

Montgomery County Public Schools Lead in Drinking Water Testing Report

**Dufief Elementary School
15001 DuFief Drive
Gaithersburg, MD 20878**

Report Date: April 18th, 2022

LEAD IN DRINKING WATER SAMPLE RESULTS SUMMARY

All Maryland public and nonpublic schools are required to sample all drinking water outlets for the presence of lead pursuant to the Code of Maryland Regulations (COMAR). Montgomery County Public Schools (MCPS) is required to remediate outlets where lead in drinking water concentrations exceed the Montgomery County Action Level (AL) of 5 parts per billion (ppb). A summary of the lead in water initial samples collected by SaLUT are presented in the table below.

Sampling Date	12/8/2021
# of Outlets Tested	35
# of Outlets \geq 5 ppb	14

NEXT STEPS

If an initial sample exceeds the AL (5 ppb), the outlet will be immediately shut-down, a follow-up sample collected, and a remedial plan of action developed for this outlet. No additional sampling or remedial actions are required for schools where all initial samples are below the AL.

HEALTH EFFECTS OF LEAD

Lead can cause serious health problems if too much enters your body from drinking water or other sources. It can cause damage to the brain and kidneys, and can interfere with the production of red blood cells that carry oxygen to all parts of your body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Lead is stored in the bones and it can be released later in life. During pregnancy, the fetus receives lead from the mother's bones, which may affect brain development. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults.

SOURCES OF HUMAN EXPOSURE TO LEAD

There are many different sources of human exposure to lead. These include: lead-based paint, lead-contaminated dust or soil, some plumbing materials, certain types of pottery, pewter, brass fixtures, food, cosmetics, exposure in the work place and from certain hobbies. According to the Environmental Protection Agency (EPA), 10 to 20 percent of a person's potential exposure to lead may come from drinking water, while for an infant consuming formula mixed with lead-containing water this may increase to 40 to 60 percent.

TO REDUCE EXPOSURE TO LEAD IN DRINKING WATER:

1. Run your water to flush out lead: If water hasn't been used for several hours, run water for 15 to 30 seconds or until it becomes cold or reaches a steady temperature before using it for drinking or cooking.
2. Use cold water for cooking and preparing baby formula: Lead from the plumbing dissolves more easily into hot water.

**Please note that boiling the water will not reduce lead levels.*

ADDITIONAL INFORMATION

1. For additional information, please contact Brian Mullikin, Environmental Team Leader, at 240.740.2324 or brian_a_mullikin@mcpsmd.org.
2. For additional information on reducing lead exposure around your home/building and the health effects of lead, visit EPA's website at www.epa.gov/lead.
3. If you are concerned about exposure; contact your local health department or healthcare provider to find out how you can get your child tested for lead.

Please refer to the attachment(s) for additional water sampling information.

