



# Water Quality Information Session for Families

Child Development Lab

July 6, 2023



# Welcome and Thank You

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- Background on lead and testing
- Overview of results and actions
- Specific results (by location)
- Remediation and other next steps
- Questions & answers

*Please hold your questions until the Q&A portion of today's Zoom.*



# Today's Panel of Experts

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**Dipesh Navsaria,**  
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Pediatrician; Professor, SMPH;  
Professor, School of Human  
Ecology; Faculty Fellow, Child  
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# Background



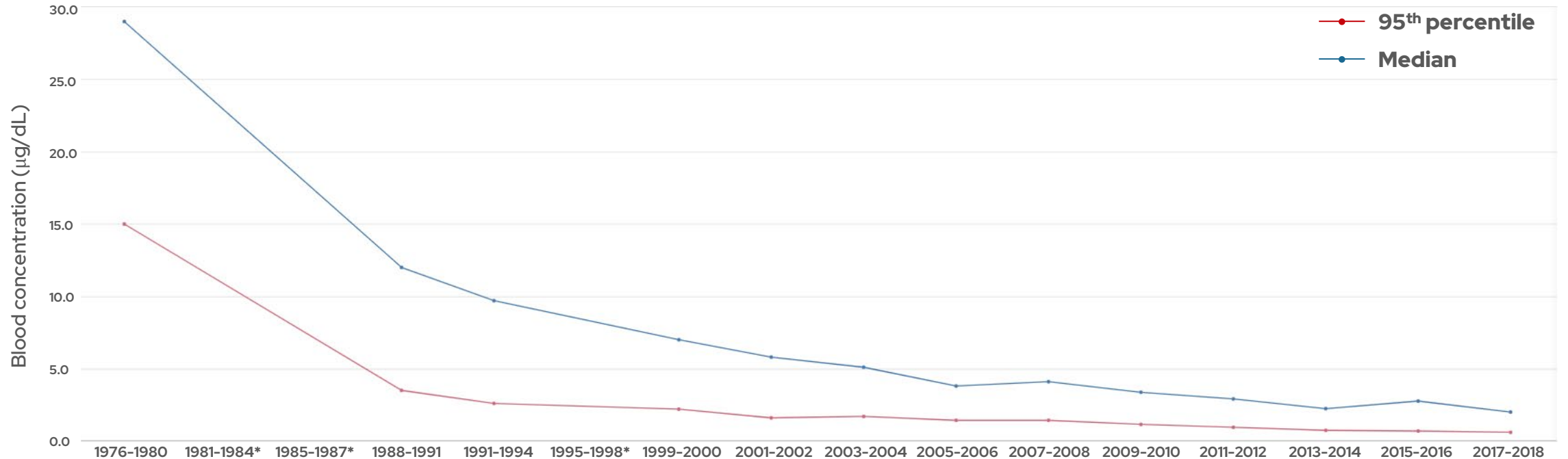


# About Lead

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- Naturally occurring and previously used in everyday products, lead may come from a variety of sources.
- Lead exposure decreased greatly but can still be found in homes, soil, pipes.
  - Piping (service lines, pipes, faucets and fixtures) dating back to 1986 or earlier may lead to traces of lead in water.
- Monitoring and testing for lead, especially for children = top priority.
- Human skin does not absorb lead in water (e.g., hand washing) even if the water contains lead over regulatory guidance levels.

# Public Health Progress: Lead in Children Aged 1-5 Years, 1976-2018



DATA: Centers for Disease Control and Prevention, National Center for Health Statistics and National Center for Environmental Health, National Health and Nutrition Examination Survey  
\* Data not available between 1981-1987 and 1995-1998.



# EPA Guidance

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- US Environmental Protection Agency (EPA) guidance applies to water distribution system operators (e.g., City of Madison) who perform system-wide testing.
- UW-Madison uses same guidelines for campus.
- **Action level = 15 parts per billion (ppb) or higher**
  - Not the same as blood levels, which are measured in micrograms of lead per deciliter ( $\mu\text{g}/\text{dL}$ ).



# Previous Water Testing at CDL

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- Representative testing, as requested and/or in tandem with copper testing, annually 2017-2021.
  - Samples analyzed by Wisconsin State Laboratory of Hygiene
  - **No previous results above regulatory guidance (before June 2023).**



# Wisconsin Lead-in-Water Testing & Remediation (WTR) Initiative



- New voluntary statewide Department of Health Services program (≈200 sites tested so far)
- Tests water for lead and helps childcare centers take action through faucet replacement and non-potable water signage.
- The CDL partnered with UW Environment, Health & Safety (EH&S) and Physical Plant to bring WTR Initiative to campus.

