

Lead Exposure and Infrastructure Reconstruction

July 19, 2017

What the OIG Found

The City of New Orleans and the Sewerage and Water Board (S&WB) have embarked on \$2.4 billion of FEMA-funded infrastructure reconstruction projects in addition to ongoing road construction projects funded by other revenue sources. Many of these projects involve repairing and/or replacing components of the water supply system that may include pipes (service lines) that carry water from the water main to a residence/property.

Lead is a dangerous neurotoxin that can impair the cognitive functioning and health of both adults and children. **No level of lead exposure is deemed safe.** In New Orleans an undetermined number of homes have service lines made of lead (Pb). Lead service lines (LSLs) are the main contributor of lead in drinking water at the tap. Many older New Orleans homes are serviced by LSLs, but the S&WB does not have complete or accurate records of their locations.



Portions of lead service line removed from residential street in New Orleans

The S&WB and city contractors replace the publicly-owned portion of service lines (from the water main to the meter or the property line) routinely when replacing water mains or performing maintenance work. However, the privately-owned portion of the service line is the property owner's responsibility and is left in place, even if it is made of lead. This process is known as partial LSL replacement. **According to the EPA Science Advisory Board, "the weight of the evidence indicates that [partial LSL replacement] often causes tap water [lead] levels to increase significantly for a period of days to weeks, or even several months."** Other infrastructure work that mechanically or hydraulically disturbs LSLs can also cause spikes in lead levels at the tap.

Evaluators found that the City and the S&WB had not alerted residents to the risk of increased exposure to lead in water caused by the partial replacement or disturbance of LSLs. Nor have they complied with industry best practices by providing residents with ways to reduce the risk of increased lead exposure. **As a result, New Orleans residents located where infrastructure reconstruction projects occur may be—or may have been—unknowingly exposed to elevated levels of lead in drinking water.**

What the OIG Recommended

Based on best practices and guidance set forth by industry, scientific, and public health experts, the OIG recommended that the City and the S&WB develop a strategic risk communication plan that includes (1) risk communication strategies for educating residents about the potential for increased lead exposure and (2) immediate steps to mitigate residents' risk of lead exposure as a result of LSL replacements or disturbances. At minimum, the plan should include:

- a thorough and persuasive public education campaign that alerts residents to the risk;
- advance notification of impending infrastructure work or other activities that might disturb LSLs;
- clear instructions for flushing service lines and interior plumbing lines;
- distribution of water pitcher kits and six months of filters certified to remove lead; and
- proactive water quality testing after partial LSL replacements or disturbances.

The steps listed above consist of practical strategies that can be implemented to protect residents from elevated lead levels caused by partial LSL replacements and disturbances. However, experts agree that the only long-term solution is to "get the lead out" completely. Evaluators recommended that the City and the S&WB should inform residents about the advantages of full LSL replacement well in advance of construction work that will disturb the public service line and actively encourage property owners to replace privately-owned LSLs by offering options such as extending payments by adding the cost to their water or property tax bills.

Purpose of This Report

The OIG learned of an imminent risk to public health due to the partial replacement or disturbance of LSLs during its inspection of the S&WB's water quality testing practices. As a result, the OIG conducted an evaluation of City and S&WB policies and procedures regarding infrastructure work that may involve the disturbance or partial replacement of LSLs.