# Reducing Lead in Drinking Water in Schools and Child Care Facilities EPA's 3Ts: TRAINING, TESTING, & TAKING ACTION May 8th, 2019



# Health Effects of Lead

- There is no safe level of lead.
- Young children are especially susceptible to lead exposure.
- Pregnant and nursing staff should also be aware of the harmful risks of lead exposure to nursing infants and the developing fetuses of pregnant women.
- Even low blood levels of lead in children have been associated with:
  - Reduced IQ and attention span
  - Learning disabilities
  - Poor classroom performance
  - Hyperactivity
  - Behavioral problems
  - Impaired growth and hearing loss





# Sources of Lead



Sources of lead exposure include the lead industry, lead-based paint (e.g., paint chips or dust), lead in water, lead in the air, lead in soil, and lead in consumer products and food.

#### Lead in Drinking Water

- Lead gets into drinking water as it comes into contact with plumbing materials containing lead.
  - Interior lead pipe and lead solder (commonly used until 1988),
  - brass fittings, valves and
  - various drinking water outlets (e.g., water fountains and faucets)

Lead-based

paint



In the air



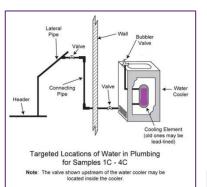






In the soil

Lead Industry In consumer products In water



Used Locations of Water in Plumbing for Samples 1A & 2A



"Even when water entering a facility meets all federal and state public health standards for lead, older plumbing materials in schools and child care facilities may contribute to elevated levels lead in their drinking water."

# How Lead in Drinking Water is Regulated



**The Lead Ban (1986):** A requirement that only "lead-free" materials be used in new plumbing and in plumbing repairs.

**The Lead Contamination Control Act (LCCA) (1988):** The LCCA aimed at the identification and reduction of lead in drinking water at schools and child care facilities, including the recall of drinking water coolers with lead lined tanks.

**The Lead and Copper Rule (1991):** A regulation by EPA to control the amount of lead and copper in water supplied by public water systems.

**The Reduction Of Lead In Drinking Water Act (2011):** This act further reduces lead and redefines "lead-free" under the Safe Drinking Water Act (SDWA).

**State Laws:** Some states, tribes and local jurisdictions have established regulations for schools and child care facilities.





### *Revised* 3Ts for Reducing Lead in Drinking Water in Schools and Child Care Facilities





NEW!

3Ts for Reducing Lead in Drinking Water in Schools and Child Care Facilities A Training, Testing, and Taking Action Approach **Revised Manual** 



- **Training** school and child care officials to raise awareness of the 3Ts program and summarize the potential causes and health effects of lead in drinking water.
- **Testing** drinking water in schools and child care facilities to identify potential lead problems.
- **Taking action** to reduce lead in drinking water.
  - New 3Ts Manual

3Ts 7-Module Toolkit





Module 3 Planning Your 3Ts Program



Module 4 Developing a Sampling Plan



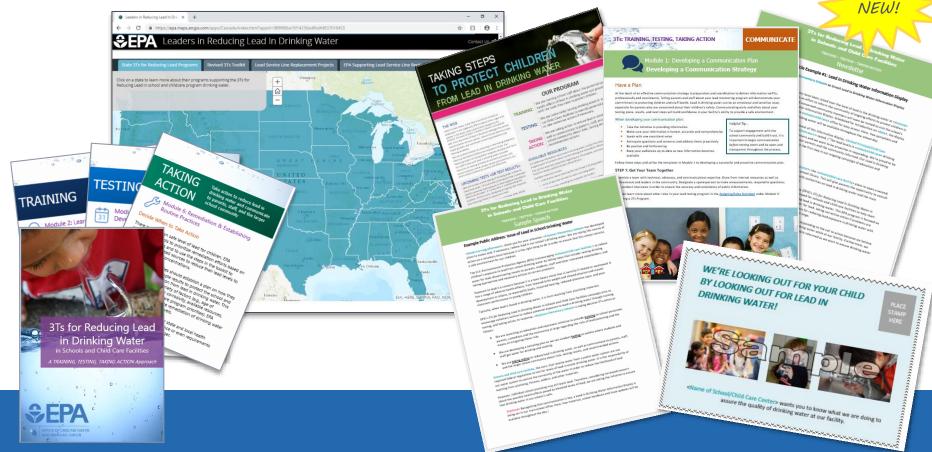
Module 5



Module 6



# **3Ts Tools and Materials**



#### 3Ts for Reducing Lead in Drinking Water in Schools and Child Care Facilities A TRAINING, TESTING, TAKING ACTION Approach

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# **3Ts Highlights**

These three brochures contain a snap shot of the 3Ts. They can be printed on legal paper and we will be making a web version. They include:

• 3Ts for Reducing Lead in Drinking Water Highlights

Training Brochure

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NEW!

**Testing Brochure** 

Taking Action Brochure



# 3Ts for Tribal Sch A TRAINING, TESTING, TAKING ACTOR Utilities 3Ts for Childcare

#### A TRAINING, TESTING, TAKING What are the 3Ts?

The 3Ts toolkit can help schools and child can program for reducing lead in drinking water.