***WTR's Goal:*** Reduce lead hazards in early childcare centers and Early Head Start programs across the state.



# Water Quality Testing at CDL

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- Recent collection dates:
  - **Monday, 6/5/2023** - Samples collected after 64 hours of stagnation (over the weekend).
    - CDL received initial results late on 6/20/23 and took immediate action to secure filtered/bottled water.
  - **Wednesday, 6/21/2023** - Samples collected after 16 hours stagnation.
- All CDL fixtures except drinking fountains sampled. (Fountains have been off since COVID.)
- In most cases, "first draw" samples result in higher values.
- Bathroom, utility fixtures sampled but not used for consumption.
- All samples analyzed by WI State Laboratory of Hygiene.



# **Water Quality Testing Results: Overview**



# Results Overview

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- Most samples were below regulatory guidance (<15 ppb).
- The highest measurements were found in fixtures not routinely used for consumption (utility, bathroom sinks).
- None of the fixtures in routine use were significantly above regulatory guidance levels.
  - Two fixtures in regular use were slightly above regulatory guidance (15.1 and 15.5).
- It is expected that the results can vary from point to point and over time.



# Actions

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- Filtered water brought in morning after results received.
  - Staff and families instructed to not use sinks for drinking or cooking out of abundance of caution.
- Second round of testing completed by EH&S 6/21/23.
- Analysis of results by subject matter experts in environmental and occupational health, Physical Plant, and CDL.
- Three email updates sent to CDL families and informational session (via Zoom) for families scheduled.
- FAQs on EH&S website set up to address CDL families' questions and concerns.



# Healthcare Considerations

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- History of test results below regulatory guidance.
- Majority of fixtures well below 15 ppb.
- Low risk of significant lead exposure from CDL water (based on the most recent data).
- Individuals' health considerations may differ.
- If desired, consult with your child's primary care provider.



# **Water Quality Testing Results: By Location/Type**



# 1316 | Bunny Room

Fixture Type	Usage water for consumption	6/5/23 Results	6/21/23 Results
<b>Classroom</b>			
Sink 1 – adult-size	Regular	3.7	10.1
Sink 2 – child-size	Regular	6.1	9.3
<b>Bathroom</b> <i>(not used for consumption)</i>			
Sink 1	None	5.8	7.8
Sink 2	None	4.7	4.3

All results are in parts per billion (ppb).

- Ages 2-3 years old.
- Bathrooms not used for consumption.
  - Human skin does not absorb lead in water (e.g., hand washing) even if the water contains lead over regulatory guidance levels.





# 1327 | Honeybee Room

Fixture Type	Usage water for consumption	6/5/23 Results	6/21/23 Results
<b>Classroom</b>			
Sink 1 – adult-size	Regular	4.9	2.9
Sink 2 – adult-size	Regular	5.2	3.1
Sink 3 – child-size	Regular	no sample taken	13.0
<b>Bathroom</b> <i>(not used for consumption)</i>			
Sink – no access	<b>None</b>	70.7	96.3

All results are in parts per billion (ppb).

- Ages 6 weeks–2 years old.
- Bathroom not used for consumption and blocked from access (gated and door closed).



# 2316 | Otter Room

Fixture Type	Usage water for consumption	6/5/23 Results	6/21/23 Results
<b>Classroom</b>			
Sink 1 – adult-size	Regular	3.4	9.8
Sink 2 – child-size	Regular	9.7	15.5
<b>Bathroom</b> <i>(not used for consumption)</i>			
Sink 1	None	4.8	5.6
Sink 2	None	3.0	2.2

All results are in parts per billion (ppb).

- 4K , ages 4-5 years old.
- Bathrooms not used for consumption.
- 15 ppb = regulatory guidance action level.



# 2324 | Duck Room

Fixture Type	Usage water for consumption	6/5/23 Results	6/21/23 Results
<b>Classroom</b>			
Sink 1 – adult-size	Regular	4.1	5.5
Sink 2 – child-size	Regular	7.3	10.0
<b>Bathroom</b> <i>(not used for consumption)</i>			
Sink 1	None	2.2	2.0
Sink 2	None	2.0	2.2

All results are in parts per billion (ppb).

- Ages 2-3 years old.
- Bathrooms not used for consumption.



