



# Blood Lead Level Test Results for Selected Flint Zip Codes, Genesee County, and the State of Michigan Executive Summary as of September 27, 2019\*

This report is generated by MDHHS to track Blood Lead Level test results in Flint, Michigan.

## Background

- Blood lead level testing is an important part of efforts to identify people who have been harmed by drinking water that contained lead, and from other sources of lead exposure in the home. MDHHS recognizes that the full community of Flint must be the focus of the public health response.

## Data Presentation

- Counts in this report include both capillary and venous blood tests.
- People who have had multiple tests are counted only once per year or per time period in the tables. People counted in one calendar year/time period who were tested again in the next calendar year/time period are counted in both years/time periods.

## Summary of Findings

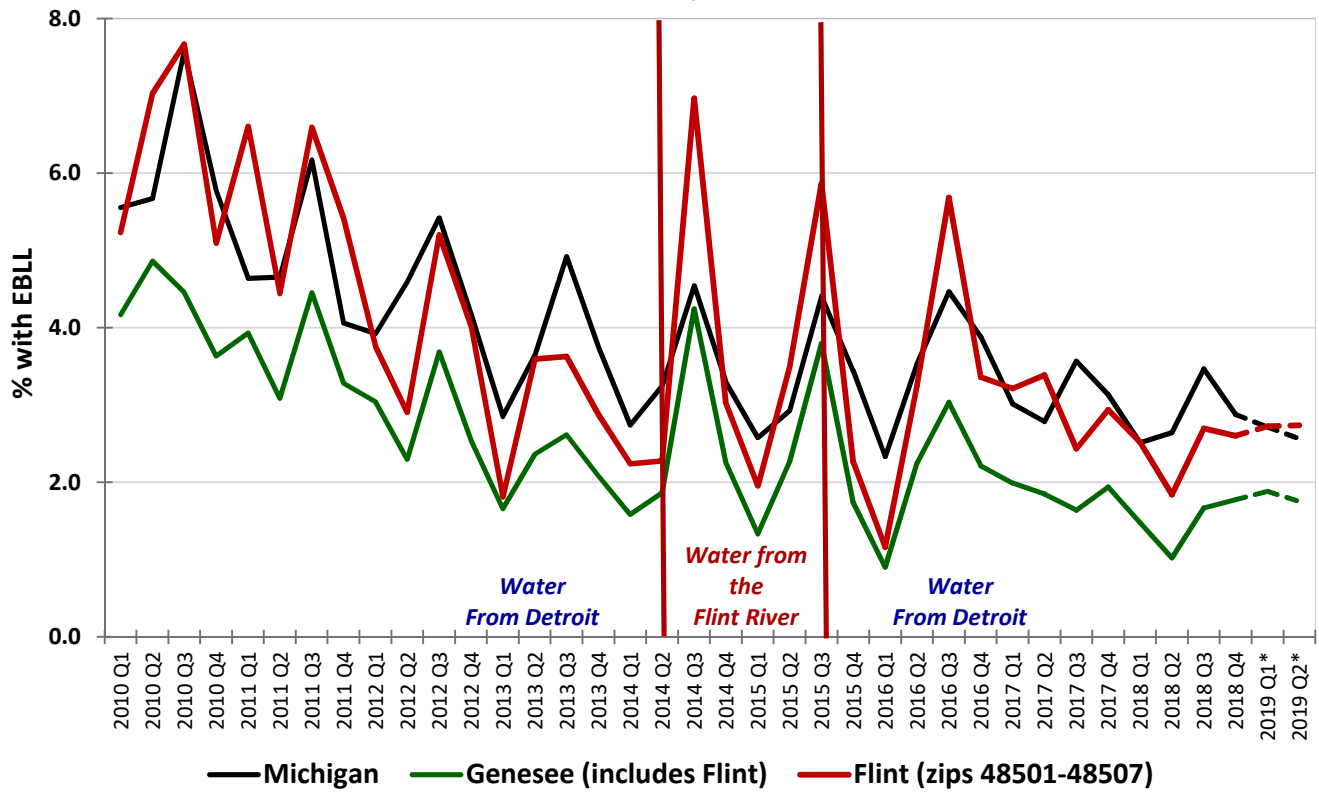
- Between 10/1/2015 and 09/27/2019, 42,585 people had a blood lead test in Flint (zip codes 48501-48507).
- Since 10/1/2015, 377 children under age 18 in the Flint zip codes 48501-48507 had elevated blood lead levels: blood lead levels greater than or equal to 5 µg/dL (micrograms lead per deciliter of blood).
- Of the 11,924 children younger than 6 years old tested since 10/1/2015, 2.8% had blood lead levels greater than or equal to 5 µg/dL.

