
SENATE COMMITTEE ON ENVIRONMENTAL QUALITY

Senator Allen, Chair

2021 - 2022 Regular

Bill No: AB 100
Author: Holden
Version: 6/24/2021
Urgency: No
Consultant: Gabrielle Meindl

Hearing Date: 7/7/2021
Fiscal: Yes

SUBJECT: Drinking water: pipes and fittings: lead content

DIGEST: Beginning January 1, 2023, requires manufacturer compliance with a certain lower lead leaching standard for faucets and other end point devices used for providing drinking water and prohibits all sales of such products that do not meet the new standard beginning July 1, 2023. Requires labeling of products that comply with the definition of “lead free” and meet the lower lead leaching standard to indicate compliance, as specified, in an easily identifiable manner.

ANALYSIS:

Existing law:

- 1) Prohibits, under the federal Safe Drinking Water Act (SDWA), the use of pipe, any pipe or plumbing fitting or fixture, solder, or flux that is not lead free in any public water system or facility providing drinking water. (Public Law 116–92 §1417)
- 2) Prohibits the use of any pipe, pipe or plumbing fitting or fixture, solder, or flux that is not "lead free" in the installation or repair of any public water system or any plumbing in a facility providing water for human consumption. (Health & Safety Code (HSC) § 116875(a))
- 3) Defines "lead free" as not containing more than 0.2 percent lead when used with respect to solder and flux and not more than a weighted average of 0.25 percent lead when used with respect to the wetted surfaces of pipes and pipe fittings, plumbing fittings, and fixtures. (HSC § 116875(e))
- 4) Requires all pipe, pipe or plumbing fittings or fixtures, solder, or flux to be certified by an independent American National Standards Institute (ANSI) accredited third party, including, but not limited to, NSF International, as being in compliance with this law. (HSC § 116875(g)(1))

- 5) Requires the certification described above to, at a minimum, include testing of materials in accordance with the protocols used by the Department of Toxic Substances Control (DTSC) in implementing Article 10.1.2 (commencing with Section 25214.4.3) of Chapter 6.5 of Division 20. (HSC § 116875(g)(2)(A))

This bill:

- 1) Commencing January 1, 2023, prohibits a person from manufacturing and offering for sale in the state an endpoint device intended to convey or dispense water for human consumption that leaches more than one microgram of lead for test statistic Q or R, when normalized for a first draw sample up to or equal to one liter in volume, as calculated in accordance with the 2020 NSF International Standard 61, which became effective in the year 2020, and certified by an ANSI-accredited third party.
- 2) Beginning July 1, 2023, prohibits a person from introducing into commerce or offering for sale in the state an endpoint device intended to convey or dispense water for human consumption that leaches more than one microgram of lead for test statistic Q or R, when normalized for a first draw sample up to or equal to one liter in volume, as calculated in accordance with the 2020 NSF International Standard 61, which became effective in the year 2020, and certified by an ANSI-accredited third party.
- 3) Requires the consumer-facing product packaging or product labeling of an endpoint device intended to convey or dispense water for human consumption that meet the “lead free” standard, as specified, and does not leach more than one microgram of lead for test statistic Q or R, when normalized for a first draw sample up to or equal to one liter in volume, as calculated in accordance with the 2020 NSF International Standard 61, which became effective in the year June 2020, and certified by an ANSI accredited third party to indicate that compliance by including the lettering “NSF/ANSI/CAN 61: $Q \leq 1$ ” in an easily identifiable manner.
- 4) Defines "endpoint device" as a single device typically installed within the last one liter of the water distribution system of a building. Defines endpoint device as including all of the following: remote chillers; lavatory faucets; bar faucets; kitchen faucets; hot and cold water dispensers; drinking fountains; drinking fountain bubblers; water coolers; glass fillers; and, residential refrigerator ice makers.

Background

- 1) *Lead*. Lead has been listed under California's Proposition 65 since 1987 as a substance that can cause reproductive damage and birth defects, and has been listed as a chemical known to cause cancer since 1992. Lead exposure and lead poisoning are also associated with cognitive and other health impacts, especially to children, that appear irreversible. There is no level of lead that has been proven safe, either for children or for adults.
- 2) *Lead in water*. Concern about lead in drinking water has heightened since the Flint, Michigan water crisis, and, in fact, some of the most prevalent sources of lead in drinking water are from pipes, fixtures, and associated hardware from which the lead can leach. According to *Lead in Drinking Water and Human Blood Levels in the United States*, published by the National Center for Environmental Health in 2012, nearly all lead in users' tap water does not come from the primary water source or from the municipal treatment plant, but is a result of corrosion resulting from materials containing lead coming into contact with water after it leaves the treatment plant. Lead can enter a building's drinking water by leaching from lead service connections, from lead solder used in copper piping, and from brass fixtures.

The amount of lead in tap water can depend on several factors, including the age and material of the pipes, concentration of lead in water delivered by the public utility, and corrosiveness of the water.

