

POST-FIXTURE REPLACEMENT SAMPLING RESULTS REPORT

Whaley Children's Center



October 14, 2016

INTRODUCTION

During the month of February, 2016, the Department of Licensing and Regulatory Affairs (DLARA) completed replacement of drinking water fixtures at Whaley Children's Center. These fixture replacements were required because testing results indicated that the older fixtures at most schools were imparting lead to the drinking water. After the fixtures were replaced, a more thorough flushing of the plumbing lines was completed to remove any remaining materials from the center's water supply system.

On Saturday, March 12, 2016, the DLARA and the Department of Environmental Quality conducted a post-fixture sampling assessment of the plumbing system at the facility.

For the protection of public health, the DLARA started the installation of filters on drinking water fixtures at the daycare facilities and schools in Flint. This work began in July, 2016.

Water Main Description

An internal inspection of the building yielded a four inch ductile iron water service line and the distribution system is copper piping.

SAMPLING METHODS

Fixture Sampling

There are 44 drinking water fixtures that were identified at the school. After a minimum six-hour stagnation period, four samples were collected at each of the fixtures identified. Two initial samples were collected immediately after turning on the tap. The water was then flushed for 30 seconds and a third sample was collected. Finally, the water was flushed for another two minutes, and the fourth sample was collected. These samples were used to determine the impact of any lead sources in and around each specific fixture and its connecting plumbing.

Deep Plumbing Sampling

A different sampling method is used to determine the impact of any lead sources located deep in the supply plumbing of the building. During this method, ten bottles are collected in a row (consecutively). These bottles are one liter in size, which is larger than those used for the fixture sampling method.

Sampling Notes

- One hundred seventy-six samples from the 44 fixtures were collected and sent to the lab for analysis.
- Sixty-nine samples from seven specific fixtures were collected to test the deeper part of the plumbing system and sent to the lab for analysis. One sample from bathroom faucet 30 (Consecutive Sample G-2) drained during travel to the lab and did not have enough water in the bottle for testing.

SAMPLING RESULTS

Post-Fixture Replacement

March 12, 2016

Of the 245 samples:

- Lead Range: Non-Detected (ND) to 60 parts per billion (ppb)
- Copper Range: ND to 9,900 ppb

* Where the result is non-detected for lead it means that the amount of lead in the water was less than 1 ppb.

* Where the result is non-detected for copper it means that the amount of copper in the water was less than 50 ppb.