The 3TS toolkit can help schools and child care Training tribal school officials to raise effects of lead in drinking water and de

Communication Plan

Why is it important

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Testing drinking water in tribal school

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Utilizing the 3T toolkit along with clear of reduction program.

What are the 3Ts?

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Why is it important Infants and young children are es iniants and young concern and es lead exposure. Lead can enter yo There is no known safe level of

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Hearing problems

A TRAINING, TESTING, TAKING ACTION Approach What are the 3Ts? The att bolist was developed for schools and child care facebles to help them implements's voluntary program for reducing lead in drinking water. It includes a solution station and fadion service associated. enprements a source of program our recording and a training, testing, and taking action approach. How does it differ from sampling under the Lead and Copper Rule?

Taking Action to reduce lead in drin Utilizing the 3T toolkit along with clear

Sampling Protocol: The LCR takes a system-wide sampong vromocor: the LLM takes a system-wate approach. If the 90th percentile lead level concentration of tap samples exceeds the 150g/L action level, water systems must take additional actions. The sampling Telling parents and stafi protecting children and

protocol under the LCR includes a 11 first draw sample after a stagnation period of 6 hours.

Follow Up Actions: Water systems are required to ronow up account: water systems are instance to undertake treatment actions, depending upon system size and corrosion control treatment status. These include orrasion control, public education, water quality strustors control, presse sourcesses, water quan-ionitoring, and lead service line replacement.

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for children. EPA encourages schools to prioritize remediation efforts based on load sample results and to use the steps in the 31s to pirpoint potential lead sources to reduce their lead levels to the lowest possible concentrations. Office of Ground Water and Drinking Water EPA XXX-X-XX-XXX September 2018

3Ts for Reducing Lead in Drinking Water

Voluntary Program: to assist schools with training,

Sampling Protocol: Only schools and childcare facilities

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(e.g., the fixture or behind the wall). Then remediation

maasures can be implemented as appropriate to address

recommends sampling and follow-up actions be taken at

# **3Ts Audience Factsheets**

- 3Ts for Child Care Facilities
- 3Ts for Tribal Schools
- 3Ts for Public Water utilities

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### Map of State Programs

#### Link:

https://epa.maps.arcgis.com/apps/Cascade/index. html?appid=989f006a15f14256ad8bdfd837016453



Module 1: Communicating the 3Ts

# **Develop a Communication Plan**

□ Communicating early and often about your testing plans, results, and next steps will build confidence in your ability to provide a safe environment.

□ When developing your communication plan:

- Take the initiative to communicate with your community
- Make sure your information is honest, accurate and comprehensive
- Speak with one consistent voice
- Anticipate questions and concerns and address them proactively
- Be positive and forthcoming
- Keep your audiences up-to-date as new information becomes available



Module 1: Communicating the 3Ts

## **Develop a Communication Plan**

#### **STEP 1: Get Your Team Together**

- □ Assemble a team with technical and communications expertise
- Draw from internal resources as well as professionals and leaders in your community
- Designate a spokesperson to make announcements, respond to questions, and conduct interviews in order to ensure the accuracy and consistency of public information

#### **STEP 2: Create a Contact List**

- Having names, phone numbers, and emails at your fingertips is vital when providing a quick response
- □ Create a contact list and update it regularly
- □ Include task force members as well as fact-finding and communications contacts (e.g. School Superintendent, State Drinking Water Program, EPA Regional Office)

Module 1: Communicating the 3Ts

# Develop a Communication Plan

#### **STEP 3: Identify Your Target Audiences**

- School or Child Care Facility Community
- Building Community
- Larger Community
- Local Community Organizations
- □ State Drinking Water Programs
- Drinking Water Community

STEP 4: Know Your Methods of Communication
Press Release
Letters/Fliers
Mailbox or Paycheck Stuffers
Staff Newsletter
Presentations
Email and Websites
Social Media

Module 1: Communicating the 3Ts

# **Develop a Communication Plan**

#### **STEP 5: Identify Times for Communicating**

□ Timely dissemination of communication materials is of the utmost importance

At a minimum, EPA recommends that schools and child care facilities provide information to members of the local community, building community and the larger community (if appropriate) at the following times:

- Before the lead in drinking water sampling program begins
- After obtaining the results of testing:
  - As soon as the results are available
  - When/if corrective measures are decided upon
  - O If no corrective measures are appropriate because the lead levels are low
- In response to periodic interest in the program

#### Module 1: Communicating the 3Ts

#### **STEP 6: Start Communicating!**

- Launch an ongoing campaign
- □ Prepare a fact sheet(s)
- Post information on your website

A Make sure your communication materials include:

- Details about the 3Ts Program
- The results of the sampling program
- Plans for correcting any identified problems
- Information on the public health effects
- The significance of other sources
- Information about blood-lead level testing
- Information about testing your home water



#### Module 2: Learning About Lead in Drinking Water

# Health Effects of Lead

- □ There is no safe level of lead.
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- Pregnant and nursing staff should also be aware of the harmful risks of lead exposure to nursing infants and the developing fetuses of pregnant women.
- □ Even low blood levels of lead have been associated with:
  - reduced IQ and attention span
  - learning disabilities
  - poor classroom performance
  - hyperactivity
  - behavioral problems
  - impaired growth and hearing loss



#### Module 2: Learning About Lead in Drinking Water

### Source of Lead

Sources of lead exposure include the lead industry, lead-based paint (e.g., paint chips or dust), lead in water, lead in the air, lead in soil, and lead in consumer products and food.

