

Lead and Drinking Water

Revised March 2016

Why is lead in drinking water regulated?

If consumed, lead has multiple toxic effects on the human body. Elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Infants and young children are especially vulnerable to lead in drinking water.

Lead exposure could cause chronic health effects including neurobehavioral effects (decreased intelligence) in children and hypertension in adults.

What is the source of lead in drinking water?

Lead in drinking water is primarily from corrosion of faucets, plumbing fixtures and lead solder in the home as well as from lead service lines, if they are present.

For San Francisco, there are no known lead service lines in the distribution system; however, if a lead service line is found, it is quickly removed. All tests for lead content in the distribution system water result in non-detects. It is possible that lead levels detected at your tap may be higher than that at other properties due to differences in plumbing materials.

What is our corrosion control and monitoring program?

Our corrosion control treatment consists of maintaining alkaline water pH (above neutral) throughout our distribution system by adding lime or caustic soda to the water. This practice is typical for water systems serving low mineral content high quality water from mountain supplies. This corrosion control approach was reaffirmed by the State Water Resources Control Board (SWRCB) in 2006 based on a corrosion control study conducted for us by an outside consultant. SWRCB is responsible for implementing USEPA and State drinking water regulations.

We have surveyed for lead at the customer's tap eleven times since 1992 and have been in compliance with the lead and copper regulation, with the exception of the initial sampling round in 1992.

The latest monitoring was conducted in August 2015. These results are a testimony to our efforts in lead control over the last several decades.

Can I have my water tested?

San Francisco residents may request a sampling kit and analysis for a small fee (\$25) by calling 311. WIC participants can request a free lead test. This tap water sampling is conducted by the resident according to lead and copper sampling protocol provided by us. We will pick up the collected sample, conduct analysis, and provide results to the resident.

How can I reduce potential lead exposure from drinking water?

When your water has been sitting for several hours, you can flush your tap until it feels colder, for 30 seconds to 2 minutes, before using water for drinking or cooking. You can also use certified filters to further reduce any potential lead exposure from drinking water. If you are concerned about lead levels in your water, you may wish to have your water tested.

What is the lead regulatory requirement?

The US Environmental Protection Agency (USEPA) regulates lead in drinking water under the Lead and Copper Rule (LCR), a federal drinking water standard effective in 1991. The LCR specifies a monitoring regime that emphasizes more vulnerable residences and an Action Level of 15 µg/L for lead in drinking water as measured at customers' taps. If lead concentrations exceed this limit in more than 10% of customer taps sampled, the water system must undertake a number of additional actions to control corrosion and inform the public about steps to take to reduce their exposure and protect their health. Additionally, lead service lines under control of the water system may need to be replaced.

The LCR Action Level refers to a concentration measured at the tap rather than in the municipal water supply system because lead in drinking water is derived principally from household plumbing.

Reduction of Lead in Our System

In conjunction with monitoring and corrosion control efforts, we have worked hard to continuously reduce lead exposures from drinking water to City residents.

Lead Component Replacement

- 1980's Removal of approximately 7,000 lead service lines in the San Francisco water distribution system.
- 1983 "Leaded" water main joints in the distribution system are discontinued.
- 2000 Approval of lead-free water meter replacement program, to replace all meters within 20 years.
- 2003 Began replacing curb stops with lead-free units as replacement was needed. As of 2016, the program is over 98% complete.

Public Outreach and Education

We have long taken a proactive approach to educating customers about potential lead exposure from drinking water, its health effects, and reducing customers' potential exposure:

- 1980 Conducted free lead tests of drinking water taps at the San Francisco Unified School District
- 1994 Began providing "Lead Test for a Fee" for consumers to test their tap for a nominal fee
- 1996 Customer focused communications regarding lead issues in bill inserts and annual Water Quality Report
Participated in City & County of San Francisco's Childhood Lead Prevention Program Task Force
- 1998 With San Francisco Department of Public Health (SFDPH), began free lead tests for Women, Infants & Children (WIC) program participants; to date more than 1,400 tests performed
- 2000's Provided lead-free faucets to childcare centers and public schools in San Francisco at no cost
Provide significantly discounted lead-free faucets to City residents via annual sales at street fairs

Additionally, in partnership with the SFDPH's Childhood Lead Prevention Program, the we provide laboratory services and water sampling assistance to help investigate the lead sources for cases of high blood lead levels in children residing in the City.

Legislative Action

- 2006 California AB 1953 (Chan) "Lead Plumbing"
Advocated with other local utilities to mandate only "lead-free" plumbing components be used in drinking water supplies. AB 1953 became State law and effective on January 1, 2010.
- 2010 HR 5289 (Eshoo/Miller) "Get the Lead Out" legislation:
Supported its lead-free provisions, which were subsequently folded into S.3874, signed into law by the President on January 4, 2011. This federal lead-free requirement, similar to California AB 1953, became effective on January 1, 2014.

As a result of these laws, the plumbing components used in drinking water systems for human consumption in California have been "lead-free" since 2010. The plumbing components are considered "lead-free" if the weighted average lead content of the component's wetted surface area is not more than 0.25%.

Consumer Resources: Regulation/Health

- USEPA's Safe Drinking Water Hotline 800-426-4791
- www.epa.gov/your-drinking-water/basic-information-about-lead-drinking-water
- www.epa.gov/dwreginfo/lead-and-copper-rule
- SWRCB: www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/leadandcopperrule.shtml
- California Department of Public Health: www.cdph.ca.gov/programs/CLPPB/pages/healthinfo-CLPPB.aspx
- San Francisco Department of Public Health, Lead Prevention Program: www.sfdph.org/dph/eh/CEHP/Lead/
- Centers for Disease Control and Prevention (CDC): www.cdc.gov/nceh/lead/

NSF, Water Treatment Products complying with NSF61-G for lead:

- Search for NSF Certified Drinking Water Treatment Units or Filters: www.nsf.org/Certified/DWTU/
- NSF Certified Product Listings for Lead Reduction: www.nsf.org/Certified/DWTU/listings_leadreduction.asp
- Search for products that meet NSF61 Annex G requirement for lead-free components:
www.nsf.org/services/by-industry/water-wastewater/plumbing-fixtures/lead-content-compliance