

# Sources of Lead in the Environment

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**Lead-based paint**



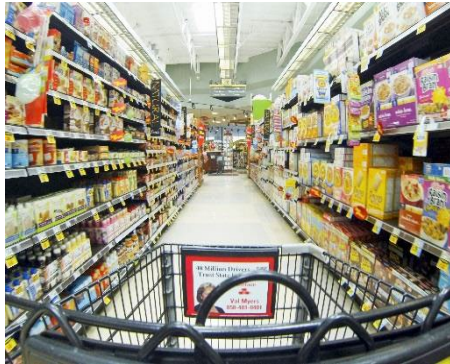
**In the air**



**In the soil**



**Lead Industry**

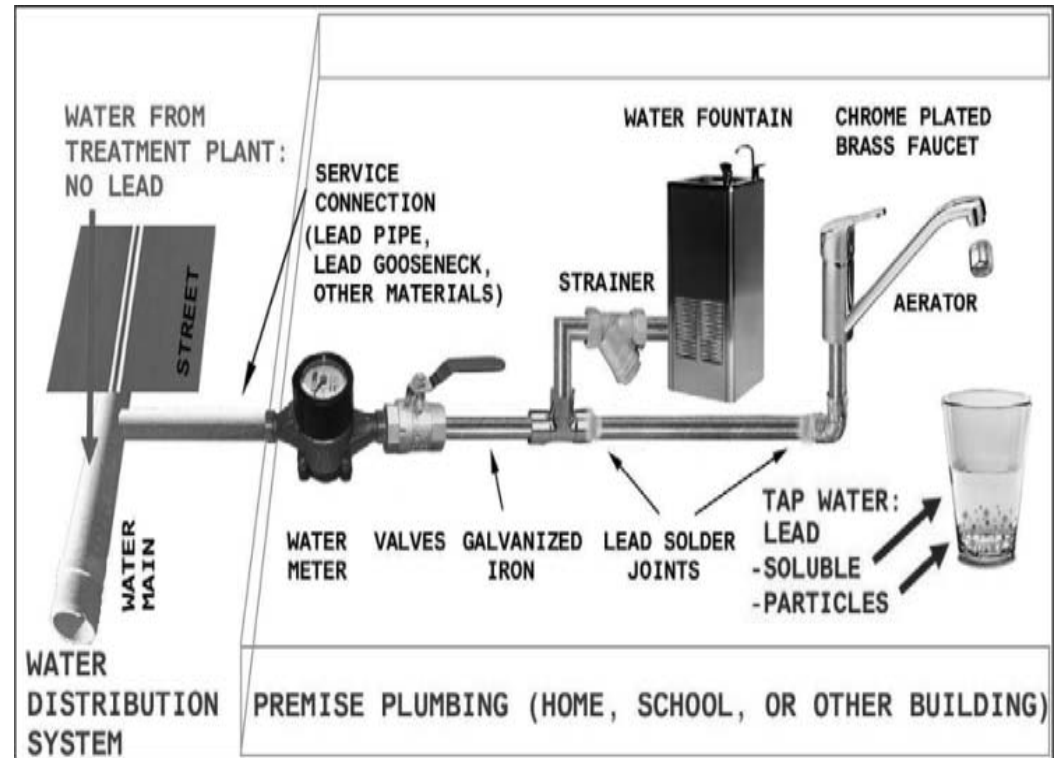
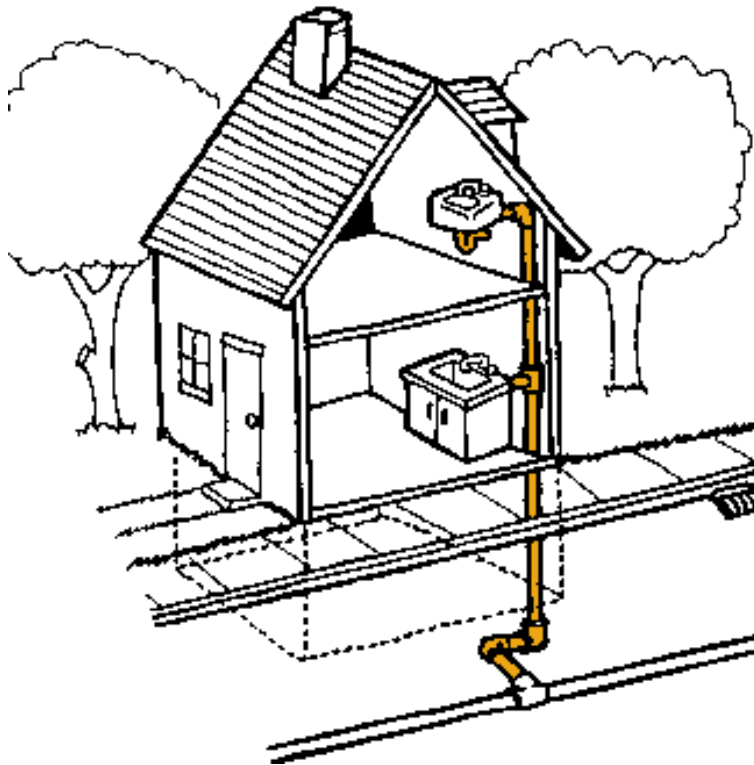


