



RESULTS OF WATER TESTING FOR LEAD CONTENT

Presentation to the Special Administrative Board

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Deputy Superintendent of Operations

August 25, 2016

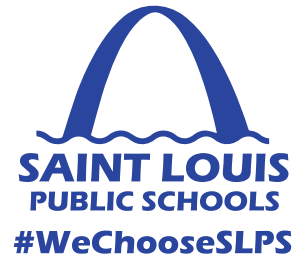


INTRODUCTION



In response to national events and increased awareness, St. Louis Public Schools (SLPS) authorized Environmental Consultants, LLC (EC) to perform lead testing of water sources throughout active school buildings within the district. Initial sampling began on March 2, 2016 and all active school buildings were screened prior to the start of the 2016-2017 school year. Follow up testing remains ongoing as part of the district's Lead Program and response action protocols.

INTRODUCTION



Sampling was performed by trained and licensed personnel in accordance with Federal, State and local regulations. EC is licensed by the Missouri Department of Health and Senior Services (MDHSS) as a Lead Abatement Contractor authorized to perform water testing services and has been with the District since 2007 and has familiarity with the District buildings.

BACKGROUND



SLPS began remediation of lead-based paint within its schools in 2001 and has continued to address lead hazards throughout recent bond issues. “Child Occupied Areas” – defined as classrooms and common spaces associated with students under the age of seven (7) are part of the district’s Lead Abatement Program and are subject to routine inspections and interim controls in accordance with Federal regulations.

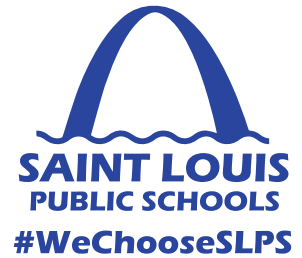
BACKGROUND



The United States Environmental Protection Agency (USEPA) regulates the nation's drinking water in public water supplies (PWS) under the Safe Drinking Water Act (SDWA).

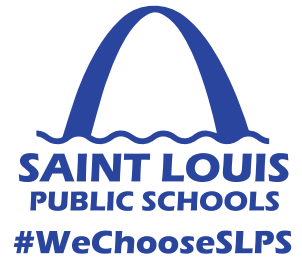
The USEPA estimates that approximately 10,000 schools and childcare facilities maintain their own water supply. USEPA further estimates approximately 90,000 public schools are not regulated under the SDWA – this includes SLPS. As a proactive approach to protecting students and staff, SLPS voluntarily agreed to test drinking water sources at all active schools for lead content.

OVERVIEW



Lead enters drinking water when service pipes containing lead corrode. The amount of lead in water varies depending on factors such as the condition of pipes, water temperature, settling period, acidity, and types of minerals present within the water system. As such, controlling the lead content in drinking water is a facility management challenge. Although lead containing plumbing products are prohibited today, buildings constructed prior to 1986 are at greater risk of lead exposure due to the presence of lead in building construction materials.

OVERVIEW



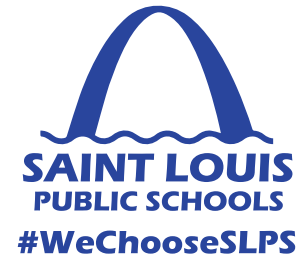
SLPS receives drinking water from the City of St. Louis. As a PWS, the City of St. Louis is regulated under the SDWA by the USEPA. As such, the City of St. Louis is required to issue a “Consumer Confidence Report” (CCR) which includes testing for lead in drinking water. The 2015 CCR indicates that all samples collected from the City of St. Louis PWS were below the USEPA Action Level of 15.0 parts per billion (ppb).

METHODOLOGY, REPORTING AND ALLOWABLE STANDARDS



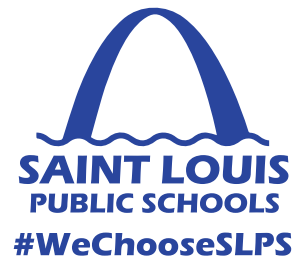
- Sources of potable water that may be used as drinking water by students and staff within all active school buildings were sampled for lead content. Potential sources include drinking fountains and sinks. Sinks associated with kitchens and teacher lounges were included during sampling.
- The sampling timeline was prioritized to address children under the age of seven (7). The first areas to be tested were the Parent Infant Interactive Programs (PIIP) at Roosevelt, Sumner, and Vashon. The Early Childhood Centers at Stix and Wilkinson followed the PIIP facilities. Upon completion, the elementary schools, middle schools and high schools were then tested.
- All samples were collected on a “first draw” basis. “First draw” is achieved by allowing the water system to rest for at least six hours prior to sampling in order to collect any existing debris or settlement within the sample. The intent of this sampling is to replicate “worst case scenario” conditions.