Attachment(s) A – Lead in Water Sample Results Table

ATTACHMENT A

Lead in Water Sample Results Table

Sampling Results for DuFief ES

Fixture Barcode	Fixture Location	Fixture Type	Initial Results (ppb)	Pass/Fail	Follow up Results (ppb)	Status
LW07298	In work room by office	Teacher's Lounge Sink	1.6	Pass	N/A	Testing Complete
LW07299	In kindergarten	Classroom Combination Sink	6.7	Fail	<1	Testing Complete
LW07300	In kindergarten 1	Classroom Combination Drinking Fountain	4.3	Pass	N/A	Testing Complete
LW07301	In kindergarten 2	Classroom Combination Sink	4.4	Pass	N/A	Testing Complete
LW07305	In classroom 6	Classroom Combination Sink	9.9	Fail	11.6	Testing Complete
LW07306	In classroom 6	Classroom Combination Drinking Fountain	4.9	Pass	N/A	Testing Complete
LW07313	In classroom 10	Classroom Combination Sink	6.3	Fail	<1	Testing Complete
LW07314	In classroom 10	Classroom Combination Drinking Fountain	5.3	Fail	3.2	Testing Complete
LW07315	In classroom 7	Classroom Combination Sink	4.4	Pass	N/A	Testing Complete
LW07316	In classroom 7	Classroom Combination Drinking Fountain	4.1	Pass	N/A	Testing Complete
LW07317	In classroom 8	Classroom Combination Sink	11.1	Fail	<1	Testing Complete
LW07318	In classroom 8	Classroom Combination Drinking Fountain	2.3	Pass	N/A	Testing Complete
LW07319	In classroom 9	Classroom Combination Drinking Fountain	2.3	Pass	N/A	Testing Complete
LW07320	In classroom 12	Classroom Combination Sink	5.5	Fail	1.1	Testing Complete
LW07321	In classroom 12	Classroom Combination Drinking Fountain	1.6	Pass	N/A	Testing Complete
LW07322	In classroom 11	Classroom Combination Sink	2.1	Pass	N/A	Testing Complete
LW07325	In child development 19	Classroom Sink	2.0	Pass	N/A	Testing Complete
LW07326	In classroom 14	Classroom Combination Sink	2.4	Pass	N/A	Testing Complete
LW07327	In classroom 14	Classroom Combination Drinking Fountain	<1.0	Pass	N/A	Testing Complete
LW07328	In classroom 13	Classroom Combination Sink	25.1	Fail	<1	Testing Complete
LW07329	In classroom 13	Classroom Combination Drinking Fountain	8.2	Fail	2.6	Testing Complete
LW07330	In classroom 15	Classroom Combination Sink	2.2	Pass	N/A	Testing Complete
LW07331	In classroom 15	Classroom Combination Drinking Fountain	2.3	Pass	N/A	Testing Complete
LW07332	In classroom 17	Classroom Combination Sink	36.7	Fail	8.6	Testing Complete
LW07334	In classroom 18	Classroom Combination Sink	6.5	Fail	2.8	Testing Complete
LW07336	In hallway next to APR	Drinking Fountain	1.7	Pass	N/A	Testing Complete
LW10088	In kitchen	Kitchen Sink	8.4	Fail	<1	Testing Complete
M10697	In classroom 16	Classroom Combination Sink	8.2	Fail	<1	Testing Complete
M11111	In classroom 9	Classroom Sink	1.6	Pass	N/A	Testing Complete
M11120	In hallway outside CR 10	Drinking Fountain	2.5	Pass	N/A	Testing Complete

M11144	In hallway next to GBR	Drinking Fountain	1.1	Pass	N/A	Testing Complete
M14266	In hallway left of room 7	Drinking Fountain	1.5	Pass	N/A	Testing Complete
M14306	In kitchen	Kitchen Sink	4.6	Pass	N/A	Testing Complete
M14308	In kitchen	Kitchen Sink	5.5	Fail	14.4	Testing Complete
M14309	In music	Classroom Combination Sink	16.2	Fail	7.1	Testing Complete



**MONTGOMERY COUNTY PUBLIC SCHOOLS LEAD IN DRINKING WATER
POST-REMEDATION FOLLOW-UP TESTING 2019**

November 13, 2019

Executive Summary:
DuFief Elementary School
15001 DuFief Drive,
North Potomac, MD 20878

Round of Testing:	Post-Remediation Follow-up
Sample Date	01/25/2019
# of Outlets Tested:	4
# of Outlets \geq 5 ppb:	3
Low Value (ppb):	3.7
High Value (ppb):	19.2

Project Status

Testing Complete: Post-remediation follow-up testing completed for the following rooms:

- Speech Therapy – Outlet (M11142) will be removed from service.
- Kitchen – Outlet (M14308) will be placed back in service.
- Classroom 2 – Outlet (LW07309) will have signage affixed.
- Classroom 13 – Outlet (LW07328) will have signage affixed.



