# Advancing Environmental Health Best Practices within the Early Care and Education System in New Hampshire: Fulfilling Regulations, Requirements and Business Growth New Hampshire Environmental Health Conference October 26, 2023

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NH Department of Environmental Services













#### **Presentation Outline**

- 1. Overview
- Current NH landscape-bridging child care needs and children's environmental health
  - Water sources in NH
  - Sources of lead for NH residents
- 2. NH Get the Lead Out of Drinking Water Program
- 3. Finding the balance/opportunities and assistance
- 4. Questions from you/for you





## A few statistics...

#### Too many children lack the basic necessities of life:

- 46% reside in "hazardous housing"
- 22% are "food insecure"
- 9% lack health insurance

#### Children are routinely exposed to significant environmental hazards:

- At least 4 million households include children exposed to high levels of lead children of color and living in poverty are disproportionately at risk for elevated blood lead levels
- 8,684 children die from injuries
- 66% live in poor air quality areas

#### Remember...

#### Children are not little adults...

Young children consume 7x as much water per kilogram body weight vs adults

Infant's skin is more permeable

Organs are still developing



Increased water requirements during pregnancy and lactation

Placenta is permeable to many toxicants

Children have a longer life span

Infants may drink formula mixed with water

Children get a higher dose (lb per lb)



Boston Children's Hospital Region 1 New England Pediatric Environmental Health Specialty Unit





**NH News** 

# FSTOVWX Low income families struggle New Hampshire Bulletin

STATE HOUSE

EDUCATION

**ENERGY + ENVIRONMENT** 

COMMENTARY



## Solve child care and 'we're going to live in one hell of a great state'

BY: ANNMARIE TIMMINS - JULY 18, 2023 5:00 AM











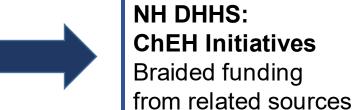






Sustainability Plan for Children's Environmental Health (ChEH) in New Hampshire

#### **NHDES:** EHP/APPLETREE/ **Choose Safe Places** (CSP) ATSDR funding



Focus on integrating environmental health best practices into new or existing ECE Facilities.

Focus on site data with children as exposure receptors through Risk Assessment.

Safe Siting Incorporate selfassessment to evaluate

Safe Siting Use risk assessment to evaluate

Child Care Business **Improvement** Project NH DHHS, **BCDHSC** 

Get the Lead Out of

**Drinking Water** 

**NHDES** 

Children's **Environmental Heath Initiative** NH DHHS, EPHT

**CSP Advisory** Team Nothing about us without us.

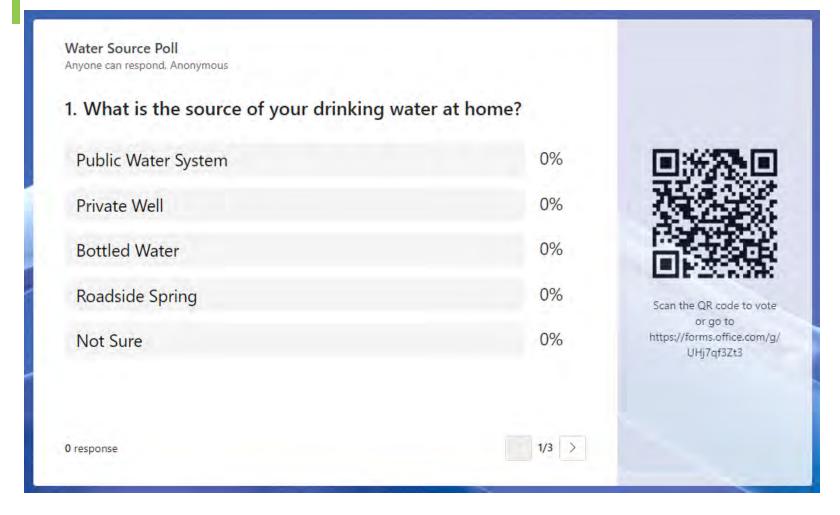
**CSP Advisory Team** Nothing about us without us





**SOILSHOP** Risk Assessment Superfund/State sites

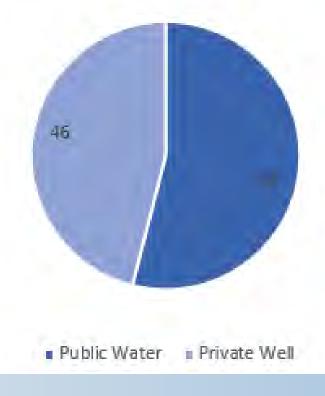
# Poll: Where does your drinking water come from?



