



MONTGOMERY COUNTY PUBLIC SCHOOLS DRINKING WATER TESTING 2018

June 27, 2018

Executive Summary:
Flower Hill Elementary School
18425 Flower Hill Way
Gaithersburg, MD 20879

Round of Testing:	Initial
# of Outlets Tested:	66
# of Outlets \geq 20 ppb:	9
Low Value (ppb):	< 1.0
High Value (ppb):	151.0
Follow-Up Testing Required (Samples \geq 20 ppb):	Classroom 4 (31.5 ppb) Classroom 6 (36.9 ppb) Classroom 21 (44.0 ppb) Classroom 22 (85.8 ppb) Classroom 24 (38.1 ppb) Classroom 26 (74.2 ppb) Classroom 30 (55.7 ppb) Classroom 28 (82.4 ppb) Media Center Workroom (151.0 ppb)
Round of Testing:	Follow-Up – 30 sec draw
# of Outlets Tested:	9

Project Status **Testing Complete: Remediation Plan**

Classroom 4– Replace fixture (LW02466), in addition to supply line and valve located under sink
Classroom 6 – Replace fixture (LW06597), in addition to supply line and valve located under sink
Classroom 21 – Replace fixture (LW06613), in addition to supply line and valve located under sink
Classroom 22 – Replace fixture (LW6615), in addition to supply line and valve located under sink
Classroom 24– Replace fixture (LW06627), in addition to supply line and valve located under sink
Classroom 26 – Replace fixture (LW06629), in addition to supply line and valve located under sink
Classroom 30 – Replace fixture (LW06635), in addition to supply line and valve located under sink
Classroom 28 – Replace fixture (LW6636), in addition to supply line and valve located under sink
Media Center Workroom – Replace fixture (M05086), in addition to supply line and valve located under sink



June 27, 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: Flower Hill Elementary School
18425 Flower Hill Way
Gaithersburg, MD 20879

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 Flower Hill Elementary School, located at 18425 Flower Hill Way in Gaithersburg, MD 20879.

Scope of Services:

PSI conducted lead in water testing at Flower Hill 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 2/26/18 and 2/27/18 to collect samples from 66 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. Nine 30 second follow-up samples were collected on 4/13/18.

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 nine 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)
LW02466	Classroom 4	2/27/18	31.5	4/13/18	3.8
LW06597	Classroom 6	2/27/18	36.9	4/13/18	7.2
LW06613	Classroom 21	2/27/18	44.0	4/13/18	<1.0
LW06615	Classroom 22	2/27/18	85.8	4/13/18	<1.0
LW06627	Classroom 24	2/27/18	38.1	4/13/18	5.8
LW06629	Classroom 26	2/27/18	74.2	4/13/18	15.3
LW06635	Classroom 30	2/27/18	55.7	4/13/18	2.0
LW06636	Classroom 28	2/27/18	82.4	4/13/18	7.5
M05086	Media Center Workroom	2/27/18	151.0	4/13/18	13.8

The initial lead in water sample results (2/27/2018) and 30 second follow up results (4/13/18) 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

Flower Hill Elementary Water Test Summary Table

Contractor: Professional Services Industries, Inc.

Certified Laboratory: Microbac Laboratories, Inc.

Initial Sample Results for Flower Hill Elementary School (2/27/18)

Barcode ID	Room #	Location	Location Notes	Equipment Type	Results	Pass/Fail	Status
LW02457		Art		Bubbler - Indoor	12.6	Pass	Testing Complete
LW02460		Art		Faucet	3.0	Pass	Testing Complete
LW02461		Art		Bubbler - Indoor	7.6	Pass	Testing Complete
LW02462	3	Classroom		Faucet	<1.0	Pass	Testing Complete
LW02463	2	Classroom		Faucet	14.7	Pass	Testing Complete
LW02464	2	Classroom		Bubbler - Indoor	17.3	Pass	Testing Complete
LW02465	4	Classroom		Faucet	4.6	Pass	Testing Complete
LW02466	4	Classroom		Bubbler - Indoor	31.5	Fail	Follow-Up Testing Needed
LW02467	5	Classroom		Faucet	<1.0	Pass	Testing Complete
LW02468	5	Classroom		Bubbler - Indoor	<1.0	Pass	Testing Complete
LW02469	7	Classroom		Faucet	8.2	Pass	Testing Complete
LW02470	7	Classroom		Bubbler - Indoor	10.1	Pass	Testing Complete
LW06596	6	Classroom		Faucet	5.3	Pass	Testing Complete
LW06597	6	Classroom		Bubbler - Indoor	36.9	Fail	Follow-Up Testing Needed
LW06598	8	Classroom		Faucet	10.2	Pass	Testing Complete
LW06600	9	Classroom		Faucet	11.4	Pass	Testing Complete
LW06601	9	Classroom		Bubbler - Indoor	1.1	Pass	Testing Complete
LW06602	11	Classroom		Faucet	7.2	Pass	Testing Complete
LW06603	11	Classroom		Bubbler - Indoor	17.1	Pass	Testing Complete
LW06604		Hallway	Left of Room 12	Cooler	<1.0	Pass	Testing Complete
LW06605	13	Classroom		Faucet	5.9	Pass	Testing Complete
LW06606	13	Classroom		Bubbler - Indoor	2.1	Pass	Testing Complete
LW06607	14	Classroom		Bubbler - Indoor	5.0	Pass	Testing Complete
LW06608	14	Classroom		Faucet	4.8	Pass	Testing Complete
LW06609	15	Classroom		Faucet	4.7	Pass	Testing Complete
LW06610	15	Classroom		Bubbler - Indoor	8.1	Pass	Testing Complete
LW06611		Break Room	Across from Room 15	Faucet	1.3	Pass	Testing Complete
LW06612		Work Room	Media Center	Faucet	3.3	Pass	Testing Complete
LW06613	21	Classroom		Faucet	44.0	Fail	Follow-Up Testing Needed
LW06614	21	Classroom		Bubbler - Indoor	5.8	Pass	Testing Complete

