



Manley School

3002 Farley Street | Flint, Michigan | 48507

Introduction

On Saturday, January 16, 2016, the Department of Licensing and Regulatory Affairs (DLARA) and the Department of Environmental Quality (DEQ), collectively (Team), conducted a sampling assessment of the plumbing system at Manley School to determine any potential lead and/or copper sources within the building.

The Team is in the process of replacing all drinking water fixtures in the school. Once replacements are completed, the Team will return and conduct an additional sampling assessment on the new fixtures.

The results of the January 16, 2016, sampling assessments are found below:

Water Service Information

An inspection of the water main from inside the building yielded a three-inch ductile iron pipe, welded to a copper water main.

Fixtures with Lead Levels Greater Than 15 Parts per Billion

Based on the sampling conducted, the following fixtures were found to have lead water level results greater than 15 parts per billion (ppb).¹

Location: Drinking Water Bubbler in the Hallway, Right of Boiler Room, (DW001)
Results: P1=53 parts per billion, P2=9 parts per billion
F01=4 parts per billion, F02=non-detect

Location: Classroom Faucet in Room 212, (CF003)²
Results: P1=42 parts per billion, P2=5 parts per billion
F01=1 part per billion, F02=non-detect

Location: Drinking Water Bubbler next to Room 220, (DW008)
Results: P1=22 parts per billion, P2=4 parts per billion
F01=1 part per billion, F02=non-detect

¹ After a 12-hour stagnation period, the Team collected four (4) samples at each of the fixtures identified. Two (2) initial, 125-mililiter samples (P1 and P2), were collected immediately after turning on the tap. The water was then flushed for 30 seconds and a third, 125-mililiter sample (F01) was collected. Finally, the water was flushed for another two minutes, and the fourth 125-mililiter sample (F02) was collected. These samples were used to determine the impact of any lead sources in and around each specific fixture and its connecting plumbing.

² This fixture also has a copper water level over 1.3 parts per million as reflected on the third (3) page of this document.



Manley School

3002 Farley Street | Flint, Michigan | 48507

Location:	Drinking Water Bubbler in Room 220, (DW009)
Results:	P1=44 parts per billion, P2=16 parts per billion F01=5 parts per billion, F02=2 parts per billion
Location:	Kitchen Faucet in Room 226, (KS018)
Results:	P1=33 parts per billion, P2=10 parts per billion F01=non-detect, F02=non-detect
Location:	Drinking Water Bubbler next to Room 227, (DW022)
Results:	P1=76 parts per billion, P2=23 parts per billion F01=3 parts per billion, F02=non-detect
Location:	Kitchen Faucet in Room 227, (KS026)
Results:	P1=33 parts per billion, P2=2 parts per billion F01=non-detect, F02=non-detect
Location:	Drinking Water Bubbler in Classroom 123, (DW029) ³
Results:	P1=47 parts per billion, P2=246 parts per billion F01=3 parts per billion, F02=1 part per billion
Location:	Drinking Water Bubbler in Room 122, (DW030) ³
Results:	P1=274 parts per billion, P2=1,856 parts per billion F01=7 parts per billion, F02=2 parts per billion
Location:	Kitchen Faucet in Room 120, (KS033)
Results:	P1=16 parts per billion, P2=non-detect F01=non-detect, F02=non-detect
Location:	Drinking Water Bubbler in Room 116, (DW034)
Results:	P1=42 parts per billion, P2=14 parts per billion F01=6 parts per billion, F02=2 parts per billion
Location:	Drinking Water Bubbler in Room 106, (DW038)
Results:	P1=81 parts per billion, P2=46 parts per billion F01=23 parts per billion, F02=8 parts per billion
Location:	Kitchen Faucet in Room 105, (KS039)
Results:	P1=110 parts per billion, P2=113 parts per billion F01=10 parts per billion, F02=4 parts per billion

³ These fixtures have a copper water level over 1.3 parts per million, as reflected on the third page of this document.