Whaley Children's Center
March 12, 2016

Lead	Result (ppb)	Sample Description	Site Code	Copper	Result (ppb)
Lead	ND	01BF001 OFF PARLOR ROOM	P1	Copper	110
Lead	ND	01BF001 OFF PARLOR ROOM	P2	Copper	250
Lead	ND	01BF001 OFF PARLOR ROOM	F01	Copper	120
Lead	ND	01BF001 OFF PARLOR ROOM	F02	Copper	90
Lead	ND	01WC002 BETWEEN RESTROOM BY KITCHEN	P1	Copper	1540
Lead	ND	01WC002 BETWEEN RESTROOM BY KITCHEN	P2	Copper	580
Lead	ND	01WC002 BETWEEN RESTROOM BY KITCHEN	F01	Copper	160
Lead	ND	01WC002 BETWEEN RESTROOM BY KITCHEN	F02	Copper	110
Lead	ND	01BF003 MENS RESTROOM BY KITCHEN	P1	Copper	180
Lead	ND	01BF003 MENS RESTROOM BY KITCHEN	P2	Copper	140
Lead	ND	01BF003 MENS RESTROOM BY KITCHEN	F01	Copper	100
Lead	ND	01BF003 MENS RESTROOM BY KITCHEN	F02	Copper	80
Lead	ND	01BF004 WOMENS RESTROOM BY KITCHEN	P1	Copper	140
Lead	ND	01BF004 WOMENS RESTROOM BY KITCHEN	P2	Copper	130
Lead	ND	01BF004 WOMENS RESTROOM BY KITCHEN	F01	Copper	90
Lead	ND	01BF004 WOMENS RESTROOM BY KITCHEN	F02	Copper	80
Lead	1	01KC005 KITCHEN	P1	Copper	220
Lead	ND	01KC005 KITCHEN	P2	Copper	560
Lead	ND	01KC005 KITCHEN	F01	Copper	140
Lead	ND	01KC005 KITCHEN	F02	Copper	230
Lead	ND	02WC006 ACROSS FROM ROOM 224	P1	Copper	1530
Lead	1	02WC006 ACROSS FROM ROOM 224	P2	Copper	710
Lead	ND	02WC006 ACROSS FROM ROOM 224	F01	Copper	190
Lead	ND	02WC006 ACROSS FROM ROOM 224	F02	Copper	110
Lead	ND	02BF007 UNISEX RESTROOM BY ROOM 224	P1	Copper	110
Lead	ND	02BF007 UNISEX RESTROOM BY ROOM 224	P2	Copper	240
Lead	ND	02BF007 UNISEX RESTROOM BY ROOM 224	F01	Copper	90
Lead	ND	02BF007 UNISEX RESTROOM BY ROOM 224	F02	Copper	80
Lead	ND	02BF008 WOMENS RESTROOM BY UNISEX	P1	Copper	200
Lead	ND	02BF008 WOMENS RESTROOM BY UNISEX	P2	Copper	270
Lead	ND	02BF008 WOMENS RESTROOM BY UNISEX	F01	Copper	100
Lead	ND	02BF008 WOMENS RESTROOM BY UNISEX	F02	Copper	80
Lead	8	03DW009 NURSES OFFICE	P1	Copper	220
Lead	2	03DW009 NURSES OFFICE	P2	Copper	150
Lead	3	03DW009 NURSES OFFICE	F01	Copper	200
Lead	ND	03DW009 NURSES OFFICE	F02	Copper	100
Lead	2	03CF010 NURSES OFFICE	P1	Copper	100
Lead	ND	03CF010 NURSES OFFICE	P2	Copper	100
Lead	ND	03CF010 NURSES OFFICE	F01	Copper	100
Lead	ND	03CF010 NURSES OFFICE	F02	Copper	100
Lead	ND	03BF011 BOYS RESTROOM	P1	Copper	170

Non-detected (ND) means; for lead the amount in water is less than 1 ppb, and for copper the amount in water is less than 50 ppb.

Whaley Children's Center
March 12, 2016

Lead	Result (ppb)	Sample Description	Site Code	Copper	Result (ppb)
Lead	1	03BF011 BOYS RESTROOM	P2	Copper	180
Lead	ND	03BF011 BOYS RESTROOM	F01	Copper	100
Lead	ND	03BF011 BOYS RESTROOM	F02	Copper	110
Lead	ND	03BF012 BOYS RESTROOM	P1	Copper	150
Lead	ND	03BF012 BOYS RESTROOM	P2	Copper	150
Lead	ND	03BF012 BOYS RESTROOM	F01	Copper	120
Lead	ND	03BF012 BOYS RESTROOM	F02	Copper	120
Lead	4	03BF013 BOYS RESTROOM	P1	Copper	200
Lead	ND	03BF013 BOYS RESTROOM	P2	Copper	150
Lead	ND	03BF013 BOYS RESTROOM	F01	Copper	110
Lead	ND	03BF013 BOYS RESTROOM	F02	Copper	110
Lead	1	03DW014 ROOM 4	P1	Copper	280
Lead	ND	03DW014 ROOM 4	P2	Copper	280
Lead	1	03DW014 ROOM 4	F01	Copper	350
Lead	ND	03DW014 ROOM 4	F02	Copper	190
Lead	11	03CF015 ROOM 4	P1	Copper	140
Lead	ND	03CF015 ROOM 4	P2	Copper	170
Lead	1	03CF015 ROOM 4	F01	Copper	140
Lead	ND	03CF015 ROOM 4	F02	Copper	100
Lead	7	03DW016 ROOM 3	P1	Copper	240
Lead	3	03DW016 ROOM 3	P2	Copper	200
Lead	1	03DW016 ROOM 3	F01	Copper	180
Lead	ND	03DW016 ROOM 3	F02	Copper	120
Lead	4	03CF017 ROOM 3	P1	Copper	130
Lead	1	03CF017 ROOM 3	P2	Copper	120
Lead	ND	03CF017 ROOM 3	F01	Copper	100
Lead	ND	03CF017 ROOM 3	F02	Copper	100
Lead	1	03DW018 ROOM 2	P1	Copper	160
Lead	ND	03DW018 ROOM 2	P2	Copper	100
Lead	ND	03DW018 ROOM 2	F01	Copper	110
Lead	ND	03DW018 ROOM 2	F02	Copper	120
Lead	12	03CF019 ROOM 2	P1	Copper	140
Lead	ND	03CF019 ROOM 2	P2	Copper	120
Lead	ND	03CF019 ROOM 2	F01	Copper	110
Lead	ND	03CF019 ROOM 2	F02	Copper	110
Lead	5	03DW020 ROOM 1	P1	Copper	180
Lead	ND	03DW020 ROOM 1	P2	Copper	120
Lead	ND	03DW020 ROOM 1	F01	Copper	110
Lead	ND	03DW020 ROOM 1	F02	Copper	110
Lead	60	03CF021 ROOM 1	P1	Copper	170
Lead	23	03CF021 ROOM 1	P2	Copper	130

