



Working with ‘critical customers,’ specifically schools and child care facilities, to replace lead service lines

Case Example from Denver Water

Removing lead service lines that connect to schools and child care facilities requires a layered approach, cooperation and good connections. To accelerate the replacement of lead service lines from these facilities in Denver, Denver Water has worked closely with the local Denver Public Schools system (DPS), as well as charter schools, faith-based organizations, government agencies at the local and state level, including the Denver Department of Human Services, and other partners to reach locations that Denver Water categorizes as “critical customer” sites.

Denver Water’s Lead Reduction Program Manager, Alexis Woodrow, offers some lessons the utility has learned along the way.

Define your target group

At Denver Water, “critical customers” are typically defined as facilities that need drinking water to operate, such as a hospital, a jail or a medical facility. For the Lead Reduction Program, Denver Water’s definition is different. The Lead Reduction Program defines “critical customers” as those serving populations that are most vulnerable to the consequences of exposure to lead in drinking water: Our community’s children. Specifically, the Lead Reduction Program defines “critical customers” as facilities that serve children as schools, day cares, after-school programs and the like.

Reaching different groups

Ask for lists of facilities once, twice, three times if needed. Facilities that serve children involve a variety of organizational structures that often categorize the use of their facilities differently. There are public schools and private schools. Charter schools may be a part of the public school district, or report to a different organizational structure. Day cares run the gamut from corporate chain centers to small, at-home businesses. Some day cares and schools may be operated by the school or faith-based organization, others may simply contract for space to operate within the church, school or other facility. Ask organizations for their lists of school locations, their lists of day care operations and their lists of after-school locations. Those lists may overlap, or they may be different, depending on how each organization categorizes the use of its facility or facilities.

For charter schools, Denver Water used information from the Colorado Department of Education to ensure all charter schools in its service area were accounted for in the inventory process. Relationships with the department also were valuable in identifying the right point of contact at the school facility, particularly for those managed outside the local public school system.

Faith-based organizations may operate in older properties and will often have schools and child care options for their members and community. As an example, Denver Water worked with the Archdiocese of Denver to obtain lists of schools and child care operations on properties overseen by the Catholic Church, several of which were found to be served by a lead service line.

Finding all child care facilities, including the non-conventional alternative child care locations

(such as an at-home child care or a neighbor who watches children) requires extra work. Local governments keep records of licensed child care facilities within their jurisdiction. Denver Water obtained a list of licensed facilities in the city of Denver from the Denver Department of Human Services (HHS) to aid its inventory process.

Check and double-check the data

Denver Water has worked for years with Denver Public Schools to identify and investigate potential sources of lead in schools’ drinking water. As part of the Lead Reduction Program, Denver Water did an analysis of the schools previously identified as potentially having lead service lines — and also conducted an analysis of all of the district’s schools. The wider, more sweeping analysis resulted in the discovery of additional locations that needed investigation and replacement that were not on the initial list.

Denver Water used a layered approach to its school list. This approach included an analysis of the age of the building or buildings on the school site, the age of the tap at the main, the age of the main itself, as well as information about buildings near and around the school. This information was compared with documentation about when lead pipe was used in the community to assign risk levels to individual sites.

Physical inspections also were used, including checking meter pits and examining pipe inside buildings and potholing outside the building to examine pipe material. Tap size also was a useful indication of the potential for lead, but not conclusive. Smaller pipes, such as those with diameters of 5/8s inch to 1-inch, are more often made of lead but Denver Water did identify a school site served by a 3-inch service line made of lead.

Schools are in use, even when “school’s out”

During the early days of the COVID-19 pandemic, when child care centers closed and public schools shifted to remote learning, Denver Water sought to take advantage of the situation to perform replacement at these locations while they were unoccupied. This was somewhat successful, but Denver Water also found that school buildings remained in use during this time. Schools were routinely used on weekends and during summer months for purposes that include food distribution sites, meaning careful coordination was still needed to minimize interruptions in water service. Woodrow emphasized that this is the case under normal circumstances as well. Even when classes are out on weekends or in summer months, it should be assumed that school buildings are being otherwise used.

Site contacts are critical

The process of replacing a lead service line ultimately requires working closely with the person in charge of the property, whether that’s the homeowner, the on-site manager or facilities manager or an off-site organizational coordinator. Someone will be the point of contact for the site when it’s time for workers to access the building for potholing or interior inspections, to shut off the water for the replacement work and to begin the interior flushing procedures inside the building following the replacement. When working through the inventory list, remember to gather contact information that will be needed later in the replacement process.