November 13, 2019

Mr. Brian Mullikin
Environmental Team Leader
Montgomery County Public Schools
8301 Turkey Thicket Drive
Building A, First Floor
Gaithersburg, Maryland 20879

Re: Lead in Water Post-Remediation Follow-up Testing Service

Location: DuFief Elementary School
15001 DuFief Drive,
North Potomac, MD 20878

Dear Mr. Mullikin:

Intertek-PSI, Inc. is pleased to submit the following report to the Montgomery County Public Schools (MCPS) for completion of post-remediation lead in water testing at DuFief Elementary School, located at 15001 DuFief Drive, North Potomac, MD 20878.

Scope of Services:

Four (4) drinking water outlets were remediated at DuFief Elementary School due to initial levels that exceeded the lead action level of 5 parts per billion (ppb). Intertek-PSI conducted lead in water post-remediation follow-up testing in accordance with the Maryland Code of Regulations (COMAR) 26.16.07-Lead in Drinking Water – Public and Nonpublic Schools.

Intertek-PSI visited the site on 01/25/2019 to collect post-remediation follow-up samples from 4 of the outlets that have been replaced. Samples were submitted to a laboratory for lead in water analysis using current US EPA methodology. The laboratory has been certified by the Maryland Department of the Environment to analyze drinking water for lead.

Results:

The initial, flush, and post-remediation follow-up results are highlighted in the summary table below:



Barcode ID	Room Number	Location	Notes	Equipment Type	Initial (ppb)	Flush (ppb)	Post-Remediation Follow-up (ppb)	Post-Remediation Follow-up Pass/Fail	Status
M11142	SP	Speech Therapy		Bubbler – Indoor	46.0	3.0	7.4	Fail	Post-remediation follow-up testing complete. Outlet will be removed from service
M14308		Kitchen		Faucet	42.5	2.6	3.7	Pass	Post-remediation follow-up testing complete. Outlet will be placed back in service
LW07309	2	Classroom		Faucet	21.9	<1.0	7.3	Fail	Post-remediation follow-up testing complete. Outlet will have signage affixed
LW07328	13	Classroom		Faucet	34.9	1.0	19.2	Fail	Post-remediation follow-up testing complete. Outlet will have signage affixed

*ppb = parts per billion

Discussion:

Lead is a naturally occurring element that can be harmful to humans when ingested or inhaled, particularly to children under the age of six. Lead can adversely affect the development of children’s brain potentially leading to detrimental alterations in intelligence and behavior. Lead has been historically used in plumbing, paint and other building materials. Lead is released into the environment from industrial sources and fuel combustion. Lead may also be found in consumer products (imported candy, medicines, toys, dishes, etc.).

Most lead leaches into drinking water from contact with plumbing components such as faucets and valves made of brass or lead-containing solder. The physical and chemical interaction that occurs between the plumbing and water directly contributes to the amount of lead that is released into the water. Although plumbing components installed prior to the 1990’s could contain more lead than newer materials, the amount of lead in the drinking water cannot be predicted by the age of building. The purpose of this regulation is to establish a program to minimize the risk of exposure to lead in drinking water outlets at schools.

Simple steps like keeping your home clean and well-maintained will go a long way in preventing lead exposure. These steps include inspecting and maintaining all painted surfaces to prevent paint deterioration, using only cold water to prepare food and drinks, flushing water outlets used for drinking or food preparation, and cleaning around painted areas where friction can generate dust, such as doors, windows, and drawers. Wipe these areas with a wet sponge or rag to remove paint chips or dust, and wash children's hands, bottles, pacifiers and toys often.



Respectfully Submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

A handwritten signature in blue ink, appearing to read 'Nan Lin', with a stylized flourish at the end.

