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EPA Fact Sheet

Drinking Water Infrastructure Needs Survey: American Indian and Alaska Native Water Systems

Fact Sheet

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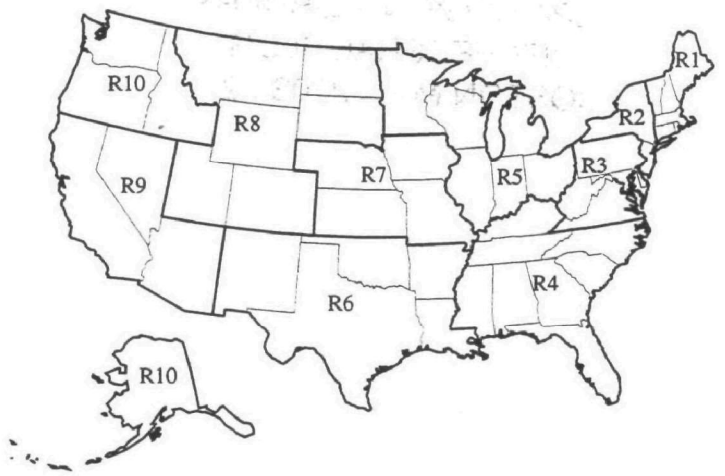
The U.S. Environmental Protection Agency (EPA) has conducted the first comprehensive study of the drinking water infrastructure needs of American Indian and Alaska Native water systems. This study was part of the first nationwide survey of drinking water systems' infrastructure needs. The survey estimates how much money drinking water systems nationwide will have to spend now and through the year 2014. The report estimates the need for complying with current and future federal regulations, replacing aging infrastructure to protect public health, and consolidating with or acquiring neighboring systems without safe supplies of drinking water. The Indian Health Service (IHS), and American Indian and Alaska Native representatives participated in survey design and implementation.

Location of EPA Regions



How Was the Survey Conducted?

The Needs Survey workgroup assessed needs for a sample of the 884 American Indian and Alaska Native systems nationwide. These needs were assessed through site visits, questionnaires, and expert evaluations, with American Indian and Alaska Native representatives involved in each assessment. The results of these assessments were complied and used along with IHS data to estimate the total need.

What is the Total Need for American Indian and Alaska Native Systems?

The Drinking Water Infrastructure Needs Survey shows that American Indian and Alaska Native water systems will need $1.3 billion for the 20-year period from January 1995 through December 2014. Significantly, about $1.1 billion of the total is needed now for infrastructure improvements to protect public health.

Total Need by EPA Region

(in millions of Jan. '95 dollars)

EPA Region	Need
Region 1	<1
Region 2	2
Region 3	--
Region 4	16
Region 5	41
Region 6	35
Region 7	6
Region 8	96
Region 9	321
Region 10	46
Alaska Native Systems	772
Total	**1,333**

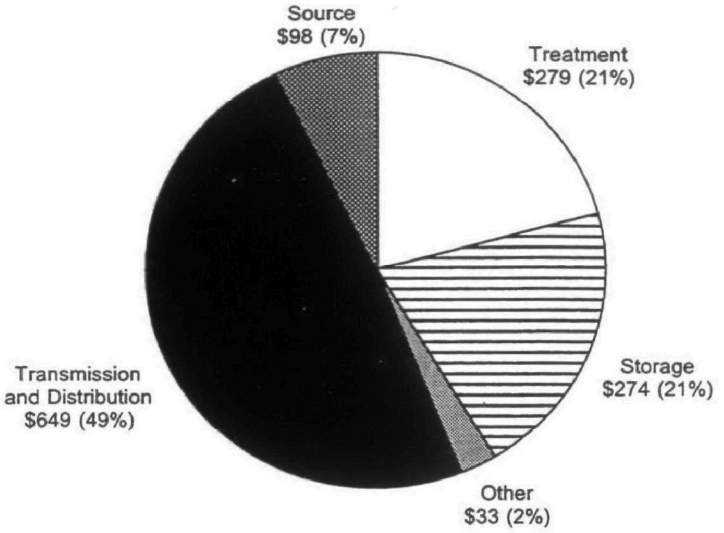
There are no American Indian water systems in EPA Region 3.
Navajo water systems are located in EPA Regions 6, 8, and 9, but are reported here in Region 9.

What Needs do American Indian Water System Face?

American Indian water systems face unique problems. Communities are often distant from other towns and communities, so they must construct

American Indian and Alaska Native Need by Category

(in millions of Jan. '95 dollars)



and maintain their own water systems. American Indian water systems require more distribution line per customer than most small systems regulated by the States. Almost 40 percent of American Indian needs are for transmission and distribution.

Treatment needs account for approximately one third of the total need for American Indian systems. Water sources can be difficult to find in the arid country in which many American Indian communities are located, and when found, water is often of poor quality. Frequently, the only available sources of water require expensive treatment methods.

American Indians have a higher average per-household cost than small systems regulated by the States. The average per–household need over a 20-year period is $6,200 for a American Indian water system compared to $3,300 for small systems regulated by the States.

What Needs do Alaska Native Water Systems Face?

Transmission and distribution system installation and replacement account for about half of the total Alaska Native water system need. Freezing and structural stability problems associated with permafrost make construction expensive.

Projects to install or replace treatment and storage facilities for Alaska Native communities represent over a third of their reported need. In order for Alaska Native water systems to be structurally sound, heated facilities such as water treatment facilities and storage tanks must be constructed on pilings or large pads made of imported gravel. Because many Alaska Native households lack running water, treatment facilities often house washeterias with showers, toilets, and laundry facilities.

Capital infrastructure costs are further increased by the short construction season and the high cost of transporting equipment. The average per–household need over a 20-year period for an Alaska Native water system is very high at $43,500.

What is the Need to Comply with the Safe Drinking Water Act?

Approximately $96 million is needed for existing Safe Drinking Water Act (SDWA) regulations for contaminants with acute health effects. This includes the Surface Water Treatment Rule, the Total Coliform Rule (TCR), and the nitrate standard. In addition, $1 million is needed for compliance with existing regulations for contaminants with chronic health effects, such as the Lead and Copper Rule.

An additional $185 million is for replacing or repairing distribution pipes, which is not considered a SDWA need. This need is categorized as a SDWA-related need because the monitoring required under the SDWA's TCR helps to identify problems in the distribution lines. However, these problems would exist in the absence of TCR monitoring, and they would eventually degrade water quality and service to the extent that problems would be detected without the monitoring required under the TCR.

American Indian and Alaska Native Total SDWA and SDWA-Related Need

(in millions of Jan. '95 dollars)

Regulation	Need
Existing Regulations	
Regulations for Contaminants with Acute Health Effects	96
Regulations for Contaminants with Chronic Health Effects	1
Subtotal	**97**
Proposed Regulations	
Disinfectants and Disinfection Byproducts Rule	18
Enhanced Surface Water Treatment Rule	8
Subtotal	**26**
SDWA-Related Need	
Distribution Improvements (TCR)	185

How Can I Obtain More Information?

Information on the 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 Executive Summary on the Office of Ground Water and Drinking Water home page at http://www.epa.gov/OW/OGWDW. 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.