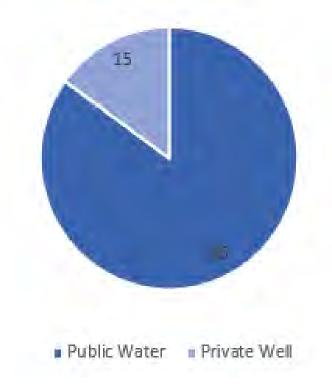


# **Drinking Water Sources**





#### **United States**



# **Be Well Informed DES Site**



The **Be Well Informed** Guide from NHDES is designed to help you understand your water test results and, if your well water has commonly found pollutants in it, provide information about health concerns and water treatment choices. New Hampshire is fortunate to have an abundance of clean groundwater, and nearly half of New Hampshire's residents (over 500,000 people) rely solely upon domestic wells (also called "private wells") as their primary source of drinking water. While many private wells provide safe drinking water, certain pollutants like arsenic, iron and manganese are sometimes present in groundwater at levels that can affect your health and home.

NHDES recommends private well owners test their well water every three to five years for pollutants commonly found in New Hampshire's groundwater. This group of commonly found pollutants is listed in the NHDES Private Well Brochure and is referred to as







#### Enter the Results of Your Drinking Water Test

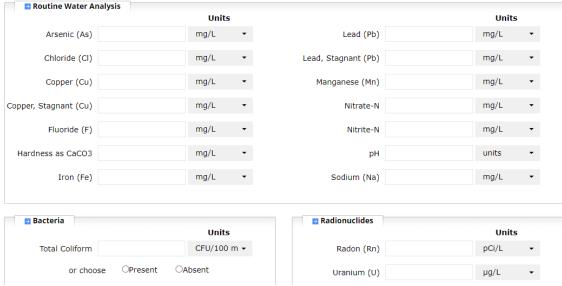
After reading the following, enter your water test results from your lab report and click "submit" at the bottom of the page. If you need help reading your lab report, see an example here.



- Be sure that the "units" (for example milligrams per liter, or "mg / L") are properly set and the same as those shown on your lab report. You may change the units using the drop down menu to match your lab report, if necessary.
- Your lab report may show that a certain pollutant was "Not Detected" in your water. This may be indicated in your report by a
  "ND" (Not Detected), "BD" (Below Detection), "BDL" (Below Detection Limit) or a less than symbol ("<") next to the result. In
  these cases, enter a "0" for that parameter.</li>

NH Town or City \*

- . If your lab report doesn't show a test result for a certain pollutant, do not enter a zero; leave the box blank.
- . Only enter numbers (not letters) for your test results unless otherwise noted. Do not add commas.



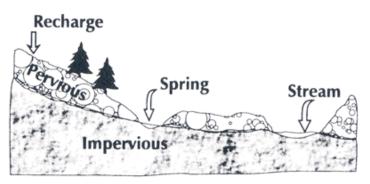


# A bit about bottled water....

- Potential temporary solution if your lab results reveal harmful contaminants
- Not recommend as a permanent solution due to plastic waste & cost over time
- ➤ Bottled water companies aren't as heavily regulated as even public water systems in NH-for example: arsenic and PFAS

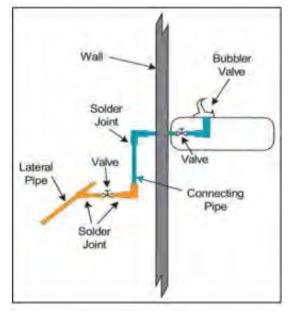






# Roadside Springs

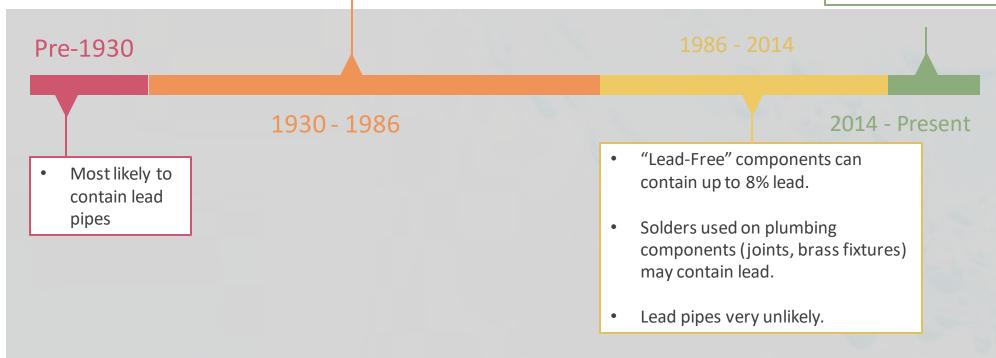
- Locations where residents fill up water bottles
- Not regulated; may not be tested unless Town voluntarily chooses to test
- May contain pathogens
- NHDES strongly recommends NOT drinking from these springs



# How does building plumbing age affect lead concentration?

- Lead pipes are allowed (federally) until 1986
- Likely to contain lead solder (used to join copper pipes together).