#### Lead in Drinking Water

- Lead gets into drinking water as it comes into contact with plumbing materials containing lead.
  - □ Interior lead pipe and lead solder (commonly used until 1988),
  - □ brass fittings, valves and
  - □ various drinking water outlets (e.g., water fountains and faucets)
- Even when water entering a facility meets all federal and state public health standards for lead, older plumbing materials in schools and child care facilities may contribute to elevated levels lead in their drinking water.







Lead-based paint

In the soil





In the air



er In water

Lead Industry



Module 2: Learning About Lead in Drinking Water

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# How Lead in Drinking Water is Regulated

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- □ State Laws: Some states, tribes and local jurisdictions have established regulations for schools and child care facilities.

### Module 3: Planning a 3Ts Program

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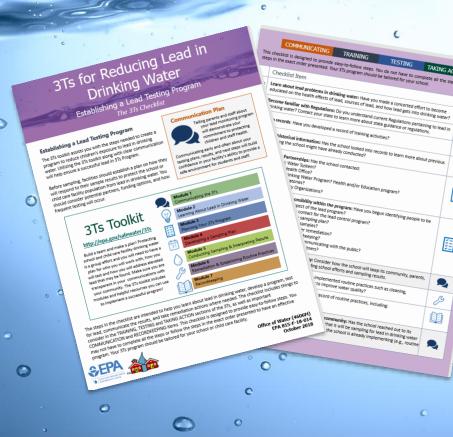
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# 3Ts Checklist

These three brochures contain a snap shot of the 3Ts. They can be printed on legal paper and we will be making a web version. They include:

- 3Ts for Reducing Lead in Drinking Water Highlights
- Training Brochure

NEW

- Testing Brochure
- Taking Action Brochure

#### Module 3: Planning a 3Ts Program

## **Establishing Partnerships**

- Entities like the public water system, local health offices, state drinking water programs, certified laboratories and local community organizations may be able to provide assistance in testing the drinking water for lead.
  - Assistance from Public Water Systems
  - Assistance from Local Health Offices
  - Assistance from the State Drinking Water, Heath and Education Programs
  - Assistance from Certified Laboratories
  - Assistance from Local Community Organizations



#### Module 3: Planning a 3Ts Program

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# Working with Your Water System

A critical partner in any program to reduce lead in drinking water is the local water system.

U Water systems can help:

- Provide information that may be helpful
- Assist with determining if lead is present
- Support the you in developing your sampling plan
- **Collect and analyze samples**
- Help interpret results and determine potential lead sources
- Communicate with the school and child care facility, and the public

#### 3Ts for Public Water Utilities

A TRAINING, TESTING, TAKING ACTION Approach

#### What are the 3Ts?

The 3Ts toolkit was developed for schools and child care facilities to help then implement a voluntary program for reducing lead in drinking water. It includes a training, testing, and taking action approach

#### How does it differ from sampling under the Lead and Copper Rule?

Lead and Copper Rule (LCR)	3Ts for Reducing Lead in Drinking Water
Required for: all community and non-transient non- community water systems.	Voluntary Program: to assist schools with training, testing, and taking action.
Sampling Protocol: The LCR takes a system-wide approach. If the 90th percentile lead level concentration of tapa sniples successith the 33cg/L action level, water systems must take additional actions. The sampling protocol under the LCR includes a <b>1L first draw sample</b> after a stagnation period of 6 hours.	Sampling Protocol: Only schools and childcare facilities that own and/or operate a public water system must meet the requirements of the ICL where the 3TL, PER- recommends sampling and follow-up actions be taken a each individual uselt. The 3TL constitution of a 2-step sampling protocol, which includes two 250mt sampless (1) first draw water as 8 to 18 hour stagnation, and (2) : flush sample after 30 seconds.
Follow Up Actions: Water systems are required to undertake traatment actions, depending upon system size and corrusion control reatment status. These include corrosion control, public education, water quality monitoring, and lead service line replacement.	Follow Up Actions: The initial sample and the follow-up fluch sample will help determine the source of the lead (e.g., the future or behind the well). Then remediation measures can be implemented as appropriate to addres that outlet. This includes removing flutures and repaining/replacing water coolers, to minimize exposure
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### Module 3: Planning a 3Ts Program

# Assigning Roles

Role	Responsibilities	
3Ts Program Contact	Act as the point of contact for the Program. Communicate with the other teams, external resources, and program partners.	
Public Communications Contact	Communicate testing plans, results and remediation efforts to the public (e.g., to the school and child care facility community, media outlets, civic groups)	
Partner Liaison Contact	Work with certified laboratories, interest groups, the school board and other partners supporting the 3Ts Program. Schedule activities and maintain communication.	
Sampling Activities Contact	Lead the effort to develop and implement a sampling plan. Engage with other program points of contact and external resources and partners as appropriate.	
Remediation Activities Contact	Icontact and external partners as appropriate acting as the Program point of contact	
Recordkeeping Contact	Ensure a central repository is created to house all 3Ts Program documents. Lead effort to create, maintain and update documentation with the team annually.	

