

# POST-FIXTURE REPLACEMENT SAMPLING RESULTS REPORT

Flint Public Schools, Administration Building



## INTRODUCTION

On Saturday, December 12, 2015, the Department of Licensing and Regulatory Affairs (DLARA) and the Department of Environmental Quality (DEQ) conducted a pre-fixture sampling assessment of the plumbing system at the facility.

During the week of April 10, 2016, the DLARA completed replacement of drinking water fixtures at the Flint Public School's Administration Building. 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 building's water supply system.

On Saturday, April 23, 2016 the DEQ went back and conducted a post-fixture sampling assessment.

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

### Water Main Description

An inspection of the water main from inside the building yielded a four inch cast iron or ductile iron water service line.

## SAMPLING METHODS

### Fixture Sampling

There are 11 drinking water fixtures that were identified at the building. 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

### December 12, 2015

- Forty-four samples from the 11 fixtures were collected and sent to the lab for analysis.
- Thirty samples from three specific fixtures were collected to test the deeper part of the plumbing system and sent to the lab for analysis.

### April 23, 2016

- Forty-four samples from the 11 fixtures were collected and sent to the lab for analysis.
- Thirty samples from three specific fixtures were collected to test the deeper part of the plumbing system and sent to the lab for analysis.

## SAMPLING RESULTS

### Pre-Fixture Replacement

December 12, 2015  
Of the 74 samples:

- Lead Range: Non-Detected (ND) to 30 parts per billion (ppb)
- Copper Range: ND to 440 ppb

### Post-Fixture Replacement

April 23, 2016  
Of the 74 samples:

- Lead Range: ND to 23 ppb
- Copper Range: ND to 2,730 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.

Flint Public Schools, Administration Building

December 12, 2015

Lead	Result (ppb)	Sample Description	Site Code	Copper	Result (ppb)
Lead	3	01KC001 EMPLOYEE LOUNGE	P1	Copper	170
Lead	15	01KC001 EMPLOYEE LOUNGE	P2	Copper	270
Lead	3	01KC001 EMPLOYEE LOUNGE	F01	Copper	170
Lead	ND	01KC001 EMPLOYEE LOUNGE	F02	Copper	90
Lead	2	01KC002 OFF EMPLOYEE LOUNGE	P1	Copper	130
Lead	ND	01KC002 OFF EMPLOYEE LOUNGE	P2	Copper	120
Lead	ND	01KC002 OFF EMPLOYEE LOUNGE	F01	Copper	ND
Lead	ND	01KC002 OFF EMPLOYEE LOUNGE	F02	Copper	ND
Lead	9	01DW003 HALL NEXT TO ROOM 8	P1	Copper	60
Lead	3	01DW003 HALL NEXT TO ROOM 8	P2	Copper	ND
Lead	ND	01DW003 HALL NEXT TO ROOM 8	F01	Copper	ND
Lead	3	01DW003 HALL NEXT TO ROOM 8	F02	Copper	80
Lead	18	01DW004 BY WOMEN'S RESTROOM	P1	Copper	140
Lead	9	01DW004 BY WOMEN'S RESTROOM	P2	Copper	60
Lead	3	01DW004 BY WOMEN'S RESTROOM	F01	Copper	ND
Lead	2	01DW004 BY WOMEN'S RESTROOM	F02	Copper	ND
Lead	4	01KC005 ROOM 3	P1	Copper	90
Lead	4	01KC005 ROOM 3	P2	Copper	50
Lead	2	01KC005 ROOM 3	F01	Copper	ND
Lead	ND	01KC005 ROOM 3	F02	Copper	ND
Lead	1	02KC006 ROOM 119	P1	Copper	90
Lead	ND	02KC006 ROOM 119	P2	Copper	50
Lead	ND	02KC006 ROOM 119	F01	Copper	ND
Lead	ND	02KC006 ROOM 119	F02	Copper	ND
Lead	30	02DW007 NEXT TO MECH/RM 111	P1	Copper	150
Lead	15	02DW007 NEXT TO MECH/RM 111	P2	Copper	90
Lead	14	02DW007 NEXT TO MECH/RM 111	F01	Copper	90
Lead	4	02DW007 NEXT TO MECH/RM 111	F02	Copper	80
Lead	ND	02WC008 BY WOMEN'S RESTROOM	P1	Copper	440
Lead	ND	02WC008 BY WOMEN'S RESTROOM	P2	Copper	430
Lead	1	02WC008 BY WOMEN'S RESTROOM	F01	Copper	220
Lead	ND	02WC008 BY WOMEN'S RESTROOM	F02	Copper	70
Lead	3	02DW009 BY CONFERENCE ROOM	P1	Copper	70
Lead	ND	02DW009 BY CONFERENCE ROOM	P2	Copper	ND
Lead	1	02DW009 BY CONFERENCE ROOM	F01	Copper	ND
Lead	ND	02DW009 BY CONFERENCE ROOM	F02	Copper	ND
Lead	5	03DW010 BY FAN/ROOM 212	P1	Copper	80
Lead	3	03DW010 BY FAN/ROOM 212	P2	Copper	70
Lead	2	03DW010 BY FAN/ROOM 212	F01	Copper	70
Lead	3	03DW010 BY FAN/ROOM 212	F02	Copper	80
Lead	19	03DW011 NEXT TO ROOM 207	P1	Copper	80
Lead	4	03DW011 NEXT TO ROOM 207	P2	Copper	80