Manley School

3002 Farley Street | Flint, Michigan | 48507

Fixtures with Copper Levels Greater Than 1.3 Parts per Million

Based on the sampling conducted, the following fixtures were found to have copper water level results greater than 1.3 parts per million (ppm).¹

Location: Classroom Faucet in Room 212, (CF003)
Results: P1= 5.30 parts per million, P2=0.26 parts per million
F01=0.14 parts per million, F02=0.05 parts per million

Location: Drinking Water Bubbler in Classroom 123 (DW029)
Results: P1= 0.26 parts per million, P2=1.40 parts per million
F01=non-detect, F02=non-detect

Location: Drinking Water Bubbler in Room 122, (DW030)
Results: P1=0.37 parts per million, P2=3.32 parts per million
F01=non-detect, F02=non-detect



Manley School

3002 Farley Street | Flint, Michigan | 48507

Consecutive Sampling Results

This consecutive sampling was used to determine the impact of any lead sources located deep in the supply plumbing of the school building. Results of the consecutive sample monitoring are listed in the table below.

Consecutive Sample No.	1	2	3	4	5	6	7	8	9	10
LOCATION	LEAD RESULT (PARTS PER BILLION; ND = NOT-DETECTED)									
Room 220 Drinking Water Bubbler (DW009)	4	1	ND	ND	ND	ND	ND	1	1	ND
Room 227 Kitchen Faucet (KS026)	23	ND	ND	ND	ND	ND	ND	ND	ND	ND
Community Room/Kitchen Kitchen Faucet (KS027)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Room 120 Kitchen Faucet (KS033)	7	ND	ND	4	ND	ND	ND	ND	ND	ND
Room 105 Kitchen Faucet (KS039)	19	7	4	4	4	6	4	3	3	4

Manley School
3002 Farley Street
Flint, MI 48507

Sample Number	Analysis (PB)	Result (mg/L)	Analysis (Cu)	Result (mg/L)	Sample Description	Site Code
LG00148	Lead	0.000	Copper	0.00	KS027	CA1
LG00149	Lead	0.000	Copper	0.00	KS027	CA2
LG00150	Lead	0.000	Copper	0.00	KS027	CA3
LG00151	Lead	0.000	Copper	0.00	KS027	CA4
LG00152	Lead	0.000	Copper	0.00	KS027	CA5
LG00153	Lead	0.000	Copper	0.00	KS027	CA6
LG00154	Lead	0.000	Copper	0.00	KS027	CA7
LG00155	Lead	0.000	Copper	0.00	KS027	CA8
LG00156	Lead	0.000	Copper	0.00	KS027	CA9
LG00157	Lead	0.000	Copper	0.00	KS027	CA10
LG00158	Lead	0.004	Copper	0.08	DW009	CB1
LG00159	Lead	0.001	Copper	0.00	DW009	CB2
LG00160	Lead	0.000	Copper	0.00	DW009	CB3
LG00161	Lead	0.000	Copper	0.00	DW009	CB4
LG00162	Lead	0.000	Copper	0.00	DW009	CB5
LG00163	Lead	0.000	Copper	0.00	DW009	CB6
LG00164	Lead	0.000	Copper	0.00	DW009	CB7
LG00165	Lead	0.001	Copper	0.00	DW009	CB8
LG00166	Lead	0.001	Copper	0.00	DW009	CB9
LG00167	Lead	0.000	Copper	0.00	DW009	CB10
LG00168	Lead	0.023	Copper	0.06	KS026	CC1
LG00169	Lead	0.000	Copper	0.00	KS026	CC2
LG00170	Lead	0.000	Copper	0.00	KS026	CC3
LG00171	Lead	0.000	Copper	0.00	KS026	CC4
LG00172	Lead	0.000	Copper	0.00	KS026	CC5
LG00173	Lead	0.000	Copper	0.00	KS026	CC6
LG00174	Lead	0.000	Copper	0.00	KS026	CC7
LG00175	Lead	0.000	Copper	0.00	KS026	CC8
LG00176	Lead	0.000	Copper	0.00	KS026	CC9
LG00177	Lead	0.000	Copper	0.00	KS026	CC10

Note: Results of "Not Detected" have been converted to a numerical value of zero to allow for ease of sorting.

