GAO Highlights

WATER INFRASTRUCTURE RESILIENCE

Agencies Could Better Assess Efforts to Assist Communities Vulnerable to Natural Disasters

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A report to congressional requesters.

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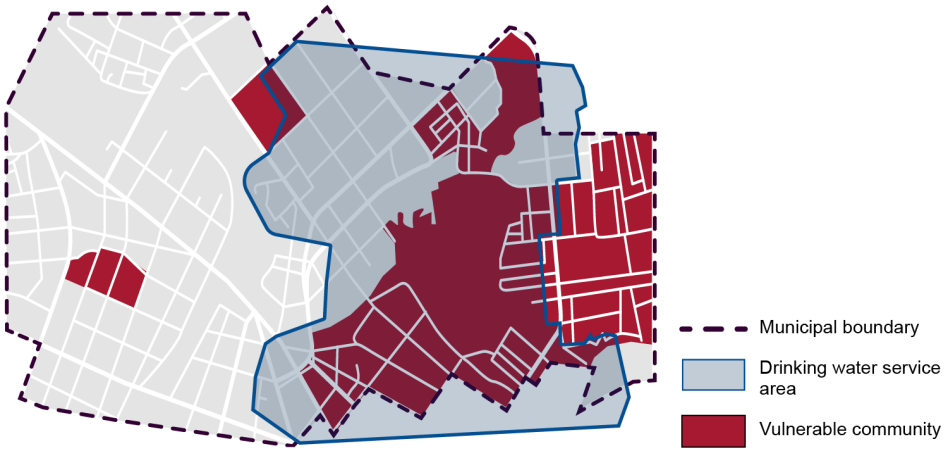
What GAO Found

The U.S. Environmental Protection Agency (EPA), Federal Emergency Management Agency (FEMA), and U.S. Department of Agriculture (USDA) provided different types of financial assistance to improve drinking water and wastewater infrastructure in fiscal years 2014 through 2023. Specifically, 14 of the agencies' programs provided $35 billion in grants (at least 22,000 projects) and $29 billion in direct loans (about 4,800 projects) during this period.

EPA, FEMA, and USDA took steps to reduce barriers to financial assistance faced by vulnerable communities—those likely to face challenges preparing for and recovering from disasters, such as rural and low-income areas. In this report, GAO used the term "vulnerable communities" to refer to communities defined in some programs' authorizing statutes that may receive additional assistance under these programs. These statutes were not affected by recent executive orders or actions. Agencies provided technical assistance and allowed grantees to use assistance from other federal programs to meet requirements to provide matching funds, known as nonfederal cost share. However, FEMA has not adequately communicated about the option to use assistance from USDA programs to meet cost-share requirements in certain cases.

EPA, FEMA, and USDA used national or state measures to assess the extent to which vulnerable communities benefitted from certain programs. However, EPA, FEMA, and USDA officials said that limited data about the geographical areas served by drinking water and wastewater utilities made it difficult to accurately assess who benefited from their programs. EPA created a mapping tool with the geographical service areas of drinking water systems, which may differ from municipal boundaries (see fig.). EPA plans to complete a similar tool for wastewater service areas in summer 2025. Using EPA's mapping tools could enable EPA, FEMA, and USDA to more accurately identify the communities, including vulnerable communities, their programs are benefiting.

Example Municipal Boundary and Drinking Water System Service Area



Source: GAO. | GAO-25-107013

Why GAO Did This Study

Drinking water and wastewater utilities have experienced disruption or failure after disasters, threatening public health. For example, disasters in Mississippi in 2022 and North Carolina in 2024 left residents without potable water for weeks. Federal agencies provide assistance for utilities to build resilience against natural disasters—including communities in rural and low-income areas vulnerable to disasters.

This report examines, among other things, (1) financial assistance that EPA, FEMA, and USDA provided to improve water infrastructure; (2) the extent to which these agencies addressed barriers vulnerable communities face accessing and participating in selected programs; and (3) how these agencies assessed the extent to which assistance reached vulnerable communities.

GAO analyzed fiscal year 2014–2023 data for EPA, FEMA, and USDA programs that provided financial assistance for water infrastructure projects—the most recent data available during the review. GAO also reviewed relevant executive orders and agencies' plans and actions taken to address barriers faced by vulnerable communities. Finally, GAO interviewed a nongeneralizable sample of 14 utilities selected based on factors including vulnerability and disaster experience.

What GAO Recommends

GAO is making eight recommendations, including that FEMA communicate about options to meet cost-share requirements, and that EPA, FEMA, and USDA use service area map tools. EPA and FEMA disagreed with using the tools. USDA did not comment. GAO maintains its recommendations are valid, as discussed in this report.