- "Lead-Free" materials can contain 0.25% lead
- Potential lead leaching can occur in new construction and plumbing repairs

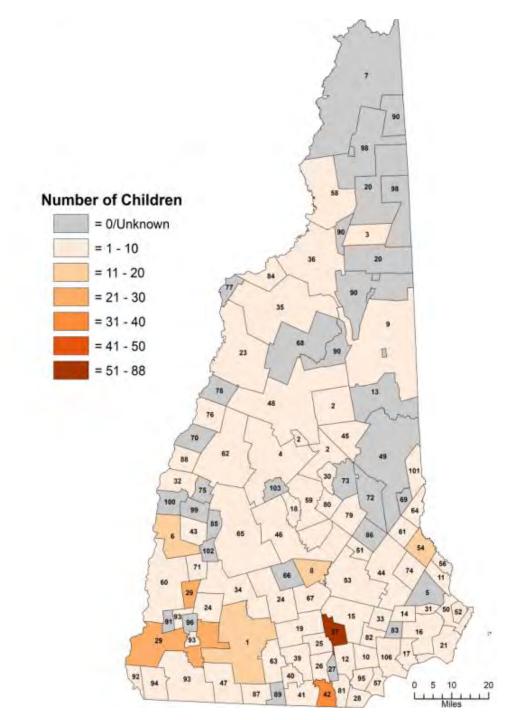


# Lead Levels in Children Under 6 in NH

Children <6
years old with
elevated
blood lead
levels
(>5 µg/dL) by
SAU - 2021

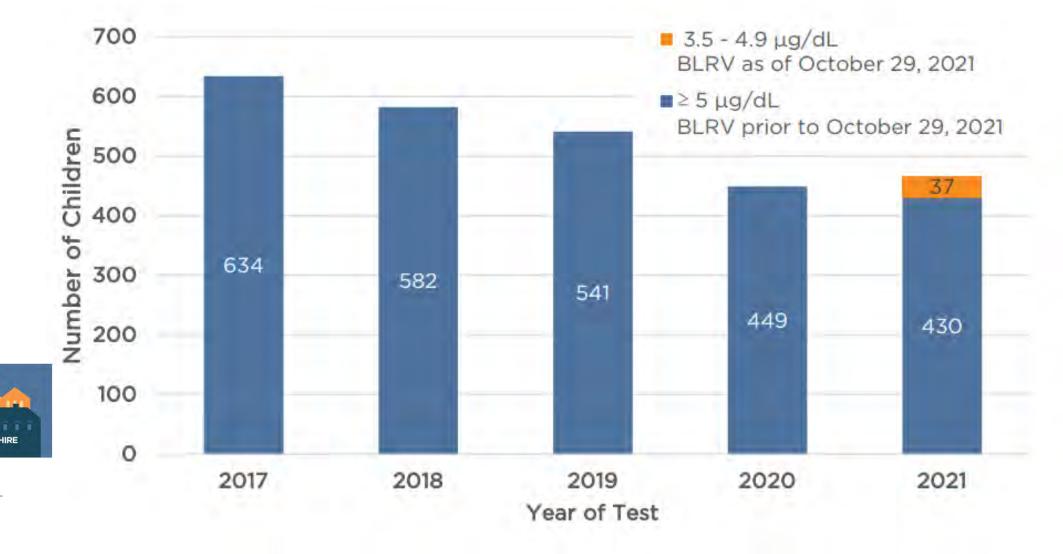
DHHS 1/2023 NH-Report-2021.pdf





Number of children aged 6 years and younger with elevated blood lead levels at CDC's Reference