Results in RED exceed 15 ppb for Lead or 1.3 ppm for Copper

1 ppb = 0.001 mg/L

Sampling Date: January 16, 2016

Page 1

Manley School
3002 Farley Street
Flint, MI 48507

Sample Number	Analysis (PB)	Result (mg/L)	Analysis (Cu)	Result (mg/L)	Sample Description	Site Code
LG00178	Lead	0.007	Copper	0.14	KS033	CD1
LG00179	Lead	0.000	Copper	0.00	KS033	CD2
LG00180	Lead	0.000	Copper	0.00	KS033	CD3
LG00181	Lead	0.004	Copper	0.00	KS033	CD4
LG00182	Lead	0.000	Copper	0.00	KS033	CD5
LG00183	Lead	0.000	Copper	0.00	KS033	CD6
LG00184	Lead	0.000	Copper	0.00	KS033	CD7
LG00185	Lead	0.000	Copper	0.00	KS033	CD8
LG00186	Lead	0.000	Copper	0.00	KS033	CD9
LG00187	Lead	0.000	Copper	0.00	KS033	CD10
LG00188	Lead	0.019	Copper	0.14	KS039	CE1
LG00189	Lead	0.007	Copper	0.11	KS039	CE2
LG00190	Lead	0.004	Copper	0.08	KS039	CE3
LG00191	Lead	0.004	Copper	0.08	KS039	CE4
LG00192	Lead	0.004	Copper	0.08	KS 039	CE5
LG00193	Lead	0.006	Copper	0.10	KS039	CE6
LG00194	Lead	0.004	Copper	0.07	KS039	CE7
LG00195	Lead	0.003	Copper	0.07	KS039	CE8
LG00196	Lead	0.003	Copper	0.07	KS039	CE9
LG00197	Lead	0.004	Copper	0.08	KS039	CE10
LG00198	Lead	0.274	Copper	0.37	DW030 RM122	P1
LG00199	Lead	1.856	Copper	3.32	DW 030 RM 122	P2
LG00200	Lead	0.007	Copper	0.00	DW 030 RM 122	F01
LG00201	Lead	0.002	Copper	0.00	DW 030 RM 122	F02
LG00202	Lead	0.002	Copper	0.07	KS031 RM121	P1
LG00203	Lead	0.000	Copper	0.18	KS 031 RM 121	P2
LG00204	Lead	0.000	Copper	0.00	KS 031 RM 121	F01
LG00205	Lead	0.000	Copper	0.00	KS031 RM121	F02
LG00206	Lead	0.008	Copper	0.00	DW028 HALLWAY LF OF	P1
LG00207	Lead	0.006	Copper	0.00	DW 028 HALLWAY LT OF	P2
LG00208	Lead	0.001	Copper	0.00	DW 028 HALLWAY LT OF	F01
LG00209	Lead	0.000	Copper	0.00	DW 028 HALLWAY LT OF	F02

Note: Results of "Not Detected" have been converted to a numerical value of zero to allow for ease of sorting.