#### Module 4: Developing a Sampling Plan



# Conduct a Walkthrough

- Conduct a walkthrough of the facility and create an inventory.
- □ Take note of all sinks and fountains used for consumption.
- It may be helpful to take pictures when conducting this walkthrough.
- Make sure to identify any outlet noted as having leadlined storage tanks or lead parts listed in EPA's 3Ts.
   These should be removed immediately.

#### Module 4: Developing a Sampling Plan

### **Determine Sample Locations**

□ Sample sites include drinking fountains, kitchen and classroom sinks, home economics sinks, teachers' lounge, and other sites used for consumption.

EPA recommends all outlets used for consumption be sampled; prioritizing outlets:

- That are used by children under the age of 6 years or pregnant women
- That are frequently used by students and staff
- Are older and/or have never been tested
- Faucets that are not used for human consumption, such as sinks in janitor's closets or outdoor hoses, do not need to be sampled and clear signage should be used to notify people that it is not for drinking.
- Important: schools and child care facilities should not use sample results from one outlet to characterize potential lead exposure from all other outlets in their facility. This approach could miss localized lead problems that would not be identified.

Examples of Sample Sites: Drinking fountains, nurses' office sinks, kitchen kettles, classrooms used for early childhood education, etc.

TESTING

Module 4: Developing a Sampling Plan

# **Determine Your Sampling Frequency**

- □ How frequently your facility can and should test for lead in drinking water is dependent on a variety of factors
  - (e.g. plumbing, water quality, lead results, budget, and competing priorities).
- □ Schools and child care facilities should make testing drinking water a part of their regular building operations.
- □ Annual monitoring provides information on changes in the lead levels and the effectiveness of remediation or treatment efforts.

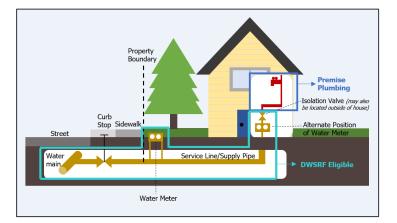


#### Module 4: Developing a Sampling Plan

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# Do You Have a Lead Service Line?

- Lead pipes are used for service connections, or service lines, in some locations.
- □ Other materials used for service lines include copper, galvanized steel, plastic and iron.
- □ Lead is less practical for the larger service lines typically used in larger buildings; however, many child care facilities reside in small buildings and are at a higher likelihood of being served by lead lines.
- Regardless of building size, make sure to check the service line. The water utility may be able to provide information about whether there is a lead line or can help identify the service line for the school.



Lead service lines may be visible and are generally a dull gray color and very soft.





Module 4: Developing a Sampling Plan

# Understanding the Sampling Procedures

□ The Who, What, Where, and When of Sampling:

- Who should collect 3Ts Samples?
- What is the recommended sample volume?
- What are the recommended types of samples? (e.g. first-draw samples, flush samples, sequential samples)
- When should samples be collected?
- When should I take action?



TESTING

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TESTING

Module 4: Developing a Sampling Plan

# When to Take Action

EPA encourages schools to prioritize remediation efforts based on lead sample results

- □ *Before sampling,* facilities should establish a plan on how they will respond to their sample results to protect the school and child care facility population from lead in drinking water.
- □ Make sure to also check with your state and local health department. They may have guidance or even requirements that include a lead remediation trigger.

#### **Important Note:**

EPA's Lead and Copper Rule (LCR) establishes a lead action level of 15 parts per billion (ppb) for water systems and facilities that have and/or operate their water source (e.g., own their own well). The LCR takes a system-wide approach. If the 90th percentile lead level of tap samples exceeds the 15ug/L action level, water systems must take additional actions. The action level for lead is not a health-based standard. It is a screening tool for determining when certain treatment technique actions are needed.

#### Module 5: Conducting Sampling and Interpreting Results

# **Conducting Sample**

- EPA recommends that schools and child care facilities conduct a 2-step sampling procedure to identify if there is lead in the outlet (e.g. faucet, fixture, or water fountain) or behind the wall (e.g. in the interior plumbing).
- □ Collect all water samples before the facility opens and before any water is used.
- Ideally, the water should sit in the pipes unused for at least 8 hours but not more than 18 hours before a sample is taken.



#### **Step 1** 250-mL First Draw Sample

Take a 250mL first draw sample at all taps used for consumption to identify potential lead in the fixture.

#### Step 2 250-mL Flush Sample

If the result of Step 1 is high, take a 30-second flush sample to identify lead in the plumbing behind the fixture.

Module 5: Conducting Sampling and Interpreting Results

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# Conducting Sample (Continued)

#### Taking Them at the Same Time

- □ These samples can be taken in the same sampling event, which can reduce cost, and provide you with more information on lead levels.
- If not taking these samples at the same time, and elevated lead levels have been found in Step 1, the water should not be consumed while preparing to take the following up flush sample.