# 2330 | Dragonfly Room

Fixture Type	Usage water for consumption	6/5/23 Results	6/21/23 Results
<b>Classroom</b>			
Sink 1 – adult-size	Regular	11.4	15.1
Sink 2 – adult-size	None	3.0	8.9
<b>Bathroom</b> <i>(not used for consumption)</i>			
Sink	None	2.5	3.7

All results are in parts per billion (ppb).

- Ages 6 weeks–2 years old.
- Classroom Sink 2 and Bathroom Sink not used for consumption.
- 15 ppb = regulatory guidance action level.



# 1324 | Chipmunk Room

Fixture Type	Usage water for consumption	6/5/23 Results	6/21/23 Results
<b>Classroom</b>			
Sink 1 – adult-size	Regular previously; infrequent now.	10.4	3.7
Sink 2 – child-size	Regular previously; infrequent now.	15.5	19.9
<b>Bathroom</b> <i>(not used for consumption)</i>			
Sink 1	<b>None</b>	54.7	10.4
Sink 2	<b>None</b>	33.1	9.6

All results are in parts per billion (ppb).

- Not currently in regular use; very infrequent use currently.
- Classroom currently closed but was in use January 2021-August 2022.
- Bathrooms not used for consumption.



# 1312 | Owl Room

Fixture Type	Usage water for consumption	6/5/23 Results	6/21/23 Results
<b>Classroom</b>			
Sink 1 – adult-size	None	10.1	10.7
Sink 2 – child-size	Infrequent	16.6	22.5

*All results are in parts per billion (ppb).*

- Bonus pull-out classroom.
- Not assigned so no all-day regular use.
- Honeybee (6 weeks-2 years old) may use this room as breakout space 30-45 minutes a day, 3-4 times a week.
- Water bottles are not routinely filled from these fixtures.



# 2312 | Fox Room

Fixture Type	Usage water for consumption	6/5/23 Results	6/21/23 Results
<b>Classroom</b>			
Sink 1 – adult-size	None	12.4	8.0
Sink 2 – child-size	Infrequent	21.6	14.9

*All results are in parts per billion (ppb).*

- Bonus pull-out classroom.
- Not assigned so no all-day regular use.
- Otter 4K uses this room as breakout space for an hour every day.
- Water bottles are not routinely filled from these fixtures.



# Neighborhood Bathroom Sinks

Fixture Type	Usage water for consumption	6/5/23 Results	6/21/23 Results
Meadow Neighborhood Sink – 1310D on first floor	None	2.7	10.4
Pond Neighborhood Sink – 2310E on second floor	None	1.1	3.0

*All results are in parts per billion (ppb).*

- Communal bathrooms, easily accessible by all.
- Bathrooms not used for consumption.





# Additional Fixtures

Location	Usage water for consumption	6/5/23 Results	6/21/23 Results
<b>Kitchen -</b> Food Prep/ Dishwashing Sink	Regular	6.4	6.2
<b>Kitchen -</b> Hand-washing sink	Regular	4.2	6.8
<b>Laundry Room -</b> Utility Sink	<b>None</b>	22.8	N/A
<b>Staff Work Room -</b> Sink	Regular for staff	7.7	6.0

*All results are in parts per billion (ppb).*

- Sinks that are never used for consumption:
  - Utility sink in laundry room



# Next Steps



# Additional Testing

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- Another round of water quality testing completed this morning (7/6/23) on CDL fixtures  $\geq 10$  ppb.
- Testing is conducted by EH&S and Dept of Health Services in partnership with WI State Laboratory of Hygiene.
- Additional next steps, include:
  - Cleaning aerators.
  - Taking first draw sample.
  - Taking sample after flushing.
- Outcomes of these steps will inform specific remediation steps.



# Possible Remediation Steps

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- Routine cleaning of aerators.
- Add or upgrade filters.
- Add, convert or remove fixtures.
- Reinforce public health practices for drinking water (only consume cold water).

*Additional testing and further consultation with the Dept of Health Services will determine next steps.*



# Post-Remediation Water Quality Testing

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- Performed after remediation steps have been taken.
- Fixtures are flushed for five minutes with aerator removed.
- Must be below 15 ppb.
  - If not, additional analysis and plans for further remediation.



# Summary

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- No previous water quality testing results  $\geq 15$  ppb.
- Voluntary, proactive testing led us to finding actionable levels of lead, so campus can take care of it right away.
- Immediately secured filtered water sources (bottled water and water coolers) while testing and remediation continue.
- Continued updates and communication with families.
- Talking with healthcare partners about the possibility of onsite, optional screening of children for elevated lead levels through a finger prick (blood draw).



# Questions?

Please type your question in the chat or raise your hand to ask a question.



**Thank you**

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