Results in RED exceed 15 ppb for Lead or 1.3 ppm for Copper

1 ppb = 0.001 mg/L

Manley School
3002 Farley Street
Flint, MI 48507

Sample Number	Analysis (PB)	Result (mg/L)	Analysis (Cu)	Result (mg/L)	Sample Description	Site Code
LG00210	Lead	0.047	Copper	0.26	DW 029 CLASSROOM #123	P1
LG00211	Lead	0.246	Copper	1.40	DW 029 CLASSROOM #123	P2
LG00212	Lead	0.003	Copper	0.00	DW 029 CLASSROOM #123	F01
LG00213	Lead	0.001	Copper	0.00	DW 029 CLASSROOM #123	F02
LG00214	Lead	0.042	Copper	0.15	DW 034 RM 116	P1
LG00215	Lead	0.014	Copper	0.12	DW 034 RM 116	P2
LG00216	Lead	0.006	Copper	0.05	DW 034 RM 116	F01
LG00217	Lead	0.002	Copper	0.00	DW 034 RM 116	F02
LG00218	Lead	0.007	Copper	0.06	DW 035 NEXT TO RM 116	P1
LG00219	Lead	0.001	Copper	0.06	DW 035 NEXT TO RM 116	P2
LG00220	Lead	0.002	Copper	0.07	DW 035 NEXT TO RM 116	F01
LG00221	Lead	0.001	Copper	0.06	DW 035 NEXT TO RM 116	F02
LG00222	Lead	0.008	Copper	0.09	DW 032 RM 114	P1
LG00223	Lead	0.004	Copper	0.08	DW 032 RM 114	P2
LG00224	Lead	0.001	Copper	0.00	DW 032 RM 114	F01
LG00225	Lead	0.000	Copper	0.00	DW 032 RM 114	F02
LG00226	Lead	0.016	Copper	0.13	KS 033 RM 120	P1
LG00227	Lead	0.000	Copper	0.18	KS 033 RM 120	P2
LG00228	Lead	0.000	Copper	0.00	KS 033 RM 120	F01
LG00229	Lead	0.000	Copper	0.00	KS 033 RM 120	F02
LG00230	Lead	0.110	Copper	0.45	KS 039 RM 105	P1
LG00231	Lead	0.113	Copper	0.69	KS 039 RM 105	P2
LG00232	Lead	0.010	Copper	0.19	KS 039 RM 105	F01
LG00233	Lead	0.004	Copper	0.14	KS 039 RM 105	
LG00234	Lead	0.010	Copper	0.21	DW 040 RM 105	P1
LG00235	Lead	0.005	Copper	0.15	DW 040 RM 105	P2
LG00236	Lead	0.004	Copper	0.13	DW 040 RM 105	F01
LG00237	Lead	0.003	Copper	0.07	DW 040 RM 105	F02
LG00238	Lead	0.081	Copper	0.42	DW 038 RM 106	P1
LG00239	Lead	0.046	Copper	0.28	DW 038 RM 106	P2
LG00240	Lead	0.023	Copper	0.15	DW 038 RM 106	F01
LG00241	Lead	0.008	Copper	0.06	DW 038 RM 106	F02

Note: Results of "Not Detected" have been converted to a numerical value of zero to allow for ease of sorting.

Results in RED exceed 15 ppb for Lead or 1.3 ppm for Copper

1 ppb = 0.001 mg/L

Manley School
3002 Farley Street
Flint, MI 48507

Sample Number	Analysis (PB)	Result (mg/L)	Analysis (Cu)	Result (mg/L)	Sample Description	Site Code
LG00242	Lead	0.014	Copper	0.43	DW 036 RM 108	P1
LG00243	Lead	0.012	Copper	0.19	DW 036 RM 108	P2
LG00244	Lead	0.002	Copper	0.08	DW 036 RM 108	F01
LG00245	Lead	0.001	Copper	0.05	DW 036 RM 108	F02
LG00246	Lead	0.053	Copper	0.21	DW 001 HALLWAY RT OF	P01
LG00247	Lead	0.009	Copper	0.09	DW 001 HALLWAY RT OF	P02
LG00248	Lead	0.004	Copper	0.05	DW 001 HALLWAY RT OF	F01
LG00249	Lead	0.000	Copper	0.00	DW001 HALLWAY RT OF	F02
LG00250	Lead	0.008	Copper	0.00	DW 015 ACROSS FROM RM	P1
LG00251	Lead	0.003	Copper	0.00	DW 015 ACROSS FROM RM	P2
LG00252	Lead	0.002	Copper	0.00	DW 015 ACROSS FROM RM	F01
LG00253	Lead	0.000	Copper	0.00	DW 015 ACROSS FROM RM	F02
LG00254	Lead	0.005	Copper	0.20	DW 020 RM 226	P1
LG00255	Lead	0.000	Copper	0.16	DW 020 RM 226	P2
LG00256	Lead	0.000	Copper	0.00	DW 020 RM 226	F01
LG00257	Lead	0.001	Copper	0.00	DW 020 RM 226	F02
LG00258	Lead	0.000	Copper	0.09	CF 024 RM 227	P1
LG00259	Lead	0.000	Copper	0.12	CF 024 RM 227	P2
LG00260	Lead	0.000	Copper	0.00	CF 024 RM 227	F01
LG00261	Lead	0.000	Copper	0.00	CF 024 RM 227	F02
LG00262	Lead	0.014	Copper	0.20	DW 006 RM 219	P1
LG00263	Lead	0.002	Copper	0.19	DW006 RM219	P2
LG00264	Lead	0.000	Copper	0.00	DW006 RM219	F01
LG00265	Lead	0.000	Copper	0.00	DW006 RM219	F02
LG00266	Lead	0.033	Copper	0.11	KS018 RM226	P1
LG00267	Lead	0.010	Copper	0.16	KS018 RM226	P2
LG00268	Lead	0.000	Copper	0.00	KS018 RM226	F01
LG00269	Lead	0.000	Copper	0.00	KS018 RM226	F02
LG00270	Lead	0.007	Copper	0.13	CF 021 RM 226	P1
LG00271	Lead	0.000	Copper	0.11	CF 021 RM 226	P2
LG00272	Lead	0.000	Copper	0.00	CF 021 RM 226	F01
LG00273	Lead	0.000	Copper	0.00	CF 021 RM 226	F02