Non-detected (ND) means; for lead the amount in water is less than 1 ppb, and for copper the amount in water is less than 50 ppb.

Whaley Children's Center
March 12, 2016

Lead	Result (ppb)	Sample Description	Site Code	Copper	Result (ppb)
Lead	ND	03CF021 ROOM 1	F01	Copper	120
Lead	ND	03CF021 ROOM 1	F02	Copper	130
Lead	1	03BF022 GIRLS RESTROOM	P1	Copper	160
Lead	1	03BF022 GIRLS RESTROOM	P2	Copper	220
Lead	2	03BF022 GIRLS RESTROOM	F01	Copper	140
Lead	ND	03BF022 GIRLS RESTROOM	F02	Copper	170
Lead	ND	03BF023 GIRLS RESTROOM	P1	Copper	160
Lead	ND	03BF023 GIRLS RESTROOM	P2	Copper	120
Lead	ND	03BF023 GIRLS RESTROOM	F01	Copper	90
Lead	ND	03BF023 GIRLS RESTROOM	F02	Copper	100
Lead	2	03BF024 GIRLS RESTROOM	P1	Copper	150
Lead	4	03BF024 GIRLS RESTROOM	P2	Copper	150
Lead	ND	03BF024 GIRLS RESTROOM	F01	Copper	100
Lead	ND	03BF024 GIRLS RESTROOM	F02	Copper	90
Lead	3	03WC025 NEXT TO GYM	P1	Copper	4720
Lead	7	03WC025 NEXT TO GYM	P2	Copper	9900
Lead	4	03WC025 NEXT TO GYM	F01	Copper	4620
Lead	2	03WC025 NEXT TO GYM	F02	Copper	1290
Lead	ND	04KS026 KITCHEN	P1	Copper	110
Lead	ND	04KS026 KITCHEN	P2	Copper	ND
Lead	ND	04KS026 KITCHEN	F01	Copper	ND
Lead	ND	04KS026 KITCHEN	F02	Copper	ND
Lead	ND	04KS027 GIRLS BATHROOM	P1	Copper	100
Lead	ND	04KS027 GIRLS BATHROOM	P2	Copper	90
Lead	ND	04KS027 GIRLS BATHROOM	F01	Copper	70
Lead	ND	04KS027 GIRLS BATHROOM	F02	Copper	ND
Lead	ND	04BF028 HALF BATH	P1	Copper	130
Lead	ND	04BF028 HALF BATH	P2	Copper	100
Lead	ND	04BF028 HALF BATH	F01	Copper	ND
Lead	ND	04BF028 HALF BATH	F02	Copper	ND
Lead	ND	04BF029 BOYS RESTROOM	P1	Copper	140
Lead	ND	04BF029 BOYS RESTROOM	P2	Copper	140
Lead	ND	04BF029 BOYS RESTROOM	F01	Copper	110
Lead	ND	04BF029 BOYS RESTROOM	F02	Copper	ND
Lead	ND	04BF030 BOYS RESTROOM	P1	Copper	280
Lead	ND	04BF030 BOYS RESTROOM	P2	Copper	140
Lead	ND	04BF030 BOYS RESTROOM	F01	Copper	ND
Lead	ND	04BF030 BOYS RESTROOM	F02	Copper	ND
Lead	ND	01BF031 GIRLS RESTROOM	P1	Copper	230
Lead	ND	01BF031 GIRLS RESTROOM	P2	Copper	160
Lead	ND	01BF031 GIRLS RESTROOM	F01	Copper	110