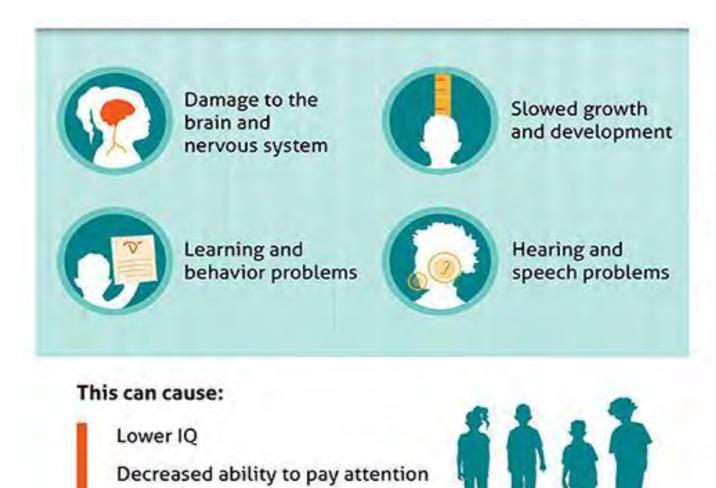
Level



DHHS1/2023 NH-Report-2021.pdf

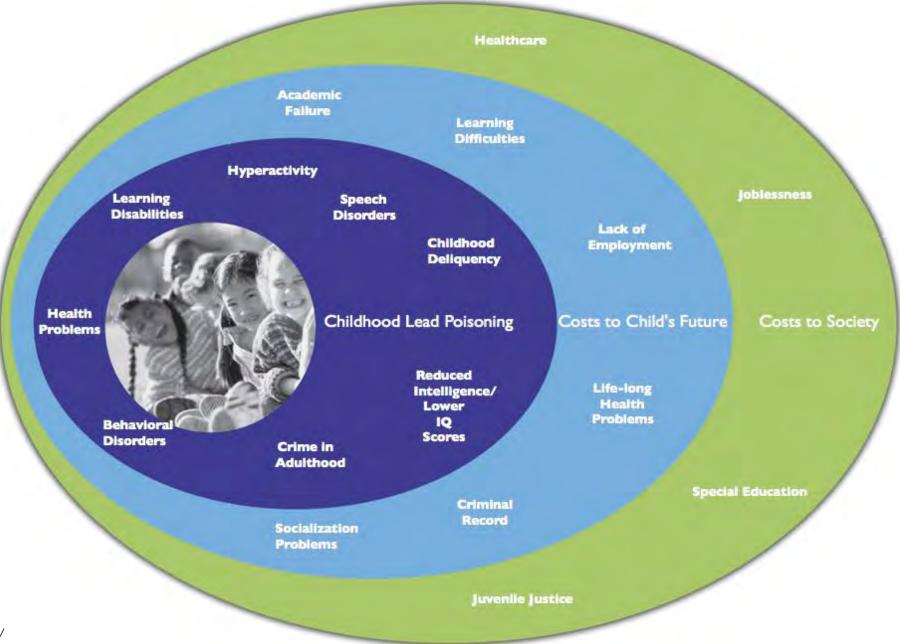
## Lead exposure and children's health

 The EPA and the Centers for Disease Control and Prevention (CDC) agree that there is NO known safe level of lead in a child's blood



Underperformance in school

# Lead exposure and children's health



• Source: LeadSafe Illinois at Loyola University, Chicago Civitas ChildLaw Center and Policy Institute

# Sources of Lead

#### Lead paint

- 58% of houses in NH built prior to 1978 when lead paint was banned
- Friction surfaces (windows & door frames)
- Chipping / flaking paint

#### Soil

- Peeling exterior paint with lead
- Leaded gasoline emissions
- Industrial contamination

#### Jobs and Hobbies

- Construction, metal working
- · Shooting ranges
- Stained glass / some ceramics

#### Household

- Toys
- Kitchenware
- · Candy
- Spices
- Cosmetics

#### Drinking Water

- · Service lines
- Fixtures
- SEE NEXT SECTION







MAIN WATER LINE

08/documents/epa lead in drinking water fin al 8.21.17.pdf

#### NH Licensed Child Care Facilities and Schools Must Test Drinking Water for Lead

- Required by state law (RSA 485-17-a)
  - Passed in 2018
  - Significant revisions in July 2022
- Sample all locations available to children for consumption
- Action level 5 ppb (previously 15 ppb)
- 3 rounds by June 30, 2024
- Required whether facility is on a well or connected to a public water system
- In addition to public water system or CCLU testing requirements











Water Infrastructure Improvements for the Nation (WIIN) Act Grants











## **Program Goals**

- Increase awareness of and compliance with law
- Support facilities in their testing efforts
  - Technical resources
  - Helpline
  - FREE analyses for public schools & licensed child care programs
- Provide more transparency and make data more accessible to the public
- Reduce children's exposure to lead!



info@gettheleadoutnh.org gettheleadoutnh.org Helpline at (603) 506-6469





# Sampling Rounds

3 rounds of sampling required by June 30, 2024

There must be at least 6 months between each round of sampling

Round 1

Round 2

Round 3

2016



June 30, 2024

Most facilities are ready to complete Round 2

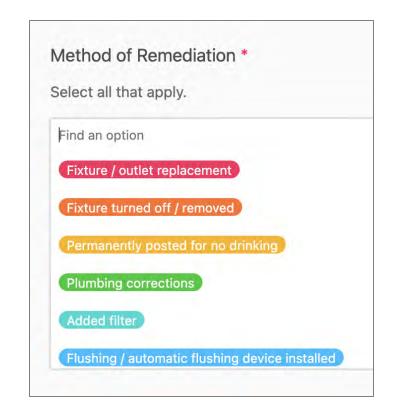




#### **Data Collection and Validation**

- Collect missing data from previous rounds
- Help facilities that never did their first round of sampling
- Collect missing remediation information