**In consumer products  
and food**



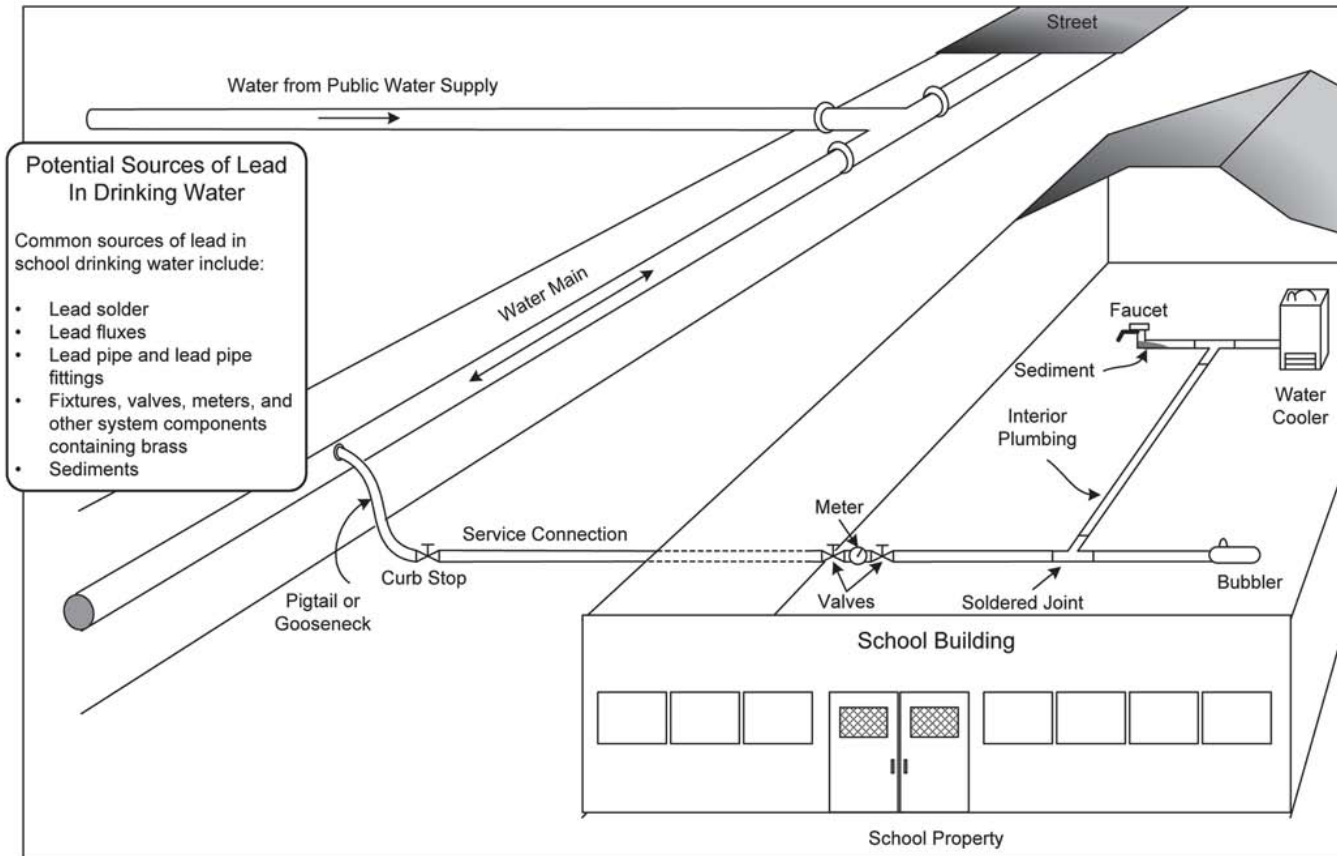
**In water**

# Sources of Lead in Drinking Water



Typical Home

# Sources of Lead in Drinking Water in Schools



**Typical School Building**

# Sources of Lead in Drinking Water in Schools

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- ❖ Children in schools and child care centers may be exposed through the water they drink or food that has been prepared with contaminated water.
- ❖ Formula fed infants can receive up to 60% of their exposure to lead from lead in drinking water.