#### Helpful Tip...

For further potential cost savings, you or lab can collect, preserve, and hold (but not analyze) the second sample at the same time the first sample is collected, then analyze only selected Step 2 samples based on review of the Step 1 results. Most commercial labs will "Hold" samples until the client advises to dispose (at nominal cost) or analyze those samples.



#### Step 1 250-mL First Draw Sample

Take a 250mL first draw sample at all taps used for consumption to identify potential lead in the fixture.

#### Step 2 250-mL Flush Sample

If the result of Step 1 is high, take a 30-second flush sample to identify lead in the plumbing behind the fixture.

Module 5: Conducting Sampling and Interpreting Results

# Interpreting Results Example

#### **Example of Prioritizing Results**

- A school takes initial (first draw) samples at all of its outlets used for drinking and cooking (e.g. 4 drinking water fountains, 1 kitchen sinks, 1 kitchen kettle, 2 classroom sinks, and 3 bathroom sinks)
  - A total of 11 sites

□ The sample results are shown to the right.

Sample Location	Sample Result
003-112-DW-P-001	ND
003-124-KF-P-005	ND
003-124-KK-P-006	23 ppb
003-130-BF-P-009	ND
003-130-BF-P-010	ND
003-130-BF-P-011	ND
003-143-CF-P-007	7 ppb
003-167-DW-P-002	11 ppb
003-212-DW-P-003	ND
003-230-CF-P-008	ND
003-267-DW-P-004	3 ppb

Sample coding is available in the 3Ts Toolkit

#### Module 5: Conducting Sampling and Interpreting Results

Interpreting Result Implement Immediate Steps (e.g. remove from service)

#### Example of Prioritizing Results

 A school takes initial (first draw) samples at all of its outlets used for drinking and cooking (e.g. 4 drinking water fountains, 1 kitchen sinks, 1 kitchen kettle, 2 classroom sinks, and 3 bathroom sinks)

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003-112-DW-P-001	ND
003-124-KF-P-005	ND
003-130-BF-P-009	ND
003-130-BF-P-010	ND
003-130-BF-P-011	ND
003-212-DW-P-003	ND
003-230-CF-P-008	ND

Module 5: Conducting Sampling and Interpreting Results

# Interpreting Results Example

#### Example of Prioritizing Take a closer look, do follow-up

 Sampling, check and clean aerators, implement routine flushing drinking and cooking (e.g. 4 drinking water fountains, 1 kitchen sinks, 1 kitchen kettle, 2 classroom sinks, and 3 bathroom sinks)

• A total of 11 sites

□ The sample results are shown to the right.



	Sample Location	Sample Result
	003-124-KK-P-006	23 ppb
-	003-167-DW-P-002	11 ppb
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	003-112-DW-P-001	ND
	003-124-KF-P-005	ND
	003-130-BF-P-009	ND
	003-130-BF-P-010	ND
	003-130-BF-P-011	ND
	003-212-DW-P-003	ND
	003-230-CF-P-008	ND

Learn about cleaning aerators! They may be a potential source of lead

Module 5: Conducting Sampling and Interpreting Results

# Interpreting Results Example

#### **Example of Prioritizing Results**

 A school takes initial (first draw) samples at all of its outlets used for drinking and cooking (e.g. 4 drinking water 1 kitchen kettle, 2 classroom sinks, and 3 b
 Routinely sampling for lead at all outlets

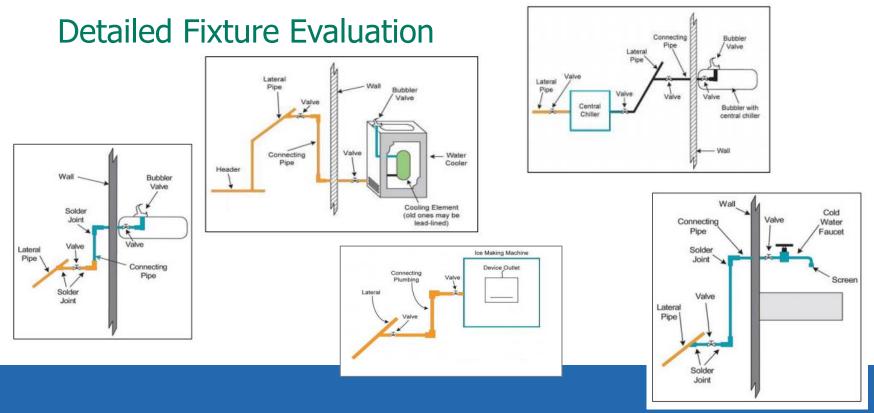
• A total of 11 sites

□ The sample results are shown to the right.

Sample Result
23 ppb
11 ppb
7 ppb
3 ppb
ND



Module 5: Conducting Sampling and Interpreting Results



#### Module 5: Conducting Sampling and Interpreting Results

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# Sampling Dos and Don'ts

#### Do:

- Follow the instructions provided by the laboratory for handling sample containers to ensure accurate results.
- Assign a unique sample identification number to each sample collected. Use a coding scheme to help differentiate samples, and don't forget to label.
- Collect all water samples before the facility opens and before any water is used. Ideally, the water should sit in the pipes unused for at least 8 hours but not more than 18 hours before a sample is taken.
- Learn how water flows in your facility. If there are multiple floors, it is typically recommended to sample from the bottom floor and continue up. Start sampling closest to the main and work away.