**15 ppb** → **5 ppb** 







# Ways to Reduce Exposure in Drinking Water

Use cold water for drinking & cooking

If lead is detected, flush the tap every morning

Use bottled water as an interim step

Replace faucet and/or plumbing parts & retest

Install a filter & retest

Check packaging carefully! (NSF/ANSI Certified under Standard 53 to remove lead) Convert to handwashing only



# **Round 1 Data Brief**





25,000+

Sample results provided to NHDES



95%

of schools in NH submitted test results

21,000+ samples from 625 schools



85%

of child care facilities in NH submitted test results

3,000+ samples from 594 child care facilities





# **Summary of Round 1 School Results**



59% of all samples had no lead detected

26%

had lead levels between 1-5 ppb 5%

had lead levels between 5-15 ppb 10%

had lead levels

≥15 ppb

\*These numbers reflect all results from the first round of testing and include results from locations that have since been remediated

~20,000 school results submitted to NHDES as of July 2023





# **Summary of Round 1 Child Care Results**



77% of all samples had no lead detected

17%

had lead levels between 1-5 ppb 2%

had lead levels

between 5-15

ppb

4%

had lead levels

≥15 ppb

\*These numbers reflect all results from the first round of testing and include results from locations that have since been remediated

~3,500 child care results submitted to NHDES as of July 2023

### **Remediation Methods**



Out of 3,236 outlets that came back at or above 5 ppb, remediation methods were reported for 92% (2,966) of these drinking outlets. The most popular method was permanently removing the fixture or posting "no drinking" signs.

51% permanently removed from service or posted for no drinking / handwash only.

16% replaced with a new fixture.

9% 15% with < 5 ppb retested for Round 2. retest result. likely due to then fixture remediated. replacement.



4% used other strategies (e.g., filtration. extensive plumbing work).













## Rounds 2 and 3 Process

Automate as much as possible!

1. Enroll in program

Outlet inventory

· Sample kit automatically sent to facility upon completion

3. Facility Collects Samples

Sample Results

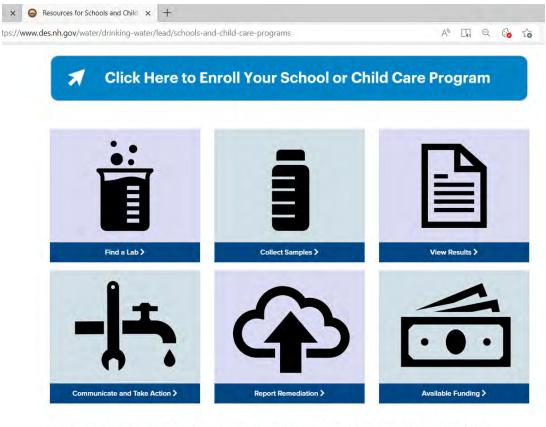
- · Facility automatically notified of exceedances
- · Facility communicates to parents/guardians