Non-detected (ND) means; for lead the amount in water is less than 1 ppb, and for copper the amount in water is less than 50 ppb.

Whaley Children's Center

March 12, 2016

Lead	Result (ppb)	Sample Description	Site Code	Copper	Result (ppb)
Lead	ND	01BF031 GIRLS RESTROOM	F02	Copper	50
Lead	ND	01BF032 GIRLS RESTROOM	P1	Copper	150
Lead	ND	01BF032 GIRLS RESTROOM	P2	Copper	130
Lead	ND	01BF032 GIRLS RESTROOM	F01	Copper	ND
Lead	ND	01BF032 GIRLS RESTROOM	F02	Copper	ND
Lead	ND	04KS033 JOHNSON WING-KITCHENETTE	P1	Copper	90
Lead	ND	04KS033 JOHNSON WING-KITCHENETTE	P2	Copper	70
Lead	ND	04KS033 JOHNSON WING-KITCHENETTE	F01	Copper	70
Lead	ND	04KS033 JOHNSON WING-KITCHENETTE	F02	Copper	ND
Lead	ND	03BF034 HALF-BATH JOHNSON WING	P1	Copper	90
Lead	ND	03BF034 HALF-BATH JOHNSON WING	P2	Copper	80
Lead	ND	03BF034 HALF-BATH JOHNSON WING	F01	Copper	50
Lead	ND	03BF034 HALF-BATH JOHNSON WING	F02	Copper	ND
Lead	ND	04BF035 BOYS RESTROOM JOHNSON WING	P1	Copper	150
Lead	ND	04BF035 BOYS RESTROOM JOHNSON WING	P2	Copper	210
Lead	ND	04BF035 BOYS RESTROOM JOHNSON WING	F01	Copper	150
Lead	ND	04BF035 BOYS RESTROOM JOHNSON WING	F02	Copper	100
Lead	ND	04BF036 BOYS RESTROOM JOHNSON WING	P1	Copper	210
Lead	ND	04BF036 BOYS RESTROOM JOHNSON WING	P2	Copper	260
Lead	ND	04BF036 BOYS RESTROOM JOHNSON WING	F01	Copper	80
Lead	ND	04BF036 BOYS RESTROOM JOHNSON WING	F02	Copper	ND
Lead	ND	04BF037 GIRLS RESTROOM JOHNSON WING	P1	Copper	100
Lead	ND	04BF037 GIRLS RESTROOM JOHNSON WING	P2	Copper	80
Lead	ND	04BF037 GIRLS RESTROOM JOHNSON WING	F01	Copper	60
Lead	ND	04BF037 GIRLS RESTROOM JOHNSON WING	F02	Copper	ND
Lead	ND	04BF038 GIRLS RESTROOM JOHNSON WING	P1	Copper	110
Lead	ND	04BF038 GIRLS RESTROOM JOHNSON WING	P2	Copper	120
Lead	ND	04BF038 GIRLS RESTROOM JOHNSON WING	F01	Copper	ND
Lead	ND	04BF038 GIRLS RESTROOM JOHNSON WING	F02	Copper	ND
Lead	ND	04KS039 KITCHEN MCDONALDS WING	P1	Copper	120
Lead	ND	04KS039 KITCHEN MCDONALDS WING	P2	Copper	90
Lead	ND	04KS039 KITCHEN MCDONALDS WING	F01	Copper	100
Lead	ND	04KS039 KITCHEN MCDONALDS WING	F02	Copper	60
Lead	ND	04BF040 BOYS RESTROOM MCDONALDS WING	P1	Copper	210
Lead	ND	04BF040 BOYS RESTROOM MCDONALDS WING	P2	Copper	280
Lead	ND	04BF040 BOYS RESTROOM MCDONALDS WING	F01	Copper	60
Lead	ND	04BF040 BOYS RESTROOM MCDONALDS WING	F02	Copper	ND
Lead	ND	04BF041 BOYS RESTROOM MCDONALDS	P1	Copper	190
Lead	ND	04BF041 BOYS RESTROOM MCDONALDS	P2	Copper	170
Lead	ND	04BF041 BOYS RESTROOM MCDONALDS	F01	Copper	110
Lead	ND	04BF041 BOYS RESTROOM MCDONALDS	F02	Copper	ND