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

Flint Public Schools, Administration Building

December 12, 2015

Lead	Result (ppb)	Sample Description	Site Code	Copper	Result (ppb)
Lead	3	03DW011 NEXT TO ROOM 207	F01	Copper	50
Lead	2	03DW011 NEXT TO ROOM 207	F02	Copper	ND
Lead	1	01KC001 EMPLOYEE LOUNGE	CB1	Copper	150
Lead	ND	01KC001 EMPLOYEE LOUNGE	CB2	Copper	100
Lead	ND	01KC001 EMPLOYEE LOUNGE	CB3	Copper	70
Lead	ND	01KC001 EMPLOYEE LOUNGE	CB4	Copper	60
Lead	ND	01KC001 EMPLOYEE LOUNGE	CB5	Copper	60
Lead	ND	01KC001 EMPLOYEE LOUNGE	CB6	Copper	60
Lead	ND	01KC001 EMPLOYEE LOUNGE	CB7	Copper	50
Lead	ND	01KC001 EMPLOYEE LOUNGE	CB8	Copper	50
Lead	ND	01KC001 EMPLOYEE LOUNGE	CB9	Copper	50
Lead	ND	01KC001 EMPLOYEE LOUNGE	CB10	Copper	50
Lead	ND	02KC006 ROOM 119	CA1	Copper	ND
Lead	ND	02KC006 ROOM 119	CA2	Copper	ND
Lead	ND	02KC006 ROOM 119	CA3	Copper	ND
Lead	ND	02KC006 ROOM 119	CA4	Copper	ND
Lead	ND	02KC006 ROOM 119	CA5	Copper	ND
Lead	ND	02KC006 ROOM 119	CA6	Copper	ND
Lead	ND	02KC006 ROOM 119	CA7	Copper	ND
Lead	ND	02KC006 ROOM 119	CA8	Copper	ND
Lead	ND	02KC006 ROOM 119	CA9	Copper	ND
Lead	ND	02KC006 ROOM 119	CA10	Copper	ND
Lead	24	03BF012 WOMENS RESTROOM	CC1	Copper	80
Lead	5	03BF012 WOMENS RESTROOM	CC2	Copper	ND
Lead	3	03BF012 WOMENS RESTROOM	CC3	Copper	ND
Lead	3	03BF012 WOMENS RESTROOM	CC4	Copper	ND
Lead	3	03BF012 WOMENS RESTROOM	CC5	Copper	ND
Lead	2	03BF012 WOMENS RESTROOM	CC6	Copper	ND
Lead	2	03BF012 WOMENS RESTROOM	CC7	Copper	ND
Lead	2	03BF012 WOMENS RESTROOM	CC8	Copper	ND
Lead	2	03BF012 WOMENS RESTROOM	CC9	Copper	ND
Lead	2	03BF012 WOMENS RESTROOM	CC10	Copper	ND