Note: Results of "Not Detected" have been converted to a numerical value of zero to allow for ease of sorting.

Results in RED exceed 15 ppb for Lead or 1.3 ppm for Copper

1 ppb = 0.001 mg/L

Sampling Date: January 16, 2016

Page 4

Manley School
3002 Farley Street
Flint, MI 48507

Sample Number	Analysis (PB)	Result (mg/L)	Analysis (Cu)	Result (mg/L)	Sample Description	Site Code
LG00274	Lead	0.005	Copper	0.06	CF 017 RM 212	P1
LG00275	Lead	0.002	Copper	0.10	CF 017 RM 212	P2
LG00276	Lead	0.000	Copper	0.10	CF 017 RM 212	F01
LG00277	Lead	0.000	Copper	0.09	CF 017 RM 212	F02
LG00278	Lead	0.006	Copper	0.23	DW 011 RM 222	P1
LG00279	Lead	0.000	Copper	0.20	DW 011 RM 222	P2
LG00280	Lead	0.001	Copper	0.18	DW 011 RM 222	F01
LG00281	Lead	0.001	Copper	0.00	DW 011 RM 222	F02
LG00282	Lead	0.033	Copper	0.18	KS 026 RM 227	P1
LG00283	Lead	0.002	Copper	0.15	KS 026 RM 227	P2
LG00284	Lead	0.000	Copper	0.00	KS 026 RM 227	F01
LG00285	Lead	0.000	Copper	0.00	KS 026 RM 227	F02
LG00286	Lead	0.076	Copper	0.24	DW 022 NEXT TO RM 227	P1
LG00287	Lead	0.023	Copper	0.10	DW 022 NEXT TO ROOM 227	P2
LG00288	Lead	0.003	Copper	0.00	DW 022 NEXT TO ROOM 227	F07
LG00289	Lead	0.000	Copper	0.00	DW 022 NEXT TO RM 227	F02
LG00290	Lead	0.000	Copper	0.07	KS 025 RM 227	P1
LG00291	Lead	0.000	Copper	0.07	KS 025 RM 227	P2
LG00292	Lead	0.000	Copper	0.00	KS 025 RM 227	F01
LG00293	Lead	0.000	Copper	0.00	KS 025 RM 227	F02
LG00294	Lead	0.004	Copper	0.10	KS 027 KITCHEN	P1
LG00295	Lead	0.002	Copper	0.07	KS 027 KITCHEN	P2
LG00296	Lead	0.000	Copper	0.00	KS 027 KITCHEN	F01
LG00297	Lead	0.000	Copper	0.00	KS 027 KITCHEN	F02
LG00298	Lead	0.014	Copper	0.19	DW 023 RM 227	P1
LG00299	Lead	0.001	Copper	0.14	DW 023 RM 227	P2
LG00300	Lead	0.000	Copper	0.00	DW 023 RM 227	F01
LG00301	Lead	0.000	Copper	0.00	DW 023 RM 227	F02
LG00302	Lead	0.002	Copper	0.08	KS 019 RM 226	P1
LG00303	Lead	0.001	Copper	0.00	KS 019 RM 226	P2
LG00304	Lead	0.000	Copper	0.00	KS 019 RM 226	F01
LG00305	Lead	0.000	Copper	0.00	KS 019 RM 226	F02

Note: Results of "Not Detected" have been converted to a numerical value of zero to allow for ease of sorting.