Nan Lin
Department Manager, Environmental Services
Nan.Lin@intertek.com



MONTGOMERY COUNTY PUBLIC SCHOOLS DRINKING WATER TESTING 2018

May 16, 2018

Executive Summary:
DuFief Elementary School
15001 DuFief Drive
North Potomac, MD 20878

Round of Testing:	Initial
# of Outlets Tested:	55
# of Outlets \geq 20 ppb:	4
Low Value (ppb):	< 1.0
High Value (ppb):	46
Follow-Up Testing Required (Samples \geq 20 ppb):	Classroom 13 (34.9 ppb) Classroom 2 (21.9 ppb) Speech Therapy (46 ppb) Kitchen (42.5 ppb)

Round of Testing:	Follow-Up – 30 sec draw
# of Outlets Tested:	4

Project Status **Testing Complete: Remediation Plan**

Classroom 13– Replace fixture (LW07309), in addition to supply line and valve located under sink
Classroom 2 – Replace fixture (LW07328), in addition to supply line and valve located under sink
Speech Therapy Room– Replace fixture (M11142), in addition to supply line and valve located under sink
Kitchen – Replace fixture (M14308), in addition to supply line and valve located under sink



May 16, 2018

Mr. Brian Mullikin
Environmental Team Leader
Montgomery County Public Schools
8301 Turkey Thicket Drive
Building A, First Floor
Gaithersburg, Maryland 20879

Re: Lead in Water Testing Service

Location: DuFief Elementary School
15001 DuFief Dr.
North Potomac, MD 20878

Dear Mr. Mullikin:

Professional Services Industries (PSI), Inc. is pleased to submit the following report to the Montgomery County Public Schools (MCPS) for completion of initial lead in water testing at DuFief Elementary School, located at 15001 DuFief Drive in North Potomac, MD 20878.

Scope of Services:

PSI conducted lead in water testing at DuFief Elementary School in accordance with the Environmental Protection Agency (EPA) and Maryland House Bill (HB) 270. State regulation established an action level of 20 parts per billion (ppb) to evaluate lead levels in school buildings, a concentration EPA recommends that schools take action to reduce lead below this action level. Maryland requires periodic testing for the presence of lead in drinking water in occupied public and nonpublic school buildings. EPA developed the 3T's (Training, Testing, and Telling) to assist schools in reducing the lead concentrations in their drinking water. More information about 3T's can be found on the EPA website.

PSI visited the site on 3/7/18 and 3/8/18 to collect samples from 55 drinking water outlets in accordance with current criteria described by the Maryland Department of the Environment (MDE) Draft Lead in Drinking Water—Public and Nonpublic Schools, Title 26, Subtitle 16 Lead, Chapter 07. Four 30 second follow-up samples were collected on 4/18/18.

Samples were submitted to a laboratory for lead in water analysis using current US EPA methodology. The laboratory has been certified by the Maryland Department of the Environment to analyze drinking water for lead.

Results:

There were four results of the initial lead in water analysis at or above 20 parts per billion (ppb) and subsequent follow up 30 second results are highlighted in the summary table below:



Barcode ID	Sample Location	Date Collected	Initial Sample Result (ppb)	Date Collected	30 Second Follow Up Sample Result (ppb)
LW07309	Classroom 2	3/8/18	21.9	4/18/18	<1.0
LW07328	Classroom 13	3/8/18	34.9	4/18/18	1.0
M11142	Speech Therapy Room	3/8/18	46	4/18/18	3.0
M14308	Kitchen	3/8/18	42.5	4/18/18	2.6

The initial lead in water sample results (3/8/2018) and 30 second follow up results (4/18/18) are shown in Attachment A.

Discussion:

Lead is a naturally occurring element that can be harmful to humans when ingested or inhaled, particularly to children under the age of six. Lead can adversely affect the development of children’s brain potentially leading to detrimental alterations in intelligence and behavior. Lead has been historically used in plumbing, paint and other building materials. Lead is released into the environment from industrial sources and fuel combustion. Lead may also be found in consumer products (imported candy, medicines, toys, dishes, etc.).

