monitoring (3% increase).

On June 27 the House passed H.R. 2643, providing FY2008 appropriations for EPA. This bill included \$1.125 billion for clean water SRF grants, plus \$175.5 million for 143 congressionally designated water infrastructure project grants. It also included increases above the Administration's request for nonpoint pollution management grants, targeted watershed protection grants, and the National Estuary Program, as well as Great Lakes and Chesapeake Bay programs. The Senate Appropriations Committee approved companion legislation (S. 1696) that similarly included higher funding levels for several water quality programs. The Senate committee's bill provided less funding for clean water SRF grants than the House bill (\$887 million), but slightly more for congressionally designated water infrastructure project grants (\$180 million). The Senate did not take up S. 1696.

By October 1, the start of the fiscal year, Congress had not enacted any FY2008 appropriations bills. Congress enacted several short-term continuing appropriations resolutions to temporarily fund EPA and other government agencies until final agreement, which occurred in December 2007. Full-year funding for EPA's water infrastructure programs was included in the Consolidated Appropriations Act for FY2008 (Division F, Title II), signed by the President December 26, 2007 (P.L. 110-161). The final bill included \$689 million for clean water SRF grants (\$1.5 million more than requested, but \$395 million less than in FY2007), plus \$177 million for 282 earmarked grants in listed communities, Alaska Native villages, and U.S.-Mexico border projects.

³² For background, see CRS Report RL32884, *Pesticide Use and Water Quality: Are the Laws Complementary or in Conflict?*, by (name redacted).

³³ For additional information, see CRS Report 96-647, *Water Infrastructure Financing: History of EPA Appropriations*, by (name redacted).

FY2009

The President's FY2009 budget was presented on February 5, 2008. Overall, the budget sought \$7.1 billion for EPA programs and activities, 5% less than Congress appropriated for FY2008. The request included a number of reductions for water quality programs. It sought \$555 million for the clean water SRF program (20% below the FY2008 level) and, as in previous budgets, requested no funding for congressionally earmarked water infrastructure grants. In addition, the budget asked for 8% less for nonpoint pollution management grants (\$184.5 million, compared with \$200.8 million in FY2008) and sought no funding for the targeted watershed grants program, a competitive grant program that provides funding for community-driven watershed restoration projects; it received \$10 million in FY2008 appropriations.

On June 11, a House Appropriations subcommittee approved a bill with FY2009 funds for EPA. The bill included \$850 million for clean water SRF capitalization grants (which is \$295 million above the Administration's request and \$161 million above the FY2008 level) and \$150 million for congressionally earmarked water infrastructure grants.

No further action occurred before the start of the new fiscal year. However, at the end of September Congress and the President agreed to legislation providing partial-year funding for EPA and most other agencies and departments. This bill, the Consolidated Security, Disaster Assistance, and Continuing Resolution Act, 2009 (P.L. 110-329) provides funding through March 6, 2009, at FY2008-enacted levels. Final action on FY2009 appropriations is expected to occur early in 2009.

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