Results in RED exceed 15 ppb for Lead or 1.3 ppm for Copper

1 ppb = 0.001 mg/L

Sampling Date: January 16, 2016

Page 5

Manley School
3002 Farley Street
Flint, MI 48507

Sample Number	Analysis (PB)	Result (mg/L)	Analysis (Cu)	Result (mg/L)	Sample Description	Site Code
LG00306	Lead	0.003	Copper	0.00	KS 005 RM 219	P1
LG00307	Lead	0.000	Copper	0.00	KS 005 RM 219	P2
LG00308	Lead	0.000	Copper	0.00	KS 005 RM 219	F01
LG00309	Lead	0.000	Copper	0.00	KS 005 RM 219	F02
LG00310	Lead	0.044	Copper	0.24	DW 009 RM 220	P1
LG00311	Lead	0.016	Copper	0.25	DW 009 RM 220	P2
LG00312	Lead	0.005	Copper	0.07	DW 009 RM 220	F01
LG00313	Lead	0.002	Copper	0.05	DW 009 RM 220	F02
LG00314	Lead	0.002	Copper	0.13	KS 014 RM 222	P1
LG00315	Lead	0.001	Copper	0.11	KS 014 RM 222	P2
LG00316	Lead	0.000	Copper	0.00	KS 014 RM 222	F01
LG00317	Lead	0.000	Copper	0.00	KS 014 RM 222	F02
LG00318	Lead	0.002	Copper	0.08	KS 004 ROOM 219	P1
LG00319	Lead	0.002	Copper	0.08	KS 004 ROOM 219	P2
LG00320	Lead	0.000	Copper	0.00	KS 004 ROOM 219	F01
LG00321	Lead	0.000	Copper	0.00	KS 004 ROOM 219	F02
LG00322	Lead	0.000	Copper	0.09	KS 013 RM 222	P1
LG00323	Lead	0.000	Copper	0.09	KS 013 RM 222	P2
LG00324	Lead	0.000	Copper	0.00	KS 013 RM 222	F01
LG00325	Lead	0.000	Copper	0.00	KS 013 RM 222	F02
LG00326	Lead	0.022	Copper	0.13	DW 008 NEXT TO RM 220	P1
LG00327	Lead	0.004	Copper	0.08	DW 008 NEXT TO RM 220	P2
LG00328	Lead	0.001	Copper	0.00	DW 008 NEXT TO ROOM 220	F01
LG00329	Lead	0.000	Copper	0.00	DW 008 NEXT TO RM 220	F02
LG00330	Lead	0.042	Copper	5.30	CF003 ROOM 212	P1
LG00331	Lead	0.005	Copper	0.26	CF 003 ROOM 212	P2
LG00332	Lead	0.001	Copper	0.14	CF 003 ROOM 212	F01
LG00333	Lead	0.000	Copper	0.05	CF 003 ROOM 212	F02
LG00334	Lead	0.001	Copper	0.07	KS 007 RM 219	P1
LG00335	Lead	0.000	Copper	0.14	KS 007 RM 219	P2
LG00336	Lead	0.000	Copper	0.00	KS 007 RM 219	F01
LG00337	Lead	0.000	Copper	0.00	KS 007 RM 219	F02

Note: Results of "Not Detected" have been converted to a numerical value of zero to allow for ease of sorting.

Results in RED exceed 15 ppb for Lead or 1.3 ppm for Copper

1 ppb = 0.001 mg/L

Manley School
3002 Farley Street
Flint, MI 48507

Sample Number	Analysis (PB)	Result (mg/L)	Analysis (Cu)	Result (mg/L)	Sample Description	Site Code
LG00338	Lead	0.000	Copper	0.08	CF 012 RM 222	P1
LG00339	Lead	0.000	Copper	0.05	CF 012 RM 222	P2
LG00340	Lead	0.000	Copper	0.00	CF 012 RM 222	F01
LG00341	Lead	0.000	Copper	0.00	CF 012 RM 222	F02

Note: Results of "Not Detected" have been converted to a numerical value of zero to allow for ease of sorting.

Results in RED exceed 15 ppb for Lead or 1.3 ppm for Copper

1 ppb = 0.001 mg/L

Sampling Date: January 16, 2016

Page 7