## PLEASE NOTE: Changes in numbers of test results due to algorithm change

\* **Starting August 30, 2019**, CLPPP has updated the algorithm selecting on test per person for the timeframes 'During Flint River Use' 4/1/2014 - 9/30/2015 and 'After Flint River Use' 10/1/2015-present. Counts are now one test per person for the entire period listed. Previously, the counts were one test per person per year in that time period. For example, a person could have been counted twice in the 'During Flint River Use' period, both in 4/1/2014-12/31/2014 and in 1/1/2015 - 9/30/2015. Counts will be lower for these time periods than in previous reports.

**Percentage of Children < 6 Years of Age with Elevated Blood Lead Levels ( $\geq 5 \mu\text{g}/\text{dL}$ ) by Quarter<sup>†</sup>, Michigan, 2010 - 2019\***

\*Data as of September 27, 2019



† People who have had multiple tests are counted only once per year; if they are tested in more than one year, they will be counted once in each year they were tested.

Counts on this chart include both capillary and venous blood tests.

\* Data for Quarters 1 and 2 of 2019 are provisional and subject to change.

**Table 1. Percentage of elevated blood lead levels ( $\geq 5 \mu\text{g/dL}$ ) among tested children less than 6 years of age, 2014 – 2019**

			Michigan	Genesee County	Flint 48501-48507
<b>Annual Results</b>	1/01/2019 to 09/27/2019	Total # of children tested for lead	106,164	4,656	2,150
		Children with test results $\geq 5 \mu\text{g/dL}$	3,225	97	71
		<b>% of children with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>3.0%</b>	<b>2.1%</b>	<b>3.3%</b>
	1/1/2018 to 12/31/2018	Total # of children tested for lead	142,356	6,362	2,984
		Children with test results $\geq 5 \mu\text{g/dL}$	4,127	94	72
		<b>% of children with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>2.9%</b>	<b>1.5%</b>	<b>2.4%</b>
	1/1/2017 to 12/31/2017	Total # of children tested for lead	150,463	6,732	3,116
		Children with test results $\geq 5 \mu\text{g/dL}$	4,727	124	92
		<b>% of children with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>3.1%</b>	<b>1.8%</b>	<b>3.0%</b>
	1/1/2016 to 12/31/2016	Total # of children tested for lead	158,042	11,710	6,624
		Children with test results $\geq 5 \mu\text{g/dL}$	5,669	209	169
		<b>% of children with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>3.6%</b>	<b>1.8%</b>	<b>2.6%</b>
	1/1/2015 to 12/31/2015	Total # of children tested for lead	141,760	6,992	3,393
		Children with test results $\geq 5 \mu\text{g/dL}$	4,820	160	112
		<b>% of children with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>3.4%</b>	<b>2.3%</b>	<b>3.3%</b>
	1/1/2014 to 12/31/2014	Total # of children tested for lead	144,185	6,820	3,099
		Children with test results $\geq 5 \mu\text{g/dL}$	5,090	178	121
		<b>% of children with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>3.5%</b>	<b>2.6%</b>	<b>3.9%</b>
<b>During Flint River Use</b>	4/1/2014 to 9/30/2015	Total # of children tested for lead	197,897	9,272	4,158
		Children with test results $\geq 5 \mu\text{g/dL}$	7,005	252	167
		<b>% of children with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>3.5%</b>	<b>2.7%</b>	<b>4.0%</b>
<b>After Flint River Use</b>	10/01/2015 to 09/27/2019	Total # of children tested for lead	443,790	24,106	11,924
		Children with test results $\geq 5 \mu\text{g/dL}$	14,109	430	328
		<b>% of children with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>3.2%</b>	<b>1.8%</b>	<b>2.8%</b>