#### Don't:

- Remove aerators prior to sampling. Potential lead contributors may be missed if aerators are removed since debris could be contributing to the lead in drinking water if particles containing lead are trapped behind aerator screens.
- Flush water prior to sampling, unless instructed to do so. Flushing can be a tool to improve water quality, especially after long holidays or weekends. However, flushing prior to sampling may cause samples to not be representative of daily consumption.
- Close the shut-off valves to prevent their use prior to sample collection. Minute amounts of scrapings from the valves could produce inaccurate results showing higher-than-actual lead levels in the water.

### TAKING ACTION

#### Module 6: Remediation and Establishing Routine Practices

### Remediation

□ Solutions to lead problems typically should be addressed on both a short-term and a long-term basis.

#### **Tips when doing remediation:**

- Work closely with maintenance staff and plumbers who may make repairs to ensure that the chosen remediation options will remove lead from the water and to understand the benefits and considerations associated with each option.
- Ensure that your school and/or child care facility population are familiar with the use of new fixtures or technology that may be installed.
- Engage the local health department, public water system and other available resources
- Ask vendors for information on the schedule, health precautions, and request regular status updates on their progress prior to agreeing to work with any particular organization.
- Identify an individual that is responsible for working with the remediation contractors.

#### Module 6: Remediation and Establishing Routine Practices

# Remediation – Immediate Response

- □ Shut off problem outlets: If initial sample results from an outlet exceed the remediation level, the outlet can be shut off or disconnected until the problem is resolved
- □ Share Test Results: Notify staff, parents, and students of test results and actions the school is taking
- Increase Awareness and Public Education: If the remediation trigger is exceeded, take the initiative by providing information to your school community



#### Module 6: Remediation and Establishing Routine Practices

# **Remediation – Short Term Control Measures**

- □ **Provide Filters at Problem Taps:** Point of use (POU), or filter, units are commercially available and can be effective in removing lead.
- □ Flush Taps Prior to Use: Flushing individual problem outlets or all outlets may also represent a short-term solution. Learn how to use flushing as a tool appropriately in the <u>3Ts Flushing Best Practices</u>.
- Provide Bottled Water: This can be an expensive alternative but might be warranted if schools expect or are aware of widespread contamination and other remediation is not an option.



#### Module 6: Remediation and Establishing Routine Practices



#### 3Ts Flushing Best Practices

Flushing is a tool schools can use as a general best practice to improve overall water quality and during flush sampling (i.e. samples targeting the plumbing inside of the wall).

#### LEAD IN DRINKING WATER IN SCHOOLS

The potential for lead to leach into water can increase the longer the water remains in contact with lead in plumbing. As a result, facilities with intermittent water use patterns, such as schools, may have elevated lead concentrations.

Testing helps evaluate plumbing systems and materials so that targeted remediation efforts can be taken. It is a key step in understanding the problem, if there is one, and designing an appropriate response.

EPA developed the 37s for Reducing Leart in Drivking Water to assist schools and child care facilities with their drinking water testing program. The 31s applies a Training, Testing, and Taiking Action approach.

#### WHAT IS FLUSHING

"Flushing" involves opening taps and letting the water run to remove water that has been standing in the interior pipes and/or the outlets. The flushing time can vary by the type of outlet being cleared. The degree to which flushing helps reduce lead levels can also vary depending upon the age and condition of the plumbing and the corresiveness of the water.

Flushing is a tool, but only when used appropriately. This fact sheet helps you understand when flushing should be used, when it should'hy, the pros and cons, and how to conduct flushing in your facility.

#### FLUSHING TO IMPROVE WATER QUALITY

In schools and child care facilities, establishing an ongoing flushing program is one of the quickest and easiest solution to ensure the water quality is preserved by decreasing water age.

In addition, flushing does not require installation or maintenance of vestor treatment equipment or complex instructions. Flushing can be used as a regular practice to ensure the water is regularly moving.



The potential for lead to leach into water increases the longer the water remains in contact with leaded plumbing materials. This document will discusses:

- Lead in Drinking Water
- What is Flushing?
- Flushing to Improve Water Quality
- Flushing and Sampling for Lead
- Flushing and Remediation
- Flushing Dos and Don'ts
- Tips for Developing a Flushing Plan

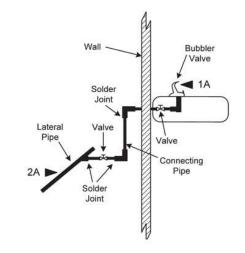
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## TAKING ACTION

#### Module 6: Remediation and Establishing Routine Practices

## **Remediation – Permanent Control Measures**

- Replacement of Outlets: If the sources of lead contamination are localized and limited to a few outlets, replacing these outlets or upstream components may be the most practical solution.
- □ **Pipe Replacement:** Lead pipes within the school and those portions of the lead service lines under the public water system's jurisdiction can be replaced.
- □ Provide Filters at Problem Taps: Some facilities may chose to use filters or Point of use (POU) units as a long-term or permanent control measure. It is important to follow manufacturer instructions for maintaining filters (e.g., change the cartridge).
- □ **Reconfigure Plumbing:** Ongoing renovation of school or childcare buildings may provide an opportunity to modify the plumbing system to redirect water supplied for drinking or cooking to bypass sources of lead contamination.



