



**American Society of Civil Engineers**

---

Washington Office  
101 Constitution Ave., N.W.  
Suite 375 East  
Washington, DC 20001  
(202) 789-7850  
Fax: (202) 789-7859  
Web: <http://www.asce.org>

STATEMENT OF  
THE AMERICAN SOCIETY OF CIVIL ENGINEERS  
ON THE  
NEED FOR RENEWED INVESTMENT IN CLEAN WATER INFRASTRUCTURE  
BEFORE THE  
SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT  
OF THE  
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE  
U.S. HOUSE OF REPRESENTATIVES  
JANUARY 19, 2007

STATEMENT OF  
THE AMERICAN SOCIETY OF CIVIL ENGINEERS  
ON THE  
NEED FOR RENEWED INVESTMENT IN CLEAN WATER INFRASTRUCTURE  
BEFORE THE  
SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT  
OF THE  
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE  
U.S. HOUSE OF REPRESENTATIVES  
JANUARY 19, 2007

Madame Chairwoman and Members of the Subcommittee:

The American Society of Civil Engineers\* (ASCE) is pleased to provide you with this testimony for the record on the parlous state of America's clean water infrastructure. We commend you for beginning your work in the 110<sup>th</sup> Congress by focusing on the importance of the need for a continuing federal investment in the nation's aging sewage treatment systems.

## I. ISSUE BACKGROUND

The federal government has directly invested more than \$72 billion in the construction of publicly owned sewage treatment works (POTWs) and their related facilities since passage of the Clean Water Act in 1972. Nevertheless, the physical condition of many of the nation's 16,000 wastewater treatment systems is poor, due to a lack of investment in plant, equipment, and other capital improvements over the years.

ASCE reported in its 2005 Report Card for America's Infrastructure ([www.asce.org/reportcard/index.cfm](http://www.asce.org/reportcard/index.cfm)) that many sewage-treatment systems have reached the end of their useful design lives. Older systems are plagued by chronic overflows during major rain storms and heavy snowmelt and, intentionally or not, are bringing about the discharge of raw sewage into U.S. surface waters. Because of these continued failings, ASCE gave the nation's wastewater treatment systems a grade of "D -" in 2005, down from a grade of "D" in our 2001 Report Card for America's Infrastructure.

---

\* ASCE was founded in 1852 and is the country's oldest national civil engineering organization. It represents more than 140,000 civil engineers individually in private practice, government, industry, and academia who are dedicated to the advancement of the science and profession of civil engineering. ASCE is a non-profit educational and professional society organized under Part 1.501(c) (3) of the Internal Revenue Code.

The U.S. Environmental Protection Agency (EPA) estimated in August 2004 that the volume of combined sewer overflows (CSOs) discharged nationwide is 850 billion gallons per year. Sanitary sewer overflows (SSOs), caused by blocked or broken pipes, result in the release of as much as 10 billion gallons of raw sewage yearly, according to the EPA.

In its "Clean Watersheds Needs Survey 2000," the EPA said that the nation needs to invest an estimated \$181 billion (in 2000 dollars) to upgrade its aging sewage treatment plants. That estimate was submitted to Congress in August 2003. We believe that the need is even greater today; unfortunately the agency will not issue its next comprehensive needs report until 2009, based on data collected in 2008.

Meanwhile, federal funding under the Clean Water Act State Revolving Loan Fund (SRF) program has remained flat or declined sharply every year since 1995. Despite the impressive funding support provided in the 1970s and 1980s, federal assistance simply has not kept pace with the needs. Nevertheless, virtually every authority agrees that funding needs remain very high: the United States must invest an additional \$181 billion for all types of sewage treatment projects eligible for funding under the Act, according to the most recent needs survey estimate by the EPA and the states, completed in August 2003.

In September 2002, EPA released a detailed gap analysis, which assessed the difference between current spending for wastewater infrastructure and total funding needs. The EPA Gap Analysis estimated that, over the next two decades, the United States must spend nearly \$390 billion to replace existing wastewater infrastructure systems and to build new ones (the total includes money for some projects not currently eligible for federal funds, such as system replacement, which are not reflected in the EPA State Needs Survey).

According to the Gap Analysis, if there is no increase in investment, there will be a roughly \$6 billion gap between current annual capital expenditures for wastewater treatment (\$13 billion annually) and projected spending needs. Nearly seven years ago, the Water Infrastructure Network, a consortium of water and wastewater providers, researchers, environmentalists, engineers (including ASCE), and product manufacturers, recognized the problem. WIN released a study concluding that the annual investment need for all sewer treatment facilities is \$12 billion. Little has been done in the interim, and the picture has not improved with the passage of time.

The Congressional Budget Office (CBO) released its own gap analysis in 2002, in which it determined that the gap for wastewater ranges, from \$23 billion to \$37 billion annually, depending on various financial and accounting variables.

The chairman of the full committee, Mr. Oberstar, stated the case quite succinctly in an October 2003 report: "Without increased investment in wastewater infrastructure, in less than a generation, the U.S. could lose much of the gains it made thus far in

improving water quality, and wind up with dirtier water than existed prior to the enactment of the 1972 Clean Water Act.”

## **II. Short-Term Solutions**

ASCE supports the reauthorization of the Clean Water Act to allow annual appropriations of \$1.5 billion to \$2 billion from the federal general fund for the Clean Water State Revolving Loan Fund (CWSRF) program. ASCE also supports funding research into wastewater treatment technology, which may reduce capital expenditures, as well as operation and maintenance cost.

In addition, the reauthorization legislation should include a prerequisite that all contracts for the acquisition of professional design services should conform to the “qualifications based selection” (QBS) requirements of the Brooks Architect-Engineers Act of 1972, 40 U.S.C. §§ 1101-1104. This will ensure that all publicly owned treatment works funded under the Clean Water Act are designed by the most highly qualified architects and engineers.<sup>1</sup>

The case for increased federal investment immediately is compelling. Needs are large and unprecedented; in many locations, local sources cannot be expected to meet this challenge alone and, because waters are shared across local and state boundaries, the benefits of federal help will accrue to the entire nation.

## **III. Long-Term Solution**

ASCE supports enactment of a federal water infrastructure trust fund act that would provide a reliable source of federal assistance for the construction and repair of POTWs to reduce the enormous funding gap.

Without a permanent dedicated source of revenue, our clean water infrastructure remains vulnerable to conflicting federal budget priorities, which can—and do—change from Congress to Congress and administration to administration. (This legislation also should require application of the Brooks A-E Act to the acquisition of all engineering designs funded by the Act.)

Clean and safe water is no less a national priority than are national defense, an adequate system of interstate highways, and a safe and efficient aviation system. Many other highly important infrastructure programs enjoy sustainable, long-term sources of federal backing, often through the use of dedicated trust funds; under current policy, water and wastewater infrastructure do not.

---

<sup>1</sup> This provision was included in water infrastructure legislation introduced in the 108<sup>th</sup> and 109<sup>th</sup> Congresses. The bills were not enacted. See H.R. 20, 108<sup>th</sup> Cong. § 3(b) (2003); H.R. 2684, 109<sup>th</sup> Cong. § 3(b) (2005); H.R. 4560, 109<sup>th</sup> Cong. § 302(b)(16) (2005).

Madame Chairwoman, that concludes our statement. If you have additional questions, please contact Michael Charles of our Washington Office at (202) 789-7844 or by e-mail at [mcharles@asce.org](mailto:mcharles@asce.org).

# # #