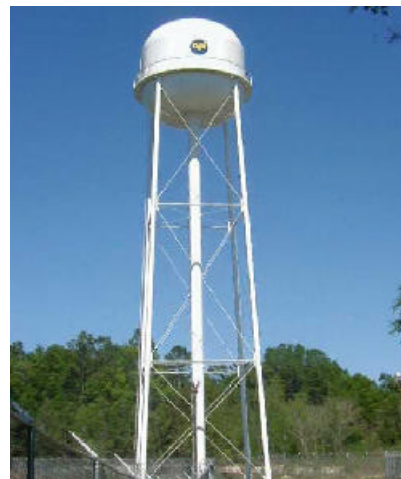
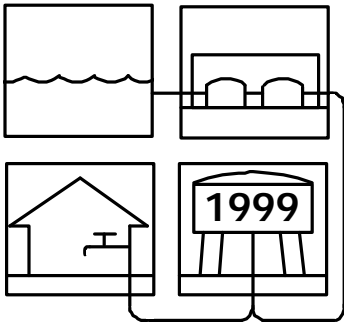




Fact Sheet

1999 Drinking Water Infrastructure Needs Survey





FACT SHEET

1999 Drinking Water Infrastructure Needs Survey

In 1999, the U.S. Environmental Protection Agency (EPA) conducted the second Drinking Water Infrastructure Needs Survey. The purpose of the survey 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 55,000 community water systems and 21,400 not-for-profit noncommunity water systems. The survey reports infrastructure needs that are required to protect public health, such as projects to ensure compliance with the Safe Drinking Water Act (SDWA). As directed by the SDWA, EPA uses the results of the survey to allocate DWSRF funds to the States and Tribes.

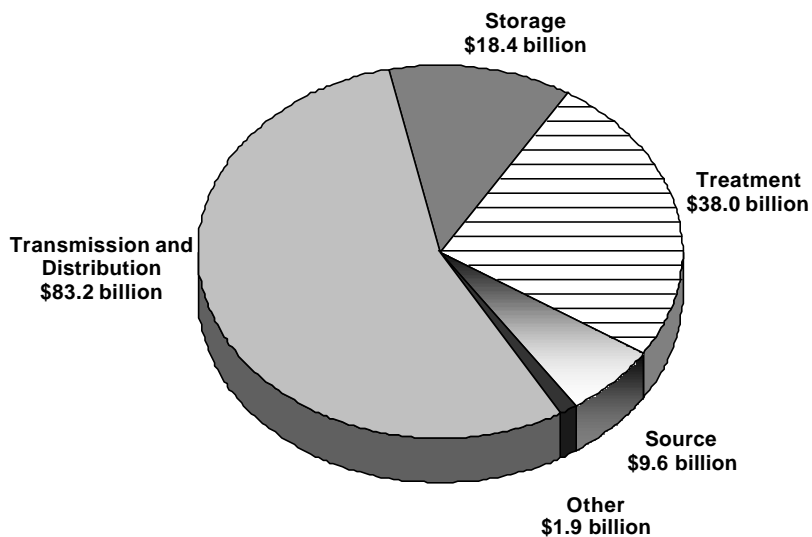
How Was the Survey Conducted?

The approach for the survey was developed by EPA in consultation with a workgroup of consisting State, American Indian, Alaska Native Village, and Indian Health Service representatives. A total of approximately 4,000 public water systems participated in the survey.

For the State survey, mailed questionnaires were used to collect documented needs and costs from medium and large community water systems. All 1,111 of the nation's large water systems serving more than 40,000 people and a random sample of about one-third of the 7,759 medium systems serving more than 3,300 people received a questionnaire. Approximately 96 percent of these systems returned the questionnaire—with 100 percent of large systems responding. EPA conducted site visits to complete the questionnaires for 599 randomly selected community water systems serving fewer than 3,300 people and for 100 not-for profit noncommunity water systems. Infrastructure needs identified through the questionnaires and site visits were extrapolated to estimate a total need for each State.

For American Indian systems, all 19 medium systems completed a questionnaire and a random sample of 78 small systems received on-site assessments. In Alaska, EPA conducted a census of the 174 water systems that serve Alaska Native Villages. The results of these efforts were extrapolated to estimate the total American Indian and Alaska Native system need.

Total 20-Year Need by Category
(in January 1999 dollars)



What Is the Total Need?