**Boiling water will not get rid of lead.**





# Why lead?

Installed After the Civil War 150 Years Old in Cincinnati:  
Any Signs of Failure?



Compliments of Mike Schock, EPA Office of Research & Development (ORD)

# EPA Regulations

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Safe Drinking Water Act was amended in 1988 to reduce lead in schools and daycare centers:

- Eliminate water coolers containing lead
- Required EPA to provide guidance to test for and remedy lead contamination in drinking water
- Requirements for the testing, recall, repair and/or replacement of water coolers with lead lined storage tanks or with parts containing lead and attaches civil and criminal penalties for the manufacture and sale of water coolers containing lead.

## The Lead and Copper Rule (1991)

- Applies to Community (CWS) & Non-transient Non-community (NTNC) Public Water Systems (PWS)
- Schools are often along the distribution line of a CWS
- Schools that have their own source water (i.e. well) are typically considered a NTNC PWS and would be required to collect lead and copper samples

# LCR Tap Sample Site Plans

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Water systems must identify the highest priority (Tier) sites. Community PWS must sample at all Tier 1 sites if they have enough Tier 1 sites to choose from.

- ❑ Tier #1 sites: Single family structures that contains copper pipes with lead solder installed between 1983 and 1988, or contain lead pipes and/or served by a lead service line (LSL).

If the System does not have enough Tier 1 sites, then Tier 2...

- ❑ Tier #2 sites: Buildings (i.e. apartment buildings, schools) that contain the above materials

If the System does not have enough Tier 2 sites, then Tier 3...

- ❑ Tier #3 sites: Single family structures that contain copper pipes with lead solder installed before 1983



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# Ground Water and Drinking Water

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For Students and Teachers

## 3Ts for Reducing Lead in Drinking Water Toolkit

EPA's 3Ts - **Training, Testing, and Taking Action** - provides tools for schools, child care facilities, states, and water systems to implement voluntary lead in drinking water testing programs.



### Additional Resources

- [Lead Testing Programs](#)
- [EPA schools and child care WIIN grant](#)
- [3Ts Highlights](#) (printable version)

<https://www.epa.gov/dwreginfo/drinking-water-schools-and-childcare-facilities>



# 2017 EPA Webinar Series

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- ❖ Denver Water and Denver Public Schools
- ❖ Massachusetts Department of Environmental Quality
- ❖ New York Department of Health

## **Reducing Lead in Drinking Water in Schools and Child Care Facilities**

### **Case Studies Webinar Series**

EPA is hosting a quarterly webinar series to highlight examples of efforts to reduce lead in drinking water in schools and child care facilities.

These webinars will include a brief overview of lead in drinking water, information regarding where to find resources and perspectives from a state, water system and/or school. Presentations will include: best practices, lessons learned, challenges, funding, procedures, and available resources.



### **How do I register?**

Find registration links to upcoming webinars in this series here:  
<https://www.epa.gov/dwreginfo/drinking-water-training>

### **Who should attend?**

Schools, states, primacy agencies, water systems, technical assistance providers and those seeking information about implementing a lead testing program for school drinking water.

<https://www.epa.gov/dwreginfo/webinar-series-case-studies-about-reducing-lead-drinking-water-schools-and-child-care>

# EPA Resources to Support Schools and Child Care Facilities

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- ❑ Drinking Water in Schools Page: [www.epa.gov/dwreginfo/lead-drinking-water-schools-and-childcare-facilities](http://www.epa.gov/dwreginfo/lead-drinking-water-schools-and-childcare-facilities)
- ❑ Frequently Asked Questions – Lead Exposure: The Risks and Remedies: [www.epa.gov/sites/production/files/2015-09/documents/toolkit\\_leadschools\\_3ts\\_training\\_faqs.pdf](http://www.epa.gov/sites/production/files/2015-09/documents/toolkit_leadschools_3ts_training_faqs.pdf)
- ❑ Drinking Water Requirements for States & Public Water Systems Training: [www.epa.gov/dwreginfo/training](http://www.epa.gov/dwreginfo/training)
- ❑ Children's Environmental Health: [www.epa.gov/children](http://www.epa.gov/children)
- ❑ Healthy Schools: [www.epa.gov/schools](http://www.epa.gov/schools)
- ❑ Healthy Child Care: [www.epa.gov/childcare](http://www.epa.gov/childcare)