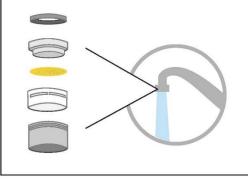
#### Module 6: Remediation and Establishing Routine Practices

# **Establishing Routine Practices**

- Establish routine practices to reduce exposure to lead and other environmental hazards (e.g., bacteria).
- These activities should not be conducted immediately prior to collecting a water sample but should be planned as part of the school's or child care facility's water management program to improve overall drinking water quality. These could include:
  - Clean water fountains, aerators and screens
  - Use only cold water for food and beverages
  - If filters are used, make sure they are maintained
  - Create and post placards near sinks where water should not be consumed
  - Regularly flush all water outlets, particularly after weekends and vacations

#### **Clean Faucet Aerators**

- Unscrew the end-piece of your faucet where the water comes out. This is the aerator. (Make note of how the pieces come off, to put back together. Parts vary.)
- Remove the screen and rinse out any dirt that has collected.
- 3 Screw it back on.



#### Module 7: Recordkeeping

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# **Keep Records**

- □ Keep a record of sampling and remediation efforts that have been conducted and schedules that have been created to continue to maintain water quality
- □ It is important to keep an ongoing record of public outreach and communication activities
- □ Keep copies of past communication materials and the dates they were sent out
- Strong recordkeeping can prove to be helpful in ensuring the longevity of the program
- The 3Ts includes recordkeeping templates



# **LEAD IN SCHOOL AND CHILD CARE PROGRAM DRINKING WATER GRANT** SDWA 1464(d)

# Water Infrastructure Improvements for the Nation Grant Opportunities



#### Assistance for Small and Disadvantaged Communities – SDWA §1459A

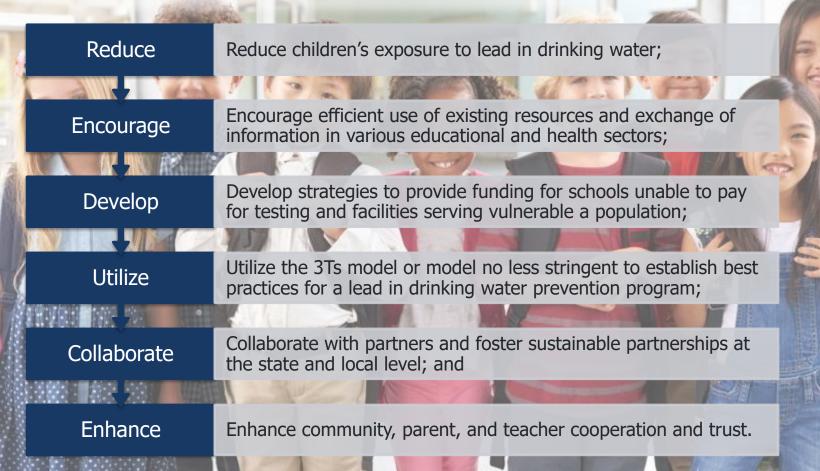
- approximately \$42.8 million in funding. Grants will be awarded as non-competitive grants to states, with a 2 percent tribal allotment of \$875K.
- Reducing Lead in Drinking Water SDWA §1459B
  - Approximately \$25 million in funding. This will be a competitive grant.

#### Lead Testing in School And Child Care Program Drinking Water – SDWA §1464(d)

• approximately \$43.7 million in funding. Grants will be awarded to states to assist local educational agencies. The tribal allotment is approximately \$875K.



# The Objectives of this Program are to:



# Allocation of Funds

- EPA will award approximately \$43.7 million in funding for the Lead Testing in School and Child Care Program Prinking Water Grant Program.
- Based on an algorithmic formula that includes factors for population, disadvantaged communities, and lead exposure risk.
- Approximately 6.44% will be allotted for assistance to tribal educational agencies.