**Table 2. Percentage of elevated blood lead levels ( $\geq 5 \mu\text{g/dL}$ ) among tested children 6 to 17 years of age, 2014 – 2019**

			Michigan	Genesee County	Flint 48501-48507
<b>Annual Results</b>	1/01/2019 to 09/27/2019	Total # of children tested for lead	8,201	977	614
		Children with test results $\geq 5 \mu\text{g/dL}$	189	7	5
		<b>% of children with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>2.3%</b>	<b>0.7%</b>	<b>0.8%</b>
	1/1/2018 to 12/31/2018	Total # of children tested for lead	12,098	1,810	1,144
		Children with test results $\geq 5 \mu\text{g/dL}$	253	9	7
		<b>% of children with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>2.1%</b>	<b>0.5%</b>	<b>0.6%</b>
	1/1/2017 to 12/31/2017	Total # of children tested for lead	13,694	2,497	1,671
		Children with test results $\geq 5 \mu\text{g/dL}$	279	16	13
		<b>% of children with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>2.0%</b>	<b>0.6%</b>	<b>0.8%</b>
	1/1/2016 to 12/31/2016	Total # of children tested for lead	24,324	9,680	7,318
		Children with test results $\geq 5 \mu\text{g/dL}$	420	54	38
		<b>% of children with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>1.7%</b>	<b>0.6%</b>	<b>0.5%</b>
	1/1/2015 to 12/31/2015	Total # of children tested for lead	10,439	1,573	1,085
		Children with test results $\geq 5 \mu\text{g/dL}$	255	9	7
		<b>% of children with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>2.4%</b>	<b>0.6%</b>	<b>0.6%</b>
1/1/2014 to 12/31/2014	Total # of children tested for lead	10,577	788	372	
	Children with test results $\geq 5 \mu\text{g/dL}$	287	6	5	
	<b>% of children with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>2.7%</b>	<b>0.8%</b>	<b>1.3%</b>	
<b>During Flint River Use</b>	4/1/2014 to 9/30/2015	Total # of children tested for lead	14,902	1,180	582
		Children with test results $\geq 5 \mu\text{g/dL}$	352	8	6
		<b>% of children with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>2.4%</b>	<b>0.7%</b>	<b>1.0%</b>
<b>After Flint River Use</b>	10/01/2015 to 09/27/2019	Total # of children tested for lead	53,708	13,650	9,691
		Children with test results $\geq 5 \mu\text{g/dL}$	883	65	49
		<b>% of children with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>1.6%</b>	<b>0.5%</b>	<b>0.5%</b>

**Table 3. Percentage of elevated blood lead levels ( $\geq 5 \mu\text{g/dL}$ ) among tested adults at least 18 years of age, 2014 - 2019**

