



Clean Watersheds Needs Survey 2008 Report to Congress

The Clean Watersheds Needs Survey 2008 Report to Congress summarizes the results of EPA's 15th national survey on water pollution control capital investment needs required to meet environmental and human health objectives of the Clean Water Act.

Frequently Asked Questions

1. How can I access the report and the survey data?

The entire report, as well as the entire suite of Clean Watershed Needs Survey (CWNS) data, is available at <http://www.epa.gov/cwns>. Reports and data from the 2004 and 2000 surveys are also available at this website.

2. What are the overall needs reported in the 2008 CWNS Report?

EPA estimates that nationwide capital investment needs for wastewater pollution control is \$298.1 billion. This figure represents documented needs for up to a 20-year period. The estimate includes \$192.2 billion for wastewater treatment and collection systems, \$63.6 billion for combined sewer overflow corrections, and \$42.3 billion for stormwater management.

The report documents a \$43.4 billion (17 percent) increase (in constant 2008 dollars) in investment needs over the 2004 CWNS report. The increase is due to a combination of improved reporting, aging infrastructure, population growth, and more protective water quality standards.

3. What is a "Need"?

Needs in the report include the unfunded capital costs of projects as of January 1, 2008 that:

- Address a water quality or a water quality-related public health problem existing as of January 1, 2008, or expected to occur within the next 20 years
- Meet the seven CWNS documentation criteria described in the report

Documentation criteria ensured the legitimacy of needs and the accuracy of cost and technical information in this report. To meet the criteria, a description and location of a water quality or water-related public health problem, as well as site-specific pollution abatement measures with detailed cost information was required. Needs that did not meet these documentation criteria were classified as unofficial cost estimates.

4. What impact did the American Recovery and Reinvestment Act (ARRA) have on reported needs?

The needs reported were those in existence as of January 1, 2008, and reported to EPA between February 2008 and April 2009. As a result, needs were neither reduced by ARRA funding nor significantly increased through additional documentation made available to the States through ARRA applications (which generally began in March of 2009 and extended beyond the data collection period for this report).

5. Who submits needs?

States, territories, and the District of Columbia are regular submitters of needs from survey to survey. These entities use their files, as well as documents from local communities, to submit needs information to EPA

Wastewater treatment needs on tribal lands are tracked separately in the Indian Health Service's annual surveys.

6. What criteria are used to determine what types of needs can be submitted into the Clean Watersheds Needs Survey (CWNS)?

EPA, in consultation with the CWNS 2008 National Workgroup, established seven criteria for states to document each need:

1. A description of the current or potential water quality impairment and information on its potential source. The problem description needed to include specific pollutant source information and/or specific threats to the waterbody.
2. The location of the problem. A single latitude/longitude point or an area (e.g., polygon, county, watershed) needed to be identified.
3. The solution to the problem. One or more specific pollution control measures or best management practices (BMPs) needed to be identified.
4. The cost for each solution. The cost to implement each pollution control measure or specified BMP needed to be provided.
5. The source of the cost. Documentation (e.g., engineer's estimates, costs from comparable practices, estimates from equipment suppliers) for each solution needed to be identified.
6. The total cost. The total cost of all pollution control measures and BMPs documented for the facility or project needed to be provided.
7. Current documentation. For records with total needs greater than \$20 million, the documentation date of all documents needed to be January 1, 2002, or more current. For all other needs, the documentation date needed to be January 1, 1998, or more current.

EPA converted all costs to “2008 dollars” (January 2008) for this report.

7. What are the differences between the needs categories in the 2004 and 2008 CWNS?

Beginning in 2008, EPA reported stormwater needs in the following four subcategories: Stormwater Conveyance Infrastructure (Category VI-A) (\$7.6 billion; 18 percent); Stormwater Treatment Systems (Category VI-B) (\$7.4 billion; 18 percent); Green Infrastructure (Category VI-C) (\$17.4 billion; 41 percent); General Stormwater Management (Category VI-D) (\$2.9 billion; 7 percent). In prior surveys, all needs were reported as Stormwater Management (Category VI) needs. Many of these needs (\$7.0 billion; 17 percent) are still valid for this report.

Also beginning in CWNS 2008, the stormwater needs category includes both regulatory and non-regulatory stormwater management needs. National Pollutant Discharge Elimination System (NPDES) Phase I municipal separate storm sewer systems (MS4s) account for 26 percent, or \$11.2 billion, of the total Stormwater Management (Category VI) needs, and NPDES Phase II MS4s account for 51 percent, or \$21.6 billion in needs. Non-traditional NPDES MS4s (e.g., universities, hospitals) and unregulated communities account for \$0.2 billion (less than 1 percent) and \$9.3 billion (22 percent) in needs respectively.

Nonpoint Source needs are included in the report’s appendix. Decentralized/Onsite Wastewater Treatment needs are included in the report’s appendix under their own category. Decentralized/Onsite needs were reported as a sub-category of Nonpoint Source needs in the appendix of the 2004 CWNS report.

8. What data quality assurance practices are utilized to ensure accurate needs data are in the report?

There are several tiers of data quality assurance. The CWNS data entry system performs several automated data quality checks as data are entered. After data is submitted, the CWNS data quality review team performs detailed reviews to:

- a) Ensure data submitted into the CWNS data entry system accurately reflect data in the substantiating documents
- b) Ensure the documents contained the minimum data elements described above, and
- c) Ensure that projects met eligibility and time requirements described above

9. What factors influence increases and decreases in a State’s needs from one survey to the next ?

States needs can increase for a variety of reasons. For CWNS 2008, many States reported that State efforts to implement more protective water quality standards led to significant increases in advanced treatment needs. Other States reported that aging pipe networks required more rehabilitation and replacement. A few States submitted needs for the new green infrastructure

subcategory of stormwater management needs, while some States' needs increased due to increased State needs documentation efforts and improved coordination between agencies and departments within States.