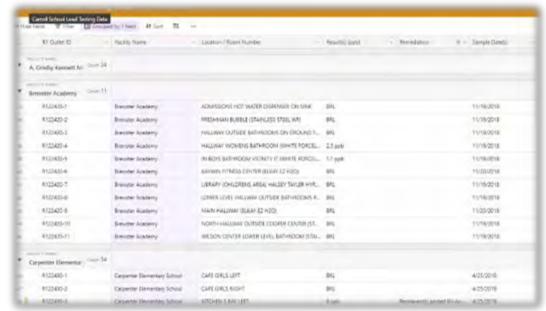
Take Action & Report Back to NHDES





# www.gettheleadoutnh.org

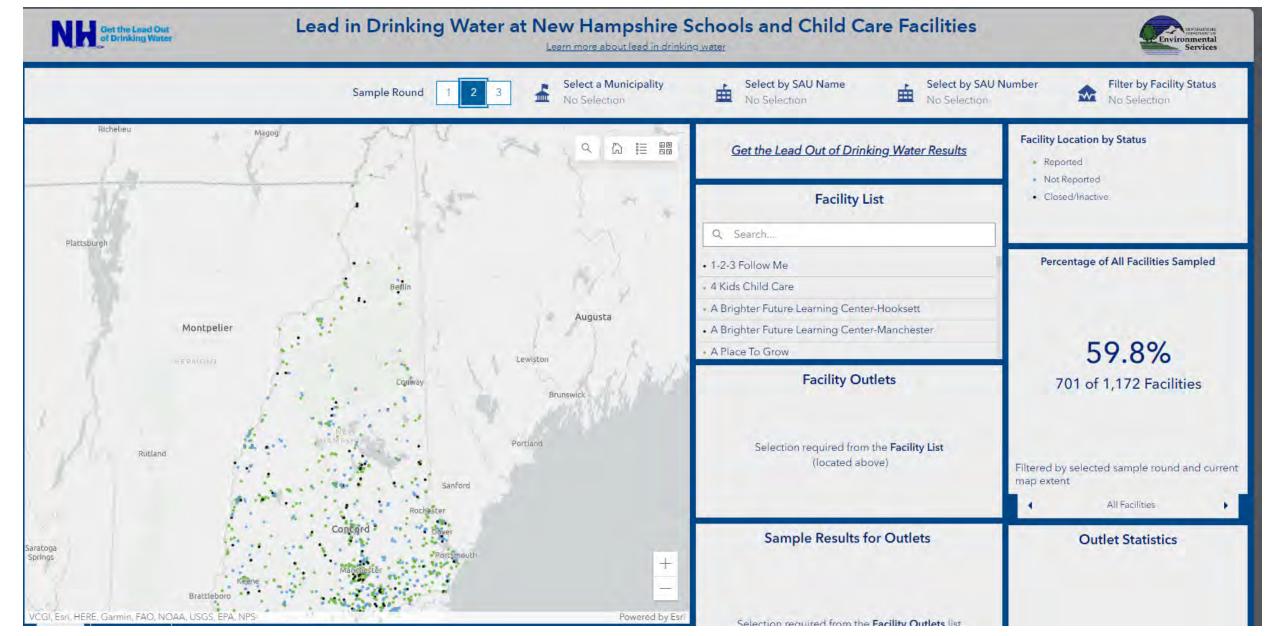




Important steps schools and child care programs must take include identifying drinking water locations to test (including sinks used for food preparation), requesting sampling materials from a certified lab, collecting samples, receiving results, notifying parents and guardians of any exceedances, and fixing locations with elevated lead levels.

Throughout this process, it is important to communicate with parents and quardians as well as NHDES. The buttons above provide more information on

### **GIS Interface: NEW!**







#### YouTube Channel



#### NH Get the Lead Out of **Drinking Water Program**

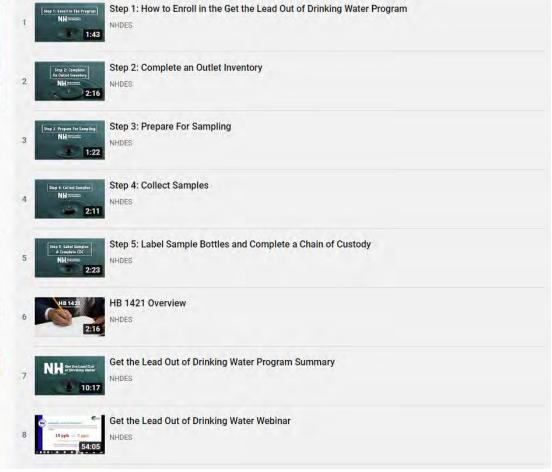
9 videos • 28 views • Updated 5 days ago

計 次 台 …

New Hampshire law (RSA 485:17-a) requires all public and nonpublic schools and licensed child care programs to test for lead in drinking water at outlets where water is available for consumption by children. Important steps schools and child care programs must take include identifying drinking water locations to test (including sinks used for food preparation), requesting sampling materials from a certified lab, collecting samples, receiving results and fixing locations with elevated lead levels.





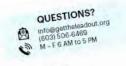


 NH Get the Lead Out of Drinking Water Program - YouTube

# **Sample Collection Instructions**







## Sample Collection Instructions

#### Your Will Need

- Instructions (this document) Chain of Custody (COC) form
- 250 mL sample bottles
- Bottle labels
   Pre-paid return shipping label (if applicable)

- Plastic bags (optional) "Do Not Use" sign (optional)

Collecting drinking water samples to test for lead typically occurs over two consecutive days. It's best to prepare for sampling in the afternoon and

collect samples the following morning. Drinking water outlets cannot be used for 8 to 18 hours prior to collecting

Check out the program video series! Videos one and two cover program enrollment and the outlet inventory, which you have already completed. The OR codes below will help the outlet inventory, which you have already completed. cneck out the program video series! videos one and two cover program enrollment and the cover program enrollment enrollme









COMPLETE COC

LABEL SAMPLES AND

**Get the Lead Out** of Drinking Water Reducing lead exposure at schools

#### 1) Prepare for Sampling



Prepare for sampling 8 to 18 hours before collecting samples.