METHODOLOGY, REPORTING AND ALLOWABLE STANDARDS



- ❑ After sample collection, samples were immediately delivered to Teklab, Inc. located in Collinsville, Illinois following strict chain of custody procedures. Teklab is a NELAP and State of Missouri accredited laboratory specializing in drinking water analysis. Certifications are available on request.

METHODOLOGY, REPORTING AND ALLOWABLE STANDARDS



- ❑ The USEPA action level for lead in drinking water is 15.0 ppb for PWS. The USEPA document titled “Lead in Drinking Water at Schools and Child Care Facilities” last updated November 9, 2015 identifies an action level for drinking water collected from a plumbing fixture as 20.0 ppb. **As a precautionary measure to ensure public safety, SLPS has set an internal action level of 10.0 ppb.**
- ❑ The stricter action level set forth by SLPS is intended as a screening tool to allow the facilities team to better proactively manage water sources within their buildings. As corrosion of plumbing lines is an ongoing concern, utilizing a stricter internal action level allows the facilities team to focus on faulty systems before they deteriorate into major problems.

SUMMARY OF RESULTS



Water sources at all active school buildings have been initially screened for lead content. Follow up sampling of select water sources remains ongoing in response to the implementation of response actions. No drinking water source will be available for public use until follow-up sample results meet SLPS expectations.

Initial test results indicate:

- ❑ Number of active school buildings: **72**
- ❑ Total number of water sources sampled: **797**
- ❑ Sources reported at 20 ppb or greater: **45**
- ¹¹
❑ Sources reported at 10 ppb to 19.9 ppb: **43**

LEAD LEVEL CLASSIFICATIONS



SLPS has classified all water sources into three priorities. Listed below are the priority classifications set forth by SLPS:

CLASSIFICATIONS

Priority 1 – sources over 20 ppb

Remove from service.
Identify source of lead content.
Replace fixture.
Re-test source prior to use.
Re-test annually.

Priority 2 – sources over 10 ppb

Remove from service.
If re-test remains over 10 ppb,
follow Priority 1 protocols.

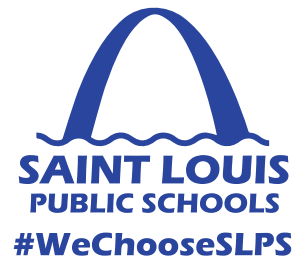
Priority 3 – sources under 10 ppb

Inspect and place on routine preventative
maintenance program. Re-test in
3 years or when conditions change.

PRIORITY 3 SCHOOLS

Of the seventy –two (72) schools within SLPS, forty (40) of these facilities did not report any water sources above the internal action level of 10 ppb. Also, none of the PIIP sites tested above 10 ppb.

- ❑ Adams Elem.
- ❑ Ames Elem.
- ❑ Ashland Elem.
- ❑ Blewett Elem.
- ❑ Bryan Hill Elem.
- ❑ Buder Elem.
- ❑ Carnahan HS.
- ❑ Central HS.
- ❑ Cleveland HS.
- ❑ Columbia Elem.
- ❑ Dewey Elem.
- ❑ Dunbar Elem.
- ❑ Farragut Elem.
- ❑ Ford Elem.
- ❑ Froebel Elem.
- ❑ Gateway Michael Elem.
- ❑ Hamilton Elem.
- ❑ Hodgen Elem.
- ❑ Humboldt Elem.
- ❑ Jefferson Elem.
- ❑ Kennard Elem.
- ❑ Lexington Elem.
- ❑ Lyon@ Blow Elem.
- ❑ Madison Elem.
- ❑ Mallinckrodt Elem.
- ❑ Mason Elem.
- ❑ Mason Elem.
- ❑ McKinley HS.
- ❑ Metro HS.
- ❑ Monroe Elem.
- ❑ Mullanphy Elem.
- ❑ Nance Elem.
- ❑ Nottingham HS.
- ❑ Oak Hill Elem.
- ❑ Bertha Gilkey Pamoja@Cole Elem.
- ❑ Shaw Elem.
- ❑ Soldan HS.
- ❑ Stix ECC.
- ❑ Washington Montessori Elem.
- ❑ Wilkinson ECC.
- ❑ Woodward Elem.