WASHINGTON, D.C. 20460						
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	APR 29 3					
MEMORAN	DUM					
SUBJECT:	Final Allotments of FY 2018 and FY 2019 Testing in School and Child Care Program Section 2107 of the Water Infrastructure Is	Final FY 2018 and FY 2019 Allotments for WIIN Voluntary Lead Testing in School and Child Care Program Drinking Water Grants Based on Appropriations of 543,759,000				
FROM:	Anita M. Thompkins, Director Drinking Water Protection Division (DWF	National Allotment American Indian & Alaska Native Communities \$2,815,000*				
го:	Water Division Directors	Alabama	\$545,000	Montana	\$192.000	
	Regions 1-10	Alaska*		Nebraska	\$522,000	
		Arizona	\$622,000		\$260,000	
Attached are the final FY 2018 and FY 2019 Voluntary L Drinking Water grant allotments, authorized under Sectio Improvements for the Nation Act (WIIN Act). The final a \$43,729,000. Attached are the state and territorial allotme support tribal water systems.		Arkansas		New Hampshire	\$414,000	
		California	\$3,878,000	New Jersey	\$1,537,000	
		Colorado		New Mexico	\$294,000	
		Connecticut	\$831,000	New York	\$1,960,000	
upport tribal	water systems.	Delaware		North Carolina	\$964,000	
The following steps support implementation of this grant:		District of Columbia		North Dakota	\$122,000	
<ul> <li>Early this summer, DWPD will publish an implementation</li> </ul>		Florida	\$1,752,000		\$1,361,000	
sample w	orkplan, which will be made available at www	Georgia	\$1,102,000		\$669,000	
<ul> <li>The regions will then work with the applicants to revie</li> </ul>		Hawaii	\$134,000		\$1,102,000	
<ul> <li>Late in the summer, DWPD will open the grant applic</li> </ul>		Idaho		Pennsylvania	\$1,740,000	
<ul> <li>The regions will approve the final grant application page</li> </ul>		Illinois		Rhode Island	\$703,000	
	and approve the time grant approaction pa	Indiana		South Carolina	\$519,000	
f you have as	ny questions regarding this grant program, pl	Iowa		South Dakota	\$298,000	
Davis at (202) 564-2703 or Davis, Catherine Millepa.gov.		Kansas Kentucky	\$472,000	Tennessee	\$697,000 \$3,331,000	
		Louisiana	\$581,000		\$434,000	
		Maine		Vermont	\$454,000 \$180,000	
		Maryland	\$513,000		\$737,000	
		Massachusetts		Washington	\$723,000	
		Michigan		West Virginia	\$262,000	
		Minnesota		Wisconsin	\$912,000	
		Mississippi		Wyoming	\$123,000	
		(wetaat5stpp)	\$719,000	w Young		
		weississippi		wyoming	3123,000	

# To Be Used for Testing at *Local Education Agencies* and *Child Care Programs*

 The SDWA section 1464(d)(1) defines child care programs and local education agencies as:

(A) Child Care Program- The term 'child care program' has the meaning given the term 'early childhood education program' in section 103(8) of the Higher Education Act of 1965 (20 U.S.C. 1003(8)).
(B) Local Education Agency- The term 'local education agency' means:

(i) a local education agency (as defined in section 8101 of Elementary and Secondary Education Act of 1965 (20 U.S.C. 7801));
(ii) a tribal education agency (as defined in section 3 of the National Environmental Education Act (20 U.S.C. 5502)); and

(iii) a person that owns or operates a child care program facility.

- Private schools are not included within the LEA definition.
- States can use grant funding to test lead in drinking water at public and private child care facilities.

# Eligible Uses

Funds for the eligible activity of testing for lead in drinking water in schools and child care facilities must be used in accordance with the following:

 The EPA's 3Ts for Reducing Lead in Drinking Water guidance (found at <u>www.epa.gov/safewater/3ts</u>);

#### OR

• Applicable state regulations or guidance regarding reducing lead in drinking water in schools and child care facilities that are not less stringent.



3Ts for Reducing Lead in Drinking Water in Schools and Child Care Facilities *A Training, Testing, and Taking Action Approach* Revised Manual



## **Priorities**

#### States must prioritize to target:

• Schools and child care programs in low-income areas (e.g., Schools with at least 50% of the children receiving free and reduced lunch and Head Start facilities);

#### EPA recommends states also prioritize:

- Elementary and child care programs that primarily care for children 6 years and under;
- Older facilities that are more likely to contain lead plumbing; schools and child care facilities built before 1988 are more likely to have lead pipes, fixtures, and solder; and
- Established and sustainable child care programs without factors indicating that the building may not be serving as a child care facility in the future.





# **Timeline and Next Steps**



Timing	Item				
September 21, 2018	EPA Office of Ground Water and Drinking Water (OGWDW) sends to Governors of all eligible states the letter announcing the FY 2019 grant program; EPA initiates tribal consultation, to end on October 22, 2018				
February 11, 2019	Extended deadline for all participating states and territories to submit a Notice of Intent to Participate (NOIP) to OGWDW via email (WIINDrinkingWaterGrants@epa.gov)				
April 29, 2019	OGWDW will inform the states and territories of their final allocation via email				
May 2019	Implementation Document and Workplan Sample available to states				
June 2019 (30 days after implementation materials are available)	Deadline for states to submit final draft workplans and budget narratives to their EPA Regional Office for review				
<b>July 2019</b> (60 days after implementation materials are available)	Deadline for participating states to submit their final application package to <a href="http://www.Grants.gov">www.Grants.gov</a>				

# RESOURCES

Questions? <u>3Ts@epa.gov</u>

WIIN Webpage: https://www.epa.gov/safewater/grants

3Ts Webpage: https://www.epa.gov/safewater/3Ts

## Upcoming Webinars on WIIN and 3Ts

Thursday, May 16, 2019 3:00-4:00pm EDT Assistance for Small and Disadvantaged Communities Grant Information for States

Tuesday, July 9, 2019, 2:00-3:00pm EDT

EPA's Webinar on Water Quality Funding Sources for Schools and Child Care Facilities