- 1. For each location you plan to sample, run the cold water for 30 seconds, and then turn it off. We recommend covering the outlet with a plastic bag and a "Do Not Use" sign.
- 2. Repeat for every outlet (e.g., drinking fountain, classroom sink, kitchen faucet) that you plan to sample.
- 3. Make sure water is not used again until a sample is collected, between 8 to 18 hours later.

#### QUESTIONS?



#### 2) Collect Samples



- Open a bottle with clean hands. Line up the bottle under the faucet and be ready to collect the first stream of water that comes
- 2. Turn on the cold water and fill up the bottle to the neck. Leave some space near the top. Be careful not to overfill the bottle. Tightly secure the cap.
- 3. Complete the bottle label with correct information and fill out the COC form. More information is provided on the next page.
- 4. Repeat for every outlet that you plan to sample. Only fill up one bottle at each location.







Labeling each bottle and completing the Chain of Custody (COC) form helps the laboratory keep track of your samples. You will need to complete a row on the COC form for every sample you collect.

Once all bottles are labeled and the COC is complete drop off your sample kit at Once an porties are labeled and the COC is complete drop on your sample kit at the lab or mail as soon as possible. Follow the instructions from the lab on how

five-digit DOE or DHHS ID number with the abbreviated prefix. For example, CB-06412 or SCH-26584.

You can look it up at

Stagnant Lead by EPA Method 200.8 Outlet Type (circle one): CF DF IM KF

The first sample you collect is #1, the second is #2, etc. If you previously completed an outlet inventory, the numbers should match.

#### Coming Soon!





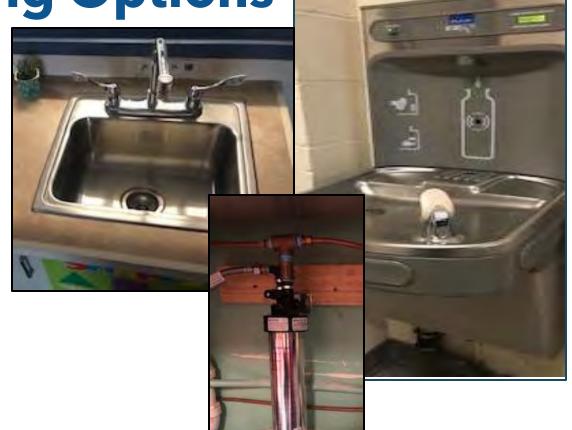
**Remediation Funding Options** 

#### Schools

 Lead Remediation Grant 100% reimbursement grant forthcoming

#### Child Care Programs

 Lead Remediation Grant 100% reimbursement grant forthcoming







Sustainability Plan for Children's Environmental Health (ChEH) in New Hampshire

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Safe Siting

Incorporate selfassessment to evaluate Get the Lead Out of **Drinking Water NHDES** 

> Child Care Business **Improvement** Project NH DHHS, **BCDHSC**

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Safe Siting Use risk assessment to evaluate

**SOILSHOP** 

NH DHHS, EPHT

**CSP Advisory Team** Nothing about us without us

Risk Assessment Superfund/State sites

> **Exposure Reduction Messaging and Solutions**

**CSP Advisory** Team Nothing about us without us.

best practices into

new or existing ECE

Facilities.



### **Drinking Water Regulations for ECEs**

**NH Childcare Licensing Rules 2017-2027:** 

He-C 4002.15: Water Supply, Septic Systems, Bathroom Facilities and Diaper Changing Facilities

**ECE Drinking Water Testing** 

Public Water System (PWS)

PWS Drinking Water Standards

ECE Drinking Water Testing conducted by PWS\*

Private Well: serving 25 or more people

All PWS Drinking Water standards (except rads)

ECE Drinking Water Testing by Certified Drinking Water Operator\*

Private Well: serving less than 25 people

CCLU ECE Drinking Water Standards

ECE Drinking Water Testing done by ECE



\* Lead & Copper stagnant sampling is responsibility of ECE



Final Report

Private Well Water Testing Initiative

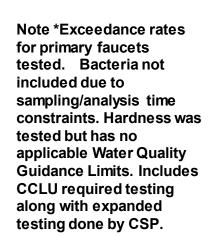
Pilot Project

New Hampshire
Choose Safe Places for Early Care & Education

https://www.dhhs.nh.gov/sites/g/files/ehbemt476/files/documents2/csp-pilot-final-report-combined-final-9-5-23.pdf