- 3) *Lead in plumbing*. Beginning January 1, 2010, California law (AB 1953, Chan, Chapter 853, Statutes of 2006) banned for sale and use any pipe, pipe or plumbing fitting, or fixture intended to convey or dispense water for human consumption through drinking or cooking that is not "lead free."

That law defines "lead free" as not more than 0.2 percent lead when used with respect to solder and flux, not more than a weighted average of 0.25 percent when used with respect to the wetted surfaces of pipes and pipe fittings, plumbing fittings, and fixtures, and not more than 8 percent when used with respect to pipes and pipe fittings.

This applies to kitchen faucets, bathroom faucets, and any other end-use devices intended to convey or dispense water for human consumption through drinking or cooking. However, service saddles, backflow preventers for non-potable services such as irrigation and industrial uses, and water distribution main gate valves that are two inches in diameter and larger are excluded.

The federal SDWA, which defines "lead free" with the same metrics as California law, prohibits the "use of any pipe, any pipe or plumbing fitting or fixture, any solder, or any flux, after June 1986, in the installation or repair of (i) any public water system; or (ii) any plumbing in a residential or non-residential facility providing water for human consumption, that is not lead free."

- 4) *Standards and Certification.* To address contamination in drinking water, the United States Environmental Protection Agency (US EPA) contracted with NSF (an independent, not-for-profit organization that develops consensus national plumbing standards, and provides product inspection, testing, and certification) in 1985 to lead a consortium of public and private partners (PPP) to develop health-based product standards for products that could be used in public drinking water supplies. These standards were developed as American National Standards and subsequent iterations became known as NSF/ANSI 60, followed by NSF/ANSI/CAN 61.

This ANSI standard limits the amount of impurities that individual products can introduce into a home's water supply for potable water contact, including lead and other metals, volatile organic chemicals, phthalates, and bisphenol A. Products covered by this standard include faucets, pipe, drinking water fountains, water meters, and water storage tanks. That standard also sets a limit of allowable lead leaching in overnight samples from end-use devices over the first three weeks of use. The leaching limit is based on a specific protocol in NSF/ANSI 61. Current law requires such covered products be certified by an independent ANSI accredited third party as being in compliance with the "lead free" standard.

- 5) *New National Consensus Standard.* On June 18, 2020, the national consensus standard for plumbing devices, known as NSF/ANSI/CAN 61, was revised to require, by January 1, 2024, that manufacturers of faucets and fountains that dispense drinking water meet limits five times more protective for lead leaching than the current standard (reducing the current limit of 5 µg/L to 1 µg/L). Manufacturers have the option to have their products tested and certified to the revised standard beginning in the fall of that year, after it was published. All states require plumbing devices comply with NSF/ANSI/CAN 61.
- 6) *Efforts to test lead in drinking water:* Given the impacts of lead on children, California has made it a priority in recent years to address lead in drinking water by testing the taps at institutions that cater to children.

In 2017, AB 746 (Gonzalez, Chapter 746, Statutes of 2017) was enacted to require community water systems that serve a schoolsite built before January 1, 2010, to test for lead in the potable faucets of the schoolsite on or before July 1, 2019. Concurrently, the State Water Resources Control Board (State Water Board) required approximately 1,200 community water systems to test the drinking water for lead at any school that requested it.

Furthermore, in 2018, the Legislature enacted AB 2370 (Holden, Chapter 676, Statutes of 2018) to require the state to test drinking water at all licensed childcare centers and recommended remediation strategies if lead is detected, including faucet replacement. Last year, Budget Act of 2019-20 included \$5 million to start that testing process ahead of AB 2370 implementation given the fact lead exposure to babies and toddlers is the most critical.

Under the proposed AB 2370 sampling protocols, there is a five parts per billion (ppb) lead action level, and a requirement that all test results – with detections down to 1 ppb – be reported. (Please note that 1 ppb \neq 1 $\mu\text{g/L}$. Both are very low thresholds for lead in drinking water, but are not the same measurement.)

- 7) *Results from water testing at schools:* There are approximately 9,000 K-12 schools in California serving more than six million school-age children, and more than 600,000 California children are enrolled in 10,500 licensed child care centers.

The AB 746 testing was completed in July 2019, and the data show that approximately 18% of K-12 public school campuses found at least one faucet that dispensed lead containing more than 5 ppb lead or more. (Many schools that tested their drinking water did not test all of the drinking water fountains or faucets of potable water, so there could be a greater percentage of schools with lead contaminated drinking water.) The testing at childcare centers has not yet commenced, but there is concern the results could mirror what we are seeing at schools.

- 8) *Goals to reduce lead in drinking water:* The American Academy of Pediatrics (AAP) recommends that drinking water in public schools should not exceed one $\mu\text{g/L}$ lead. Specifically, the AAP is calling for state and local governments to take steps to ensure that the water lead concentrations at school water fountains do not ever exceed one $\mu\text{g/L}$.