Most lead leaches into drinking water from contact with plumbing components such as faucets and valves made of brass or lead-containing solder. The physical and chemical interaction that occurs between the plumbing and water directly contributes to the amount of lead that is released into the water. Although plumbing components installed prior to the 1990’s could contain more lead than newer materials, the amount of lead in the drinking water cannot be predicted by the age of building. The purpose of this regulation is to establish a program to minimize the risk of exposure to lead in drinking water outlets at schools.

Simple steps like keeping your home clean and well-maintained will go a long way in preventing lead exposure. These steps include inspecting and maintaining all painted surfaces to prevent paint deterioration, using only cold water to prepare food and drinks, flushing water outlets used for drinking or food preparation, and cleaning around painted areas where friction can generate dust, such as doors, windows, and drawers. Wipe these areas with a wet sponge or rag to remove paint chips or dust, and wash children's hands, bottles, pacifiers and toys often.

Respectfully Submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

Nand Kaushik, P.E.
Department Manager, Environmental Services
Nand.Kaushik@psiusa.com

Attachments: A – Lead in Water Test Summary Table

ATTACHMENT A

DuFief ES Water Test Summary Table

Contractor: Professional Services Industries, Inc.

Certified Laboratory: Microbac Laboratories, Inc.

Initial Sample Results for DuFief Elementary School (3/8/18)

Barcode ID	Room #	Location	Location Notes	Equipment Type	Results	Pass/Fail	Status
LW07298		Work Room Office		Faucet	1.5	Pass	Testing Complete
LW07299	1	Kindergarten		Faucet	3.5	Pass	Testing Complete
LW07300	1	Kindergarten		Bubbler - Indoor	3.3	Pass	Testing Complete
LW07301	2	Kindergarten		Faucet	3.8	Pass	Testing Complete
LW07302	2	Kindergarten		Bubbler - Indoor	7.4	Pass	Testing Complete
LW07303	1	Classroom		Faucet	5.6	Pass	Testing Complete
LW07304	1	Classroom		Bubbler - Indoor	3.0	Pass	Testing Complete
LW07305	6	Classroom		Faucet	4.8	Pass	Testing Complete
LW07306	6	Classroom		Bubbler - Indoor	1.6	Pass	Testing Complete
LW07307	4	Classroom		Faucet	5.8	Pass	Testing Complete
LW07308	4	Classroom		Bubbler - Indoor	2.3	Pass	Testing Complete
LW07309	2	Classroom		Faucet	21.9	Fail	Follow-Up Testing Needed
LW07310	2	Classroom		Bubbler - Indoor	4.0	Pass	Testing Complete
LW07311	3	Classroom		Faucet	6.9	Pass	Testing Complete
LW07312	3	Classroom		Bubbler - Indoor	3.3	Pass	Testing Complete
LW07313	10	Classroom		Faucet	4.0	Pass	Testing Complete
LW07314	10	Classroom		Bubbler - Indoor	1.4	Pass	Testing Complete
LW07315	7	Classroom		Faucet	4.2	Pass	Testing Complete
LW07316	7	Classroom		Bubbler - Indoor	1.8	Pass	Testing Complete
LW07317	8	Classroom		Faucet	1.6	Pass	Testing Complete
LW07318	8	Classroom		Bubbler - Indoor	1.8	Pass	Testing Complete
LW07319	9	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW07320	12	Classroom		Faucet	2.8	Pass	Testing Complete
LW07321	12	Classroom		Bubbler - Indoor	3.5	Pass	Testing Complete
LW07322	11	Classroom		Faucet	1.5	Pass	Testing Complete
LW07323	11	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW07324	21	Classroom		Faucet	8.0	Pass	Testing Complete
LW07325	19	Child Development		Faucet	1.6	Pass	Testing Complete
LW07326	14	Classroom		Faucet	2.1	Pass	Testing Complete

