With hundreds, and possibly thousands, of children in Flint, Mich., confirmed to have potentially toxic amounts of lead in their blood, a school district already racked by poverty and poor performance could face yet another challenge.

After the city switched its water source in 2014 in a cost-cutting move, the percentage of infants and children with blood-lead concentrations that can cause permanent IQ loss and developmental delays doubled, rising to 4 percent.

Faucets and drinking fountains at four city schools tested above the federal limits for lead in drinking water, Michigan Department of Environmental Quality tests confirmed. One of those schools tested at more than six time the federal limit.

Months after the discovery, students are still carrying bottled water to school because of the heightened lead exposure threat.

An eastern Michigan rust belt city, Flint is home to one of the state's lowest performing school systems. Among the worst of its schools is Eisenhower Elementary, one of the buildings where elevated lead levels were discovered.

"In light of what high levels of lead can do to our children's cognitive and emotional well-being, we clearly need a long-term solution to ensure our children have access to clean, safe drinking water," Flint Superintendent Bilal Tawwab said in a statement this fall.

The city has ended its use of the Flint River for drinking water after more than 18 months. Despite the switch, concerns remain that lead is still a problem.

Although the city's water supply was treated, old pipes and service lines that convey the water were releasing lead. The city's mayor estimates that it could cost upwards of $1 billion to repair the lead-damaged infrastructure.

The human cost for the city's families could be much higher.

Research has tied high levels of lead in blood to learning disabilities, poor classroom performance, impaired growth, and even hearing loss.

Numerous studies detail the significant negative consequences of lead toxicity on learning and educational attainment and the costs associated with those consequences, including the longer term costs of special education for developmentally delayed students.

'Devastating Impact'

Gov. Rick Snyder has publicly apologized for the state's role in the catastrophe and declared a state of emergency in Flint and surrounding areas due to "ongoing health and safety issues." The director of the state's Department of Environmental Quality and the agency's lead spokesman recently resigned.

The U.S. Attorney's Office and U.S. Environmental Protection Agency are also investigating the matter.

"The children of Flint will need more than new declarations of emergency, state-level resignations and public apologies to help reverse the damage that has been done to their young bodies and developing brains," wrote Matt Gillard, CEO of Michigan's Children, a statewide advocacy group that focuses on reducing disparities in child outcomes, in an opinion piece in the Flint Journal, the city's newspaper.

"The events in Flint should awaken all Michigan residents to the devastating impact lead plays on children and their future health, well-being and prosperity."

Lead-level testing has revealed hotspots in other Michigan cities, including Grand Rapids, home to another midsized urban school district.

For some the lead exposure debacle centers on which children are most likely to be exposed. A pediatrician at Hurley Medical Center, which serves many of the city's poorest families, found elevated blood levels in her patients, triggering more screenings and drawing public attention to the problem. State and city officials initially dismissed her findings.

According to the federal Centers for Disease Control, black children are three times more likely than white children to have elevated levels of lead in their blood—and Flint is a district where students are overwhelmingly black and from poor homes.

Once a manufacturing hub, the city has suffered significant job losses and dimming prospects for its young people for decades.

Districtwide, nearly a quarter of Flint's students drop out of high school before graduating. And poverty is pervasive. More than 80 percent of Flint's students qualify for free or reduced-lunch prices, an indicator of poverty in K-12 education.

Reporting by the Flint Journal and other news organizations revealed that the city brushed off federal requirements for water testing. Lax state oversight may have led the city and state to underestimate the extent of the contaminated water crisis for months.
Marc Edwards, a Virginia Tech University environmental engineering professor and national expert on water treatment, leads a team of researchers studying the city’s water. Edwards says it is still "not safe" to drink.