The survey found that the total infrastructure need nationwide is \$150.9 billion for the 20-year period from January 1999 through December 2018. Of this total, 68 percent, or \$102.5 billion, is needed now to ensure the provision of safe drinking water. American Indian and Alaska Native Village systems represent \$2.2 billion of the total national need.

With \$83.2 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."

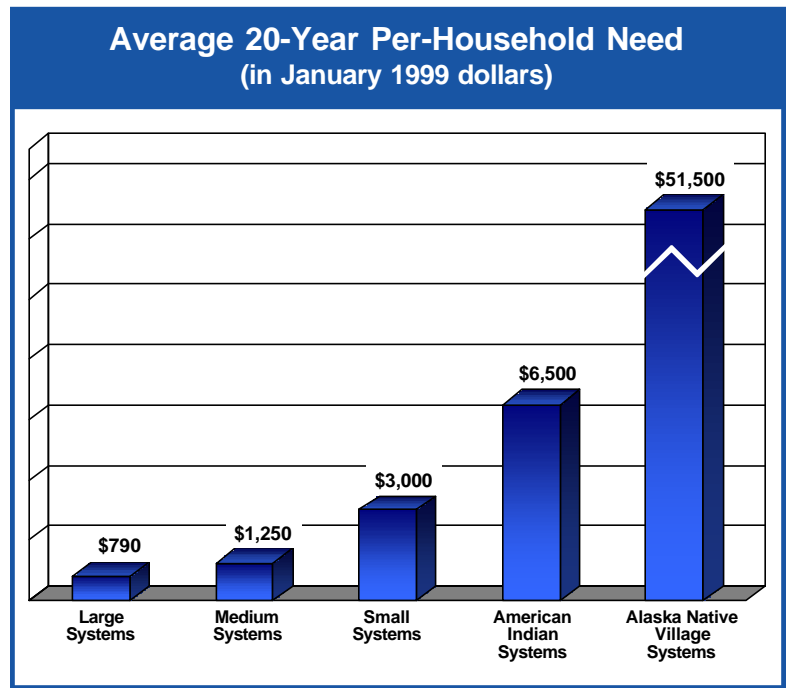
How Does the State Need Vary by System Size?

The nation's largest water systems (serving more than 50,000 people) account for the greatest share, 41 percent, of the total national need. Medium and small systems also have substantial needs of \$43.3 billion and \$31.2 billion, respectively. Not-for-profit noncommunity water systems have \$3.1 billion of need.

Although the total small system need is modest compared to needs of larger systems, the costs borne on a per household basis by small systems are almost 4-fold higher than large systems. Small systems lack the economies of scale that allow larger systems to spread the costs of capital improvements among many consumers.

What Is the American Indian and Alaska Native Village System Need?

The total need for American Indian and Alaska Native Village systems is \$2.2 billion over 20 years, of which \$2.0 billion is needed now. The significance of this need in terms of public health is underscored by considering the per household costs, which average \$6,500 for American Indian systems and \$51,500 for Alaska Native Village systems. The expense in transporting materials to remote areas, the lack of economies of scale for small systems, and the limited construction period in some regions are among the factors that contribute to the high per household costs for these systems.



What is the Regulatory Need?

Although all of the infrastructure projects in the survey promote the public health objectives of the SDWA, approximately \$31.2 billion of the total national need is directly attributable to specific SDWA regulations. Projects to address microbiological contamination account for 72 percent, or \$22.4 billion, of the total regulatory need. The remainder of the need is largely for treatment projects to control or reduce chemical contaminants such as nitrate, lead, solvents and pesticides.

How Credible are the Findings?

The methods developed for the survey yield a conservative estimate of need. Despite the large magnitude of the total national need, the survey likely underestimates the true need due to the stringent documentation criteria and the use of a mailed questionnaire to capture the needs of medium and large systems. Also, 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 Does the Need Compare to the First Survey?

The findings from the second Needs Survey support the results from the previous survey, conducted in 1995. The 1995 survey identified a total national need of \$138.4 billion (or \$152.6 billion in 1999 dollars). The need to replace, upgrade, and install infrastructure likely will increase as the nation's water systems continue to age. 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.

Where Can I Obtain More Information?

Information on the Second Drinking Water Infrastructure Needs Survey 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. Reprints of the report are available for sale to the public through the Educational Resource Information center at 1-800-276-0462, or through the National Technical Information Service at 1-800-553-NTIS or (703) 487-4650.



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