			Michigan	Genesee County	Flint 48501-48507
<b>Annual Results</b>	1/01/2019 to 09/27/2019	Total # of adults tested for lead	12,205	2,982	1,582
		Adults with test results $\geq 5 \mu\text{g/dL}$	823	44	17
		<b>% of adults with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>6.7%</b>	<b>1.5%</b>	<b>1.1%</b>
	1/1/2018 to 12/31/2018	Total # of adults tested for lead	18,638	4,663	2,533
		Adults with test results $\geq 5 \mu\text{g/dL}$	1,028	56	24
		<b>% of adults with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>5.5%</b>	<b>1.2%</b>	<b>0.9%</b>
	1/1/2017 to 12/31/2017	Total # of adults tested for lead	18,160	5,342	3,216
		Adults with test results $\geq 5 \mu\text{g/dL}$	1,132	91	58
		<b>% of adults with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>6.2%</b>	<b>1.7%</b>	<b>1.8%</b>
	1/1/2016 to 12/31/2016	Total # of adults tested for lead	34,559	20,233	15,840
		Adults with test results $\geq 5 \mu\text{g/dL}$	1,383	307	247
		<b>% of adults with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>4.0%</b>	<b>1.5%</b>	<b>1.6%</b>
	1/1/2015 to 12/31/2015	Total # of adults tested for lead	11,818	1,251	811
		Adults with test results $\geq 5 \mu\text{g/dL}$	1,147	49	21
		<b>% of adults with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>9.7%</b>	<b>3.9%</b>	<b>2.6%</b>
1/1/2014 to 12/31/2014	Total # of adults tested for lead	10,776	437	112	
	Adults with test results $\geq 5 \mu\text{g/dL}$	1,192	44	12	
	<b>% of adults with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>11.1%</b>	<b>10.1%</b>	<b>10.7%</b>	
<b>During Flint River Use</b>	4/1/2014 to 9/30/2015	Total # of adults tested for lead	15,676	676	203
		Adults with test results $\geq 5 \mu\text{g/dL}$	1,554	57	15
		<b>% of adults with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>9.9%</b>	<b>8.4%</b>	<b>7.4%</b>
<b>After Flint River Use</b>	10/01/2015 to 09/27/2019	Total # of adults tested for lead	76,114	29,973	20,970
		Adults with test results $\geq 5 \mu\text{g/dL}$	3,339	425	310
		<b>% of adults with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>4.4%</b>	<b>1.4%</b>	<b>1.5%</b>

**Table 4. Percentage of elevated blood lead levels ( $\geq 5 \mu\text{g/dL}$ ) among tested residents of all ages, 2014 – 2019**

			Michigan	Genesee County	Flint 48501-48507
<b>Annual Results</b>	1/01/2019 to 09/27/2019	Total # of people tested for lead	126,570	8,615	4,346
		People with test results $\geq 5 \mu\text{g/dL}$	4,237	148	93
		<b>% of people with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>3.3%</b>	<b>1.7%</b>	<b>2.1%</b>
	1/1/2018 to 12/31/2018	Total # of people tested for lead	173,092	12,835	6,661
		People with test results $\geq 5 \mu\text{g/dL}$	5,408	159	103
		<b>% of people with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>3.1%</b>	<b>1.2%</b>	<b>1.5%</b>
	1/1/2017 to 12/31/2017	Total # of people tested for lead	182,317	14,571	8,003
		People with test results $\geq 5 \mu\text{g/dL}$	6,138	231	163
		<b>% of people with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>3.4%</b>	<b>1.6%</b>	<b>2.0%</b>
	1/1/2016 to 12/31/2016	Total # of people tested for lead	216,925	41,623	29,782
		People with test results $\geq 5 \mu\text{g/dL}$	7,472	570	454
		<b>% of people with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>3.4%</b>	<b>1.4%</b>	<b>1.5%</b>
	1/1/2015 to 12/31/2015	Total # of people tested for lead	164,017	9,816	5,289
		People with test results $\geq 5 \mu\text{g/dL}$	6,222	218	140
		<b>% of people with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>3.8%</b>	<b>2.2%</b>	<b>2.6%</b>
	1/1/2014 to 12/31/2014	Total # of people tested for lead	165,538	8,045	3,583
		People with test results $\geq 5 \mu\text{g/dL}$	6,569	228	138
		<b>% of people with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>4.0%</b>	<b>2.8%</b>	<b>3.9%</b>
<b>During Flint River Use</b>	4/1/2014 to 9/30/2015	Total # of people tested for lead	228,475	11,128	4,943
		People with test results $\geq 5 \mu\text{g/dL}$	8,911	317	188
		<b>% of people with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>3.9%</b>	<b>2.8%</b>	<b>3.8%</b>
<b>After Flint River Use</b>	10/01/2015 to 09/27/2019	Total # of people tested for lead	573,612	67,729	42,585
		People with test results $\geq 5 \mu\text{g/dL}$	18,331	920	687
		<b>% of people with results <math>\geq 5 \mu\text{g/dL}</math></b>	<b>3.2%</b>	<b>1.4%</b>	<b>1.6%</b>