PRIORITY 1 AND 2 SCHOOLS



Of the seventy-two (72) schools within SLPS, thirty-two (32) of these facilities reported a water source in excess of the internal action of 10 ppb. Response actions are in process. Follow-up testing will take place after the implementation of the response action prior to any use.

SCHOOL	WATER SOURCE	RESULT (PPB)
AESM Middle School	Fountain near Room 104	14.7
	Fountain near Nurse's Office	24.9
Beaumont High School	Fountain near Room 227	19.4
	Fountain near Room 215	40.7
	Fountain near Room 324	54.7
	Fountain near Room 325	154.0
	Fountain near Room 311	35.1
Busch Middle School	Fountain near Room 127	43.5
Carr Lane Middle School	Fountain near Room 123	13.8
Carver Elementary School	Fountain near Room 101	12.3
	Fountain 2 nd Floor North	12.6
	Sink Room 101	22.9
Clay Elementary School	Fountain near Room 206	16.0
	Fountain 3 rd Floor East	17.1
	Fountain 3 rd Floor West	116.0
	Fountain near Room 208	9.5
Clyde C Miller Career Academy	Kitchen Sink – North	12.5
	Kitchen Sink – South	14.1
	Serving Sink – South	11.8
	Kitchen Sink – Center	45.9
	Room 127 Sink – Center Aisle South	55.1
	Room 127 – Sink	22.6
Compton Drew Elementary School	Kitchen Sink	24.6
Cote Brilliante Elementary School	Fountain near Room 205	10.4
Fanning Middle School	Fountain 2 nd Floor South	16.4
	Fountain 2 nd Floor North	280.0
	Fountain 1 st Floor North	148.0
Gallaudet Elementary School	Music Room Sink	45.4
	Fountain near Room 106	115.0
	Fountain near Room 103	107.0
Gateway Middle School	Fountain near Library – Low	50.0
Gateway STEM High School	Kitchen Sink – Center	12.6
	Kitchen Sink – North by Restroom	243.0
	Fountain near Room 223	20.1

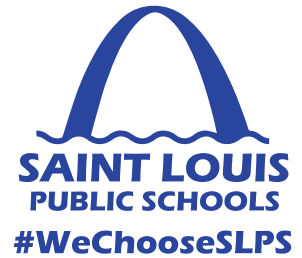


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	Fountain near Room 223	20.1

SCHOOL	WATER SOURCE	RESULT (PPB)
Henry Elementary School	Fountain 1 st Floor North Fountain South by Cafeteria	13.2 29.0
Herzog Elementary School	Kitchen Sink	11.3
Hickey Elementary School	Kitchen Sink	31.8
Laclede Elementary School	Fountain Basement – East, Low Fountain Basement – Old, West, High Kitchen Sink	12.6 67.8 10.8
Langston Elementary School	Fountain near Room 309 Kitchen Sink – Main Kitchen Sink – South Room 318 Sink	11.0 168.0 228.0 63.0
Long Middle School	Fountain near Room 208	13.6
Mann Elementary School	Fountain 1 st Floor East High	13.4
Meramec Elementary School	Kitchen Sink Fountain 1 st Floor East Fountain Gym East, High	14.5 12.0 14.7
Nahad Chapman Elementary School	Building 3, Room 304 Sink Building 3, Room 303 Sink Fountain Multi-Purpose Room	12.4 11.0 22.9
Northwest High School	Fountain Girls Gym Kitchen Sink – Northeast Kitchen Sink – Southeast Kitchen Sink – Southern Back Fountain PE Storage Room	15.5 21.3 97.1 202.0 109.0
Peabody Elementary School	Kitchen Sink	31.8
Roosevelt High School	Kitchen Sink Fountain 1 st Floor South, East Kitchen Sink – Central East Kitchen Sink - West	10.3 72.3 94.2 20.2

