

GAO Highlights

Highlights of [GAO-17-424](#), a report to congressional requesters

Why GAO Did This Study

Drinking water contaminated with lead in Flint, Michigan, renewed awareness of the danger lead poses to the nation's drinking water supply. Lead exposure through drinking water is caused primarily by the corrosion of plumbing materials, such as pipes, that carry water from a water system to pipes in homes. EPA set national standards to reduce lead in drinking water with the LCR, which applies to all water systems providing drinking water to most of the U.S. population, except places where people do not remain for long, such as campgrounds. States generally have primary responsibility for enforcing the LCR, and data help EPA monitor states' and systems' compliance with the LCR.

GAO was asked to review the issue of elevated lead in drinking water. Among other objectives, this report examines (1) what available EPA data show about LCR compliance among water systems and (2) factors that may contribute to LCR noncompliance. GAO analyzed EPA data on violations and enforcement of the LCR from July 1, 2011, through December 31, 2016, interviewed EPA officials in headquarters and the 10 regional offices; conducted a statistical analysis of the likelihood of reported LCR violations; and held discussion groups with a nonprobability sample of regulators representing 41 states.

What GAO Recommends

GAO is making three recommendations, including for EPA to require states to report data on lead pipes and develop a statistical analysis on the likelihood of LCR violations to supplement its current oversight. EPA agreed with GAO's recommendations.

View [GAO-17-424](#). For more information, contact Alfredo Gómez at (202) 512-3841 or gomezj@gao.gov.

September 2017

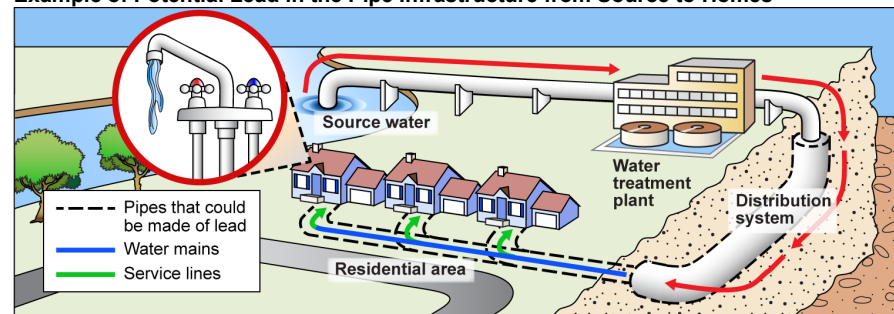
DRINKING WATER

Additional Data and Statistical Analysis May Enhance EPA's Oversight of the Lead and Copper Rule

What GAO Found

Available Environmental Protection Agency (EPA) data, reported by states, show that of the approximately 68,000 drinking water systems subject to the Lead and Copper Rule (LCR), at least 10 percent had at least one open violation of the rule; however these and other data are not complete. When the LCR was promulgated in 1991, all water systems were required to collect information about the infrastructure delivering water to customers, including lead pipes (see figure). However, because the LCR does not require states to submit information on known lead pipes to EPA, the agency does not have national-level information about lead infrastructure. After the events in Flint, Michigan, and other cities, EPA asked states to collect information on the locations of lead pipes, and all but nine, which had such difficulties as finding historical documentation, indicated a plan or intent to fulfill the request. According to EPA guidance, knowledge of lead pipes is needed for studies of corrosion control. GAO reported in March 2013 that with limited funding for federal programs, the need to target such funds efficiently increases. By EPA requiring states to report data on lead pipes, key decision makers would have information about the nation's lead infrastructure.

Example of Potential Lead in the Pipe Infrastructure from Source to Homes



Source: GAO. | GAO-17-424

Through discussion groups, state regulators identified 29 factors that may contribute to water systems' noncompliance with the LCR. In conducting a statistical analysis using EPA data on selected factors, such as the size of the population served and type of source water, GAO found that such factors were associated with a higher likelihood of water systems having reported violations of the LCR. EPA's current approach to oversight of the LCR targets water systems with sample results that exceed the lead action level. While this approach is reasonable because such water systems have a documented lead exposure risk, EPA officials in 3 of the 10 regional offices told GAO that it is not sustainable over time because of limited resources. Under federal standards for internal control, management should identify, analyze, and respond to risks related to achieving the defined objectives. By developing a statistical analysis that incorporates multiple factors to identify water systems that might pose a higher likelihood for having reported violations of the LCR to supplement its current approach, EPA could better target its oversight to such water systems.