Non-detected (ND) means; for lead the amount in water is less than 1 ppb, and for copper the amount in water is less than 50 ppb.

Whaley Children's Center
March 12, 2016

Lead	Result (ppb)	Sample Description	Site Code	Copper	Result (ppb)
Lead	ND	04BF042 GIRLS RESTROOM MCDONALDS	P1	Copper	170
Lead	1	04BF042 GIRLS RESTROOM MCDONALDS	P2	Copper	160
Lead	ND	04BF042 GIRLS RESTROOM MCDONALDS	F01	Copper	80
Lead	ND	04BF042 GIRLS RESTROOM MCDONALDS	F02	Copper	ND
Lead	ND	04BF043 BOYS RESTROOM MCDONALDS	P1	Copper	140
Lead	ND	04BF043 BOYS RESTROOM MCDONALDS	P2	Copper	160
Lead	ND	04BF043 BOYS RESTROOM MCDONALDS	F01	Copper	140
Lead	ND	04BF043 BOYS RESTROOM MCDONALDS	F02	Copper	90
Lead	ND	04BF044 BOYS RESTROOM MCDONALDS WING	P1	Copper	230
Lead	ND	04BF044 BOYS RESTROOM MCDONALDS WING	P2	Copper	230
Lead	ND	04BF044 BOYS RESTROOM MCDONALDS WING	F01	Copper	110
Lead	ND	04BF044 BOYS RESTROOM MCDONALDS WING	F02	Copper	ND
Lead	ND	01KC005 KITCHEN	A1	Copper	230
Lead	ND	01KC005 KITCHEN	A2	Copper	160
Lead	ND	01KC005 KITCHEN	A3	Copper	140
Lead	ND	01KC005 KITCHEN	A4	Copper	120
Lead	ND	01KC005 KITCHEN	A5	Copper	90
Lead	ND	01KC005 KITCHEN	A6	Copper	90
Lead	ND	01KC005 KITCHEN	A7	Copper	90
Lead	ND	01KC005 KITCHEN	A8	Copper	90
Lead	ND	01KC005 KITCHEN	A9	Copper	80
Lead	ND	01KC005 KITCHEN	A10	Copper	90
Lead	ND	03CF015 ROOM 4	B1	Copper	180
Lead	ND	03CF015 ROOM 4	B2	Copper	170
Lead	ND	03CF015 ROOM 4	B3	Copper	150
Lead	ND	03CF015 ROOM 4	B4	Copper	150
Lead	ND	03CF015 ROOM 4	B5	Copper	140
Lead	ND	03CF015 ROOM 4	B6	Copper	130
Lead	ND	03CF015 ROOM 4	B7	Copper	130
Lead	ND	03CF015 ROOM 4	B8	Copper	120
Lead	ND	03CF015 ROOM 4	B9	Copper	120
Lead	ND	03CF015 ROOM 4	B10	Copper	120
Lead	3	03WC025 NEXT TO GYM	C1	Copper	1990
Lead	2	03WC025 NEXT TO GYM	C2	Copper	720
Lead	3	03WC025 NEXT TO GYM	C3	Copper	780
Lead	3	03WC025 NEXT TO GYM	C4	Copper	530
Lead	2	03WC025 NEXT TO GYM	C5	Copper	660
Lead	2	03WC025 NEXT TO GYM	C6	Copper	590
Lead	2	03WC025 NEXT TO GYM	C7	Copper	520
Lead	3	03WC025 NEXT TO GYM	C8	Copper	420
Lead	3	03WC025 NEXT TO GYM	C9	Copper	440

Non-detected (ND) means; for lead the amount in water is less than 1 ppb, and for copper the amount in water is less than 50 ppb.