#### **CSP Private Well Water Testing Results of Primary Faucets**

Contaminants in Drinking Water	CCLU Required Testing	Drinking Water Guidance Limits	Number of Faucets Tested (n)	Exceedance Rate (%)*
Arsenic	Yes	0.005 mg/L	23	0%
Bacteria	Yes	Absence/Presence	0	144
Copper	Yes	1.3 mg/L	23	0%
Copper, Stagnant	Yes	1.3 mg/L	23	9%
Fluoride	Yes	4 mg/L	23	0%
Lead	Yes	0.005 mg/L	23	4%
Lead, Stagnant	Yes	0.005 mg/L	23	17%
Nitrate	Yes	10 mg/L	23	0%
Nitrite	Yes	1 mg/L	23	0%
Chloride	No	250 mg/L	23	4%
Hardness	No		23	
Iron	No	0.3 mg/L	23	22%
Manganese	No	0.1 mg/L	23	22%
PFAS (approximately 25 compounds)	No	Various	22	0%
pH	No	6.5-8.5	23	17%
Radon	No	2000 pCi/L	23	43%
Sodium	No	250 mg/L	23	0%
Uranium	No	30 μg/L	23	9%
VOCs (approximately 70 compounds)	No	Various	23	0%







# **Bureau of Child Development and Head Start Collaboration**

- √ The Child Care Business Improvement Project
- √ The Family Child Care Establish and Expand Project





### **Bureau of Child Development and Head Start Collaboration**

Child Care Business Improvement Project will support child care providers in center-based programs to assess their business' "health" by reviewing the facility condition/use including *drinking water safety*, operating expenses and finances, rent/mortgage arrangements, human resources, marketing, legal and tax, strategic planning and operational areas. Based on results, providers will be matched with professional development opportunities, business experts, mentors, prospective lenders, funders, and resources to meet their identified business and facility goals.

Family Child Care Establish and Expand Project The goal is to increase access to family child care programs across the state, with an emphasis on infant/toddler care by recruiting and supporting new providers and existing providers interested in expanding their services. Supports will include training and mentoring, use of a business health and readiness tool, *drinking water testing and remediation*, and start-up/expansion funding grants.

**Provider/Program Facilities Improvement Grants** are part of the Child Care Business Improvement and the Family Child Care Establish and Expand Project. Funds will support facility improvements, operational enhancements, and *drinking water testing and remediation* as recommended by the Business Health Assessment process.



### 4 Steps for Building a Safe Siting Program





Protecting the health of the nation's communities since 1987





<u>Event Flier:</u> https://www.des.nh.gov/sites/g/files/ehbemt341/files/inline-documents/sonh/soilshop-flyer.pdf

<u>APPLETREE SoilSHOP: https://www.des.nh.gov/home-and-recreation/your-health-and-environment/new-hampshire-appletree</u>

ATSDR SoilSHOP: https://www.atsdr.cdc.gov/soilshop/soilshop-events.html

# FREE SOIL SCREENING FOR LEAD

**EVALUACIÓN GRATUITADE PLOMO EN EL SUELO** 

Downtown Nashua Farmers Market Sunday, June 25, 2023

10 AM - 2 PM













### Environmental Health T 200 more Free Trainings available – 191 trainings completed!!

### Free Lead Training on ProSolutions: Over 915 Trainings completed!!

#### nealth

# English, Spanish

#### Course Learning Objectives

Objectives for this course are divided into three secti

#### Improving Indoor Air and Selecting Art Materials

✓ Recognize how each of us are exposed to hundred young children are especially vulnerable to these tox ✓ Recognize how indoor and outdoor air pollution diearly care environments, as well as how to implement ✓ Identify how Radon can seep into our homes and € for mitigation

. Parnanize that art and craft eunnline can contain t





### This Free Online Training for New Hampshire includes:

- Health and Safety Training Package that will meet the requirements for the revised Child Care Licensing Unit rule, replace the requirements for Child Care Licensing Orientation, and meet the requirements for license-exempt child care enrollment through DHHS
- Pyramid Online Learning Modules for Infants and Toddlers, Preschool, and Birth-Five
- Individual courses provided at no cost with additional courses available for purchase
- Free <u>Eco-Healthy Child Care</u> Courses are available Use Code NHECO at checkout



### Children's Environmental Health Initiative



**Project Summary** 

## Children's Environmental Health Initiative









We want to hear from you!!



Maternal and Child Health Home Visiting Nurses







### How can we help you?

- What Environmental Health Issue are you most concerned about?
- What can we do in general to be helpful to you?
- How do we continue to work on the balance?











Scan the QR code to vote or go to https://forms.office.com/g/ t2sTyLgrE9



# Thank you!

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Get the Lead Out of Drinking Water gettheleadoutnh.org info@gettheleadoutnh.org; (603) 506-6469



