Filter First to Provide Safe School Drinking Water

Elin Warn Betanzo, Safe Water Engineering October 27, 2022

Source Water Rarely contains lead



Lead in Homes Service Lines Household plumbing Fittings and Fixtures

Lead in Schools

Primarily from plumbing and fixtures



Lead is present in school plumbing, especially in buildings built before 2014

- Plumbing materials (pipes, fittings, and fixtures)
 - "Lead-free" means up to 8% lead through 2013
 - "Lead-free" means up to 0.25% lead beginning in 2014
- Lead solder (banned in 1986)
- Lead service lines
- Plumbing materials not intended for drinking water use
- Pre-1988 drinking water coolers with leadlined tanks



Photo: Birmingham Public Schools

Corrosion Control treatment reduces lead leaching but irregular water use in schools means it doesn't work as intended



Source: Great Lakes Water Authority

Test and Chase approach does not provide safe water





Data from Birmingham Public Schools, 2016-2017

The Filter First strategy focuses on safe drinking water first, then testing to verify filters are working.

- A drinking water safety plan for each school
- Filter station installation and maintenance on designated drinking water sources
- Filters certified to meet ANSI/NSF Standards 53 (lead removal) and 42 for particulate removal
- Testing once per year after filters are installed
- Remediation if filtered water still contains lead



Filter First provides a safe water immediately and costs less than the "test and tell" approach