At an October 2019 public hearing, the State Water Board recommended a goal of reducing lead in childcare centers' drinking water to no more than 1 ppb. Members of the State Water Board did not vote to approve the health-protective lead goal during the meeting but did instruct its staff to include it in the

recommendations and protocols the State Water Board will send to the Department of Social Services (DSS), which oversees licensed childcare centers and will administer the lead testing program pursuant to AB 2370.

The State Water Board reaffirmed that 1 ppb goal in a November 2019 guidance document, *Guidance for Sampling Lead in Drinking Water at Licensed Child Day Care Centers*. The document stated that reducing lead in drinking water is a critical step to reducing children's overall lead exposure and, although zero lead is the ideal, the State Water Board recommends DSS to adopt a goal of reducing lead in licensed childcare centers drinking water to no more than 1ppb. However, since the guidance document also said that more data was needed to determine if that goal was feasible, the Board recommended DSS adopt an Action Level of 5ppb.

Comments

- 1) *Purpose of Bill*. According to the author, “We all expect the water we drink to keep us healthy and not make us sick. California has progressively been working to reduce residents' exposure to lead. Yet lead is still leaching into drinking water through faucets, fixtures, and other end use plumbing devices during the curing process which can last for weeks. We can fix this by requiring all faucets/fixtures and other endpoint devices to leach as little lead as possible and third party testing demonstrates that this standard can be met.”
- 2) *Further reducing lead exposure makes sense*. Last year, this Committee heard and approved a similar bill, AB 2060 (Holden), a bill that would have codified this new lower lead leaching standard for specified faucets and established an earlier implementation schedule (i.e., requiring manufacturers to sell or offer for sale in California a certain percentage of certified models starting in July of 2021 and gradually increasing the percentage until full compliance is reached in 2024). While this earlier start date differs from the 3-year implementation period contemplated in NSF/ANSI/CAN 61, Plumbing Manufacturers International (PMI), the trade association for the industry, indicated that the ramp up approach in AB 2060, while aggressive, was doable. It still provided manufacturers, third party certifiers, distributors, and retailers with enough time to get products certified and in stock in the state prior to a January 1, 2024 deadline. The bill also required the consumer-facing packaging or labeling of such products be consistent with NSF/ANSI/CAN 61 labeling requirements to indicate compliance. This measure was held in the Senate Appropriations Committee.

Plumbing Manufacturers International (PMI), which represents manufacturers of 90% of the United States' plumbing products with more than 150 brands, is supportive of the standard being lowered to one µg/L lead. Recent amendments to the bill move the effective date from January 1, 2022 to January 1, 2023 (manufacturer compliance) and July 1, 2023 (sell-through) to address supply chain concerns in light of the pandemic. The amendments also include a PMI-suggested consumer-facing labeling requirement, identical to AB 2060, which will help consumers immediately identify which products meet the new lower lead standard. This should help ensure schools and childcare facilities can identify products on the market to replace problem fixtures with ones that deliver safe water. The amendments also provide a more realistic timeframe for compliance to those involved in the supply chain.

Related/Prior Legislation

AB 2060 (Holden, 2020). Would have required endpoint plumbing fixtures to meet a performance standard, in addition the current statutory content standard for lead, to meet conditions for "lead free." This bill was held in the Senate Appropriations Committee.

AB 1953 (Chan, Chapter 853, Statutes of 2006). Banned for sale and use any pipe, pipe or plumbing fitting, or fixture intended to convey or dispense water for human consumption through drinking or cooking that is not "lead free."

SOURCE: California Public Interest Research Group, Clean Water Action, Environmental Working Group

SUPPORT:

Alliance of Nurses for Healthy Environments
Breast Cancer Prevention Partners
California Association of Environmental Health Administrators (CAEHA)
California Coastkeeper Alliance
California League of Conservation Voters
California Product Stewardship Council
Calpirg, California Public Interest Research Group
Center for Environmental Health
Clean Water Action
Coalition of California Welfare Rights Organizations
Consumer Federation of California

East Bay Municipal Utility District
Environment California
Environmental Defense Fund
Environmental Health Coalition
Environmental Working Group
Erin Brockovich Foundation
Families Advocating for Chemical and Toxics Safety
First 5 San Francisco
Fresno Metro Black Chamber of Commerce
Friends Committee on Legislation of California
Integrated Resource Management
San Francisco Bay Area Physicians for Social Responsibility
Sierra Club California
Western Center on Law and Poverty

OPPOSITION:

None received

ARGUMENTS IN SUPPORT: Environmental Working Group, a co-sponsor of this bill, writes, "...most schools, child care facilities, and homeowners are unaware that "lead-free devices" leach lead, especially in the first few weeks of use. And, in California, where water is a scarce resource, most consumers cannot realistically afford to keep flushing a device before using it in order to reduce the leaching lead.

"These challenges are especially significant for schools and child care facilities, because if they must replace a faucet, they cannot tell which faucets on store shelves meet a tighter standard... AB 100 continues California's effort to achieve lead-free water by ensuring that all drinking water fixtures sold in the state leach much lower amounts of lead. As a result, schools and child care facilities, in particular, will be able to confidently replace problem fixtures with ones that deliver safe water."

-- END --