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

Flint Public Schools, Administration Building

April 23, 2016

Lead	Result (ppb)	Sample Description	SiteCode	Copper	Result (ppb)
Lead	18	01KC001 EMPLOYEE LOUNGE	P1	Copper	380
Lead	13	01KC001 EMPLOYEE LOUNGE	P2	Copper	220
Lead	23	01KC001 EMPLOYEE LOUNGE	FO1	Copper	280
Lead	ND	01KC001 EMPLOYEE LOUNGE	FO2	Copper	50
Lead	1	01KC002 OFF EMPLOYEE LOUNGE	P1	Copper	200
Lead	ND	01KC002 OFF EMPLOYEE LOUNGE	P2	Copper	90
Lead	ND	01KC002 OFF EMPLOYEE LOUNGE	FO1	Copper	ND
Lead	ND	01KC002 OFF EMPLOYEE LOUNGE	FO2	Copper	ND
Lead	10	01DW003 HALL NEXT TO ROOM 8	P1	Copper	220
Lead	4	01DW003 HALL NEXT TO ROOM 8	P2	Copper	60
Lead	ND	01DW003 HALL NEXT TO ROOM 8	FO1	Copper	ND
Lead	2	01DW003 HALL NEXT TO ROOM 8	FO2	Copper	ND
Lead	6	01DW004 BY WOMEN'S RESTROOM	P1	Copper	240
Lead	2	01DW004 BY WOMEN'S RESTROOM	P2	Copper	80
Lead	ND	01DW004 BY WOMEN'S RESTROOM	FO1	Copper	ND
Lead	1	01DW004 BY WOMEN'S RESTROOM	FO2	Copper	ND
Lead	1	01KC005 ROOM 3	P1	Copper	220
Lead	2	01KC005 ROOM 3	P2	Copper	80
Lead	ND	01KC005 ROOM 3	FO1	Copper	ND
Lead	ND	01KC005 ROOM 3	FO2	Copper	ND
Lead	ND	02KC006 ROOM 119	P1	Copper	200
Lead	ND	02KC006 ROOM 119	P2	Copper	60
Lead	ND	02KC006 ROOM 119	FO1	Copper	ND
Lead	ND	02KC006 ROOM 119	FO2	Copper	ND
Lead	4	02DW007 NEXT TO MECH/RM 111	P1	Copper	180
Lead	7	02DW007 NEXT TO MECH/RM 111	P2	Copper	120
Lead	2	02DW007 NEXT TO MECH/RM 111	FO1	Copper	50
Lead	3	02DW007 NEXT TO MECH/RM 111	FO2	Copper	60
Lead	ND	02WC008 BY WOMEN'S RESTROOM	P1	Copper	2730
Lead	ND	02WC008 BY WOMEN'S RESTROOM	P2	Copper	660
Lead	ND	02WC008 BY WOMEN'S RESTROOM	FO1	Copper	110
Lead	1	02WC008 BY WOMEN'S RESTROOM	FO2	Copper	110
Lead	1	02DW009 BY CONFERENCE ROOM	P1	Copper	70
Lead	ND	02DW009 BY CONFERENCE ROOM	P2	Copper	ND
Lead	ND	02DW009 BY CONFERENCE ROOM	FO1	Copper	ND
Lead	ND	02DW009 BY CONFERENCE ROOM	FO2	Copper	ND
Lead	13	03DW010 BY FAN/ROOM 212	P1	Copper	240
Lead	6	03DW010 BY FAN/ROOM 212	P2	Copper	140
Lead	2	03DW010 BY FAN/ROOM 212	FO1	Copper	50
Lead	2	03DW010 BY FAN/ROOM 212	FO2	Copper	50
Lead	12	03DW011 NEXT TO ROOM 207	P1	Copper	120
Lead	3	03DW011 NEXT TO ROOM 207	P2	Copper	100
Lead	2	03DW011 NEXT TO ROOM 207	F01	Copper	60

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

Flint Public Schools, Administration Building

April 23, 2016

Lead	Result (ppb)	Sample Description	SiteCode	Copper	Result (ppb)
Lead	1	03DW011 NEXT TO ROOM 207	FO2	Copper	ND
Lead	4	01KC001 EMPLOYEE LOUNGE	CB1	Copper	130
Lead	1	01KC001 EMPLOYEE LOUNGE	CB2	Copper	ND
Lead	ND	01KC001 EMPLOYEE LOUNGE	CB3	Copper	ND
Lead	ND	01KC001 EMPLOYEE LOUNGE	CB4	Copper	ND
Lead	ND	01KC001 EMPLOYEE LOUNGE	CB5	Copper	ND
Lead	ND	01KC001 EMPLOYEE LOUNGE	CB6	Copper	ND
Lead	ND	01KC001 EMPLOYEE LOUNGE	CB7	Copper	ND
Lead	ND	01KC001 EMPLOYEE LOUNGE	CB8	Copper	ND
Lead	ND	01KC001 EMPLOYEE LOUNGE	CB9	Copper	ND
Lead	ND	01KC001 EMPLOYEE LOUNGE	CB10	Copper	ND
Lead	ND	02KC006 ROOM 119	CA1	Copper	ND
Lead	ND	02KC006 ROOM 119	CA2	Copper	ND
Lead	ND	02KC006 ROOM 119	CA3	Copper	ND
Lead	ND	02KC006 ROOM 119	CA4	Copper	ND
Lead	ND	02KC006 ROOM 119	CA5	Copper	ND
Lead	ND	02KC006 ROOM 119	CA6	Copper	ND
Lead	ND	02KC006 ROOM 119	CA7	Copper	ND
Lead	ND	02KC006 ROOM 119	CA8	Copper	ND
Lead	ND	02KC006 ROOM 119	CA9	Copper	ND
Lead	ND	02KC006 ROOM 119	CA10	Copper	ND

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