Barcode ID	Room #	Location	Location Notes	Equipment Type	Results	Pass/Fail	Status
LW07327	14	Classroom		Bubbler - Indoor	1.0	Pass	Testing Complete
LW07328	13	Classroom		Faucet	34.9	Fail	Follow-Up Testing Needed
LW07329	13	Classroom		Bubbler - Indoor	4.8	Pass	Testing Complete
LW07330	15	Classroom		Faucet	1.6	Pass	Testing Complete
LW07331	15	Classroom		Bubbler - Indoor	1.5	Pass	Testing Complete
LW07332	17	Classroom		Faucet	3.1	Pass	Testing Complete
LW07333	17	Classroom		Bubbler - Indoor	2.0	Pass	Testing Complete
LW07334	18	Classroom		Faucet	3.6	Pass	Testing Complete
LW07335	18	Classroom		Bubbler - Indoor	2.1	Pass	Testing Complete
LW07336		Hallway	Across From Gym	Cooler	<1.0	Pass	Testing Complete
M10697	16	Classroom		Faucet	11.3	Pass	Testing Complete
M10698	16	Classroom		Bubbler - Indoor	1.8	Pass	Testing Complete
M11111	9	Classroom		Faucet	1.6	Pass	Testing Complete
M11119		Therapy	Outside of PT Rm	Faucet	18.8	Pass	Testing Complete
M11120		Hallway	Hallway Outside CR 10	Cooler	<1.0	Pass	Testing Complete
M11141		Speech Therapy		Faucet	18.0	Pass	Testing Complete
M11142	SP	Speech Therapy		Bubbler - Indoor	46.0	Fail	Follow-Up Testing Needed
M11144		Hallway	Hallway Outside CR 14	Cooler	<1.0	Pass	Testing Complete
M14266		Hallway	Left Of Room 7	Cooler	<1.0	Pass	Testing Complete
M14275	5	Classroom		Faucet	6.3	Pass	Testing Complete
M14276	5	Classroom		Bubbler - Indoor	3.1	Pass	Testing Complete
M14286		Media Center		Faucet	7.8	Pass	Testing Complete
M14305		Kitchen		Faucet	5.2	Pass	Testing Complete
M14306		Kitchen		Faucet	<1.0	Pass	Testing Complete
M14308		Kitchen		Faucet	42.5	Fail	Follow-Up Testing Needed
M14309		Music		Faucet	3.8	Pass	Testing Complete

*ppb = parts per billion

Contractor: Professional Services Industries, Inc.

Certified Laboratory: Microbac Laboratories, Inc.

Follow Up Sample Results for DuFief Elementary School (4/18/18)

Barcode ID	Room Number	Location	Equipment Type	Initial draw (2 nd) (PPB)	Initial draw (3 rd) (PPB)	30 Second Draw (PPB)	Status
LW07309	2	Classroom 2	Faucet	10.6	9.8	<1.0	Remediation required – replace fixture, in addition to supply line and valve located under sink
LW07328	13	Classroom 13	Faucet	12.9	11.6	1.0	Remediation required – replace fixture, in addition to supply line and valve located under sink
M11142		Speech Therapy Room	Bubbler- indoor	12.30	10.0	3.0	Remediation required – replace fixture, in addition to supply line and valve located under sink
M14308		Kitchen	Faucet	8.3	6.9	2.6	Remediation required – replace fixture, in addition to supply line and valve located under sink

*ppb = parts per billion

Note: Fixture(s) with elevated test results were immediately removed from service. Subsequent 2nd and 3rd round testing was performed on these fixture(s) for further diagnostics for remediation. Because the fixture was shut off after the first test, the subsequent test results may not be representative of an in-use fixture because of stagnant water in the supply line and the operation of shut off valves prior to the tests. All fixtures with elevated test results are to be remediated. After remediation, post remediation testing will be conducted before the fixture is returned to service.