



EPA's 2007 Drinking Water Infrastructure Needs Survey and Assessment

Summary In 2007, the U.S. Environmental Protection Agency (EPA) conducted its fourth Drinking Water Infrastructure Needs Survey and Assessment (DWINSA or Assessment). The purpose of the Assessment is to document the 20-year capital investment needs of public water systems that are eligible to receive Drinking Water State Revolving Fund (DWSRF) monies — approximately 52,000 community water systems and 21,400 not-for-profit noncommunity water systems. As directed by the Safe Drinking Water Act (SDWA), EPA uses the results of the survey to allocate DWSRF funds to the states.

Total National 20-Year Need (in billions of January 2007 dollars)

System Size and Type	Need
Large Community Water Systems* (serving over 100,000 persons)	\$116.3
Medium Community Water Systems* (serving 3,301-100,000 persons)	\$145.1
Small Community Water Systems (serving 3,300 and fewer persons)	\$59.4
Not-for-Profit Noncommunity Water Systems†	\$4.1
Total State Need	\$324.9
American Indian and Alaska Native Village Water Systems†	\$2.9
Costs Associated with Proposed and Recently Promulgated Regulations	\$7.0
Total National Need	\$334.8
Note - numbers may not total due to rounding. * "Large" and "medium" systems are defined differently for this Assessment than previous Assessments. See Appendix A in the DWINSA report for more information. † Based on 1999 Assessment findings adjusted to 2007 dollars.	

Needs were adjusted from 1999 to 2007 dollars.

What Is the Total Need? The survey found that the total nationwide infrastructure need is \$334.8 billion for the 20-year period from January 2007 through December 2026. American Indian and Alaska native village systems represent \$2.9 billion of the total national need. It is important to note that the scope of the survey is limited to those needs eligible to receive DWSRF assistance—thus excluding capital projects related solely to dams, raw water reservoirs, future growth, and fire protection.

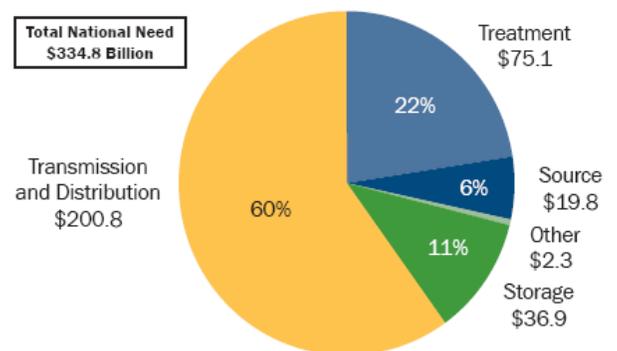
How is the Need Broken Out by Category? With \$200.8 billion in needs over the next 20 years, transmission and distribution projects represent the largest category of need. This result is consistent with the fact that transmission and distribution mains account for most of the nation's water infrastructure. The other categories, in descending order of need are: treatment, storage, source and a miscellaneous category of needs called "other."

How Was the Assessment Conducted? The approach for the Assessment was developed by EPA in consultation with a workgroup consisting of representatives from EPA regions and each state. The Assessment approach relied primarily on a random sample survey. A questionnaire was used to collect documented needs and costs.

Approximately 3,250 public water systems participated in the survey. EPA mailed questionnaires to all 584 of the nation's large water systems (serving more than 100,000 persons) and 2,266 medium systems (serving between 3,301 and 100,000 persons). Approximately 97 percent of the large systems and 92 percent of the medium systems returned the questionnaire. For small community water systems (serving fewer than 3,300 people), EPA contracted water system professionals to conduct in-person site visits to 600 small systems. These field surveys served to accurately assess the infrastructure investment needs of small systems.

The needs of not-for-profit noncommunity systems and systems serving American Indian and Alaska native villages are based on the findings of the second DWINSA.

Total 20-Year Need by Project Type (in billions of January 2007 dollars)



Note: Numbers may not total due to rounding.

How Does the 2007 Need Compare to the Other Assessments? The total national need of \$334.8 billion reported by this Assessment is similar to the result of the 2003 Assessment (\$331.4 billion when adjusted to 2007 dollars). The 2003 and 2007 estimates differ greatly from the 1995 and 1999 Assessments, which estimated a need of \$200.4 billion and \$198.2 billion (when adjusted to 2007 dollars), respectively. EPA believes the 2007 Assessment continues the success of the 2003 effort in better capturing previously under-reported needs for rehabilitation and replacement of existing infrastructure. However, the 2007 DWINSA was specifically designed to further improve consistency across states and water systems in the methodologies for estimating infrastructure investment need.

The large magnitude of the national need reflects the challenges confronting water systems as they deal with an infrastructure network that has aged considerably since these systems were constructed, in many cases, 50 to 100 years ago.

How Does the Need Vary by System Size? The nation's medium sized water systems (serving between 3,301 and 100,000 people) account for the greatest share, \$145.1 billion, of the total national need. Large and small systems also have substantial needs of \$116.3 billion and \$59.4 billion, respectively. The small system need is relatively high when compared to the fact that these systems serve 9 percent of the total national population. This reflects the challenges these small systems often face. Not-for-profit noncommunity water systems have \$4.1 billion of need.

What is the Regulatory Need? Although all of the infrastructure projects in the survey promote the public health objectives of the SDWA, only \$52.0 billion, or 16 percent of the total national need is directly attributable to compliance with specific SDWA regulations. The majority of projects are needed to ensure the continued provision of safe drinking water.

The total need for obtaining and maintaining compliance with existing regulations is \$45.0 billion. The remainder of the regulatory-related need is for compliance with proposed and recently promulgated regulations including \$2.2 billion for the treatment needs under the Long Term 2 Enhanced Surface Water Treatment Rule, \$1 billion for the Stage 2 Disinfectants/Disinfection Byproducts Rule, \$0.4 billion for the Ground Water Rule, and \$3.3 billion for the Radon Rule.

How Credible are the Findings? In order to produce an estimate of need nationally and for each fully surveyed state (some states were given the option of a partial survey), EPA set a statistical confidence level of 95 percent with a precision target of +/- 10 percent. To meet this target, all large systems were surveyed, an adequate number of medium systems were randomly selected in each fully surveyed state, and a national sample of small systems was selected.

In planning for the 2007 Assessment, EPA and the states reached a consensus on consistent policies regarding replacement and rehabilitation assumptions and documentation requirements to support projects allowable for the survey. EPA's quality assurance reviews included significant efforts to ensure policies were followed by all states.

Where Can I Obtain More Information? Information on the *Drinking Water Infrastructure Needs Survey and Assessment: Fourth Report to Congress* is available from the Safe Drinking Water Hotline at 1-800-426-4791. EPA will post the electronic files on the Office of Ground Water and Drinking Water home page at www.epa.gov/safewater/needsurvey. Reprints of the report are available to the public through the National Service Center for Environmental Publications (NSCEP) website at www.epa.gov/nscep/.