Decreases in States' needs can also be caused by many different factors. Some states reported needs decreases due to increased levels of funding. Additional States reported decreases due to reduced State efforts to document needs – either due to other State priorities or staff reductions due to State budget issues.

10. How is this report used?

Unlike the direct linkage between Drinking Water Infrastructure Needs Survey results and Drinking Water State Revolving Fund allocations to states and territories, the Clean Watersheds Needs Survey results are NOT directly linked to Clean Water State Revolving Fund (CWSRF) allocations to states and territories. Congress is currently considering legislation that would link the CWSRF allocations to results of this report.

By estimating water pollution control needs, wastewater flows, and wastewater treatment plant populations served, this report informs decision making on water pollution control programs. Congress uses CWNS data to help inform legislation. State environmental agencies, legislatures and governor's offices use CWNS data to help administer environmental programs. Academia and industry use CWNS data to help with water quality research and technology support. The public can access CWNS data at www.epa.gov/cwms to learn about facilities and projects in their community.

11. When will the next report be available?

The next survey will estimate needs as of January 1, 2012. Data collection is scheduled for January through October 2012, with the report scheduled for completion in 2013.

12. Are nonpoint source water infrastructure needs included in the report?

(see #11)

13. Are onsite/decentralized wastewater system needs included in the report?

In addition to official needs, other documented needs for nonpoint source pollution prevention (\$22.8 billion) and decentralized/onsite wastewater systems (\$23.9 billion) are included in an appendix to the report. These needs are not specifically noted for inclusion in the report by section 516(B)1(b) of the Clean Water Act, and, therefore, were not included in the main report. However, these needs are eligible for Clean Water State Revolving Fund assistance, as well as assistance under EPA's Nonpoint Source Grants Program. These appended nonpoint source and decentralized needs met the documentation standards used for rest of the report.

14. How can I find information on my community's needs?

Summary fact sheets are available for states at: <http://www.epa.gov/cwms/>

The CWNS website also includes needs information for individual wastewater and stormwater facilities, as well as information for decentralized wastewater systems, nonpoint source control projects, and watersheds.

15. How are Needs funded?

Wastewater treatment utilities pay for infrastructure using revenue from rates charged to customers and may finance large projects using loans or bonds. State and federal funding programs, such as EPA's Clean Water State Revolving Fund (CWSRF) program, are also available to help local communities address their nonpoint source pollution control and wastewater treatment needs. Most of the needs in the report and appendices (an estimated \$334.5 billion out of the \$344.8 billion in total documented needs) are potentially eligible for the CWSRF program. An estimated \$81.5 billion in needs are potentially eligible for assistance from EPA's Nonpoint Source Grants Program, including \$34.8 billion in stormwater needs, and all of the appended non-point source and decentralized/onsite needs.

16. What are some recent trends in clean water infrastructure funding?

From July 1, 2004, through June 30, 2008, EPA provided an annual average of \$1.1 billion in grants to state CWSRF programs. States combined the CWSRF funds with state-matching funds, bond proceeds, and loan repayments to provide assistance to local communities, mostly in the form of loans. In the same period, this assistance amounted to approximately \$5.5 billion per year.

According to U.S. Census Bureau estimates for the most recent four-year period available (2002–2006), local governments expended approximately \$15 billion per year to address capital wastewater needs and approximately \$2 billion per year to address capital stormwater needs. Over the past 20 years, the operation and maintenance (O&M) portion of total local wastewater expenditures grew from 50 percent to 60 percent. This is an indication of the increasing O&M needs related to aging wastewater infrastructure and to increasing material and energy costs. While local capital expenditures have remained flat over the past 20 years, they have increased over the past 10 years. In general, capital renewal projects have not kept pace with the increasing need to rehabilitate or replace aging infrastructure.

17. What would be the environmental impacts of meeting or not meeting these needs?

The wastewater treatment objectives of the Clean Water Act are designed to ensure that the nation's waters are clean, fishable, and swimmable. At wastewater plants in thousands of communities around the country, biological processes (secondary treatment) remove most of the organic matter in wastewater, while advanced treatment processes such as filtration or UV irradiation remove additional organic matter, nitrogen, phosphorus, or toxins. Advanced treatment of wastewater minimizes negative impacts such as damage to wildlife and ecosystems. The population provided with advanced wastewater treatment has increased from 7.8 million people in 1972 to 113.0 million people in 2008.

If the needs specified in this report are met, the number of publicly owned wastewater treatment facilities that provide biological treatment or more advanced treatment or that do not discharge to surface waters is projected to increase by 6 percent from 14,625 to 15,451 over the next 20 years. The population being served by those facilities is projected to increase by 26 percent. Overall, EPA projects that a total of 15,618 facilities will serve a future population of 284.2 million people, or 79 percent of the U.S. population.

If the needs presented in this report are not met, the nation's water quality would be impacted. Unfunded needs would translate into minimal repair, replacement, or upgrade of existing water infrastructure such as pipes, pumps, and treatment systems.

18. Who can I contact for more information?

State, Regional, and national contact information is available at <http://www.epa.gov/cwns/>.

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