Barcode ID	Room #	Location	Location Notes	Equipment Type	Results	Pass/Fail	Status
LW06615	22	Classroom		Faucet	85.8	Fail	Follow-Up Testing Needed
LW06616	22	Classroom		Bubbler - Indoor	6.0	Pass	Testing Complete
LW06617	20	Preschool		Faucet	12.7	Pass	Testing Complete
LW06618	18	Kindergarten		Faucet	<1.0	Pass	Testing Complete
LW06619	18	Kindergarten		Bubbler - Indoor	6.4	Pass	Testing Complete
LW06620	19	Kindergarten		Faucet	8.6	Pass	Testing Complete
LW06621	19	Kindergarten		Bubbler - Indoor	1.9	Pass	Testing Complete
LW06622	23	Kindergarten		Faucet	4.6	Pass	Testing Complete
LW06623	23	Kindergarten		Bubbler - Indoor	6.7	Pass	Testing Complete
LW06624	25	Classroom		Bubbler - Indoor	19.6	Pass	Testing Complete
LW06625	25	Classroom		Faucet	6.5	Pass	Testing Complete
LW06626	24	Classroom		Faucet	2.7	Pass	Testing Complete
LW06627	24	Classroom		Bubbler - Indoor	38.1	Fail	Follow-Up Testing Needed
LW06628	26	Classroom		Faucet	7.6	Pass	Testing Complete
LW06629	26	Classroom		Bubbler - Indoor	74.2	Fail	Follow-Up Testing Needed
LW06630	27	Classroom		Faucet	4.0	Pass	Testing Complete
LW06632	29	Classroom		Bubbler - Indoor	3.3	Pass	Testing Complete
LW06633	29	Classroom		Faucet	6.7	Pass	Testing Complete
LW06634	30	Classroom		Faucet	4.6	Pass	Testing Complete
LW06635	30	Classroom		Bubbler - Indoor	55.7	Fail	Follow-Up Testing Needed
LW06636	28	Classroom		Bubbler - Indoor	82.4	Fail	Follow-Up Testing Needed
LW06637	28	Classroom		Faucet	8.2	Pass	Testing Complete
LW06693		Hallway	Across from Main Office	Cooler	<1.0	Pass	Testing Complete
LW06694		Hallway	Across from Main Office	Cooler	<1.0	Pass	Testing Complete
LW06695		Health Room		Faucet	8.8	Pass	Testing Complete
LW06696		Work Room		Faucet	11.7	Pass	Testing Complete
LW06697		Music		Faucet	1.4	Pass	Testing Complete
LW06698		Hallway	Across from Gym	Cooler	<1.0	Pass	Testing Complete
LW06699		Art		Faucet	11.5	Pass	Testing Complete
M05086		Work Room	Media Center	Bubbler - Indoor	151.0	Fail	Follow-Up Testing Needed
M05126		Hallway	Between BRs 3 and 4	Cooler	<1.0	Pass	Testing Complete
M05133		Kitchen		Faucet	<1.0	Pass	Testing Complete
M05134		Kitchen		Faucet	3.5	Pass	Testing Complete
M05135		Kitchen		Faucet	<1.0	Pass	Testing Complete
M05136		Kitchen		Faucet	3.5	Pass	Testing Complete
M05138		Resource Center		Faucet	5.9	Pass	Testing Complete

*ppb = parts per billion

Contractor: Professional Services Industries, Inc.

Certified Laboratory: Microbac Laboratories, Inc.

Follow Up Sample Results for Flower Hill Elementary School (4/13/18)

Barcode ID	Room Number	Location	Equipment Type	Initial draw (2 nd) (PPB)	Initial draw (3 rd) (PPB)	30 Second Draw (PPB)	Status
LW02466	4	Classroom	Bubbler-Indoor	264.0	52.9	3.8	Remediation required – replace fixture, in addition to supply line and valve located under sink
LW06597	6	Classroom	Bubbler-Indoor	62.8	48.7	7.2	Remediation required – replace fixture, in addition to supply line and valve located under sink
LW06613	21	Classroom	Faucet	9.6	6.5	<1.0	Remediation required – replace fixture, in addition to supply line and valve located under sink
LW06615	22	Classroom	Faucet	40.3	15.3	<1.0	Remediation required – replace fixture, in addition to supply line and valve located under sink
LW06627	24	Classroom	Bubbler-Indoor	48.5	59.6	5.8	Remediation required – replace fixture, in addition to supply line and valve located under sink
LW06629	26	Classroom	Bubbler-Indoor	169.0	174.0	15.3	Remediation required – replace fixture, in addition to supply line and valve located under sink
LW06635	30	Classroom	Bubbler-Indoor	161.0	65.5	2.0	Remediation required – replace fixture, in addition to supply line and valve located under sink
LW06636	28	Classroom	Bubbler-Indoor	109.0	112.0	7.5	Remediation required – replace fixture, in addition to supply line and valve located under sink
M05086		Media Center Work room	Bubbler-Indoor	DNS	252.0	13.8	Remediation required – replace fixture, in addition to supply line and valve located under sink

*ppb = parts per billion
DNS = Did Not Sample

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.