Whaley Children's Center

March 12, 2016

Lead	Result (ppb)	Sample Description	Site Code	Copper	Result (ppb)
Lead	3	03WC025 NEXT TO GYM	C10	Copper	420
Lead	ND	04KS026 MOTT BUILDING KITCHEN	D1	Copper	ND
Lead	ND	04KS026 MOTT BUILDING KITCHEN	D2	Copper	ND
Lead	ND	04KS026 MOTT BUILDING KITCHEN	D3	Copper	ND
Lead	ND	04KS026 MOTT BUILDING KITCHEN	D4	Copper	ND
Lead	ND	04KS026 MOTT BUILDING KITCHEN	D5	Copper	ND
Lead	ND	04KS026 MOTT BUILDING KITCHEN	D6	Copper	ND
Lead	ND	04KS026 MOTT BUILDING KITCHEN	D7	Copper	ND
Lead	ND	04KS026 MOTT BUILDING KITCHEN	D8	Copper	ND
Lead	ND	04KS026 MOTT BUILDING KITCHEN	D9	Copper	ND
Lead	ND	04KS026 MOTT BUILDING KITCHEN	D10	Copper	ND
Lead	ND	04BF042 GIRLS RESTROOM	E1	Copper	80
Lead	ND	04BF042 GIRLS RESTROOM	E2	Copper	60
Lead	ND	04BF042 GIRLS RESTROOM	E3	Copper	60
Lead	ND	04BF042 GIRLS RESTROOM	E4	Copper	ND
Lead	ND	04BF042 GIRLS RESTROOM	E5	Copper	ND
Lead	ND	04BF042 GIRLS RESTROOM	E6	Copper	ND
Lead	ND	04BF042 GIRLS RESTROOM	E7	Copper	ND
Lead	ND	04BF042 GIRLS RESTROOM	E8	Copper	ND
Lead	ND	04BF042 GIRLS RESTROOM	E9	Copper	ND
Lead	ND	04BF042 GIRLS RESTROOM	E10	Copper	ND
Lead	ND	04BF036 BOYS RESTROOM/ JOHNSON UNITS	F1	Copper	90
Lead	ND	04BF036 BOYS RESTROOM/ JOHNSON UNITS	F2	Copper	70
Lead	ND	04BF036 BOYS RESTROOM/ JOHNSON UNITS	F3	Copper	70
Lead	ND	04BF036 BOYS RESTROOM/ JOHNSON UNITS	F4	Copper	60
Lead	ND	04BF036 BOYS RESTROOM/ JOHNSON UNITS	F5	Copper	50
Lead	ND	04BF036 BOYS RESTROOM/ JOHNSON UNITS	F6	Copper	ND
Lead	ND	04BF036 BOYS RESTROOM/ JOHNSON UNITS	F7	Copper	ND
Lead	ND	04BF036 BOYS RESTROOM/ JOHNSON UNITS	F8	Copper	ND
Lead	ND	04BF036 BOYS RESTROOM/ JOHNSON UNITS	F9	Copper	ND
Lead	ND	04BF036 BOYS RESTROOM/ JOHNSON UNITS	F10	Copper	ND
Lead	ND	04BF030 BOYS RESTROOM	G1	Copper	110
Lead	ND	04BF030 BOYS RESTROOM	G3	Copper	80
Lead	ND	04BF030 BOYS RESTROOM	G4	Copper	70
Lead	ND	04BF030 BOYS RESTROOM	G5	Copper	60
Lead	ND	04BF030 BOYS RESTROOM	G6	Copper	50
Lead	ND	04BF030 BOYS RESTROOM	G7	Copper	ND
Lead	ND	04BF030 BOYS RESTROOM	G8	Copper	ND
Lead	ND	04BF030 BOYS RESTROOM	G9	Copper	ND
Lead	ND	04BF030 BOYS RESTROOM	G10	Copper	ND

Non-detected (ND) means; for lead the amount in water is less than 1 ppb, and for copper the amount in water is less than 50 ppb.