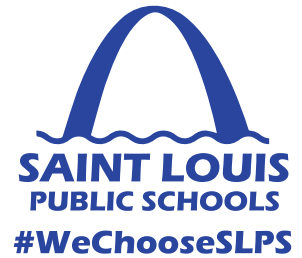
SCHOOL	WATER SOURCE	RESULT (PPB)
Shenandoah Elementary School	Fountain 2 nd Floor West Fountain Library High Fountain Basement East, Low	61.3 30.5 10.3
Sigel Elementary School	Fountain 2 nd Floor West Fountain 2 nd Floor East Fountain 1 st Floor East Fountain 1 st Floor West Fountain Basement East Kitchen Sink	33.5 34.5 62.3 32.4 16.7 21.6
Sumner High School	Cafeteria Sink Sink near Room 206	26.4 19.4
Vashon High School	Kitchen Sink – East Serving Line Kitchen Sink – West Serving Line Kitchen Sink – Southwest Serving Line Kitchen Sink – East Serving Line, Wall Kitchen Sink – Southeast Serving Line	16.6 13.9 11.3 17.1 39.1
Walbridge Elementary School	Fountain 3 rd Floor South	15.6
Woerner Elementary School	Kitchen Sink	10.9
Yeatman Middle School	Office Sink	16.3

ACTION PLAN (SINKS)



- ❑ As we have received each round of preliminary results we have turned off sinks and tagged any that tested above our action level of 10 ppb.
- ❑ As an alternative, water sources from other sinks in the building that tested below 10 ppb have been utilized.

ACTION PLAN (SINKS)



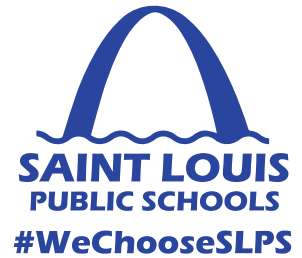
- ☐ We have purchased 30 back-mount faucets.
- ☐ We have replaced all back-mount kitchen faucets and sampled for retest. This began on August 12, 2016.
- ☐ To date 18 schools have had faucets replaced. Eleven retested below 10 ppb and have been turned on. Three have yet to be tested and remain turned off. Two are awaiting results and remain turned off. Two are above 10 ppb and remain turned off.
- ☐ Any fixtures that come back above 10 ppb level after these corrective measures will be investigated on a case by case basis for further corrective action but will remain turned off until they test below 10 ppb.

ACTION PLAN (FOUNTAINS)



- ☐ As we have received each round of preliminary results we have turned off fountains and tagged any that tested above our action level of 10 ppb.
- ☐ Bottled water has been provided to 13 schools who have had a significant number of fountains turned off or inoperable.
- ☐ Plumbers will go to each school with tagged fountains to ensure all other fountains are in good working order. Any fixtures that were completely inoperable prior to initial testing will be tagged, sampled and tested before being returned to service. This began on August 23, 2016. Anticipated completion is by September 2, 2016.

ACTION PLAN (FOUNTAINS)



- ❑ We are researching and evaluating replacements for tagged fountains; orders will be made by August 26, 2016.
- ❑ We are also evaluating plumbing lines running to each affected fixture for possible replacement along with fixtures. Anticipated completion is by September 2, 2016.
- ❑ Using our current priority system of elementary schools first, middle schools, then high schools, we will begin to install new fixtures and plumbing lines (where deemed appropriate) as they become available. As some of these repairs may be extensive, it is anticipated that these should be completed no later than October 31, 2016.

ADDITIONAL INFORMATION



- ❑ Of the 88 sources identified as Priority 1 or 2, faucet replacement has resulted in 12 sources being removed from the list.
- ❑ Individual school results will be posted on the District website on August 26, 2016.
- ❑ An ongoing maintenance program for the cleaning and repair of all drinking fountains District wide is being drafted in conjunction with Environmental Consultants and will be implemented by September 9, 2016.
- ❑ All new fixtures will be sampled and tested to ensure they are below the actionable level before being returned to service.
- ❑ No sinks or fountains will be put back in service until it tests below 10 ppb.
- ❑ All District buildings not serving students will be tested by September 2, 2016.
- ❑ The District and the St. Louis City Health Department will offer lead testing for students at schools with elevated lead levels on a case-by-case basis based on parent requests.

QUESTIONS