



Blood Lead Level Test Results for Selected Flint Zip Codes, Genesee County, and the State of Michigan

Executive Summary for Quarter 1, Calendar Year 2023

Data as of December 07, 2023

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 lead in drinking water and 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.
- The CDC announced a change in the blood lead reference value (BLRV) from 5 µg/dL (micrograms lead per deciliter of blood) to 3.5 µg/dL in October 2021. MDHHS adopted the new reference value on May 1, 2022 (for more information see <https://www.michigan.gov/mdhhs/inside-mdhhs/newsroom/2022/04/29/mdhhs-updating-definition-of-elevated-blood-lead-levels>).
- This report includes counts of BLLs above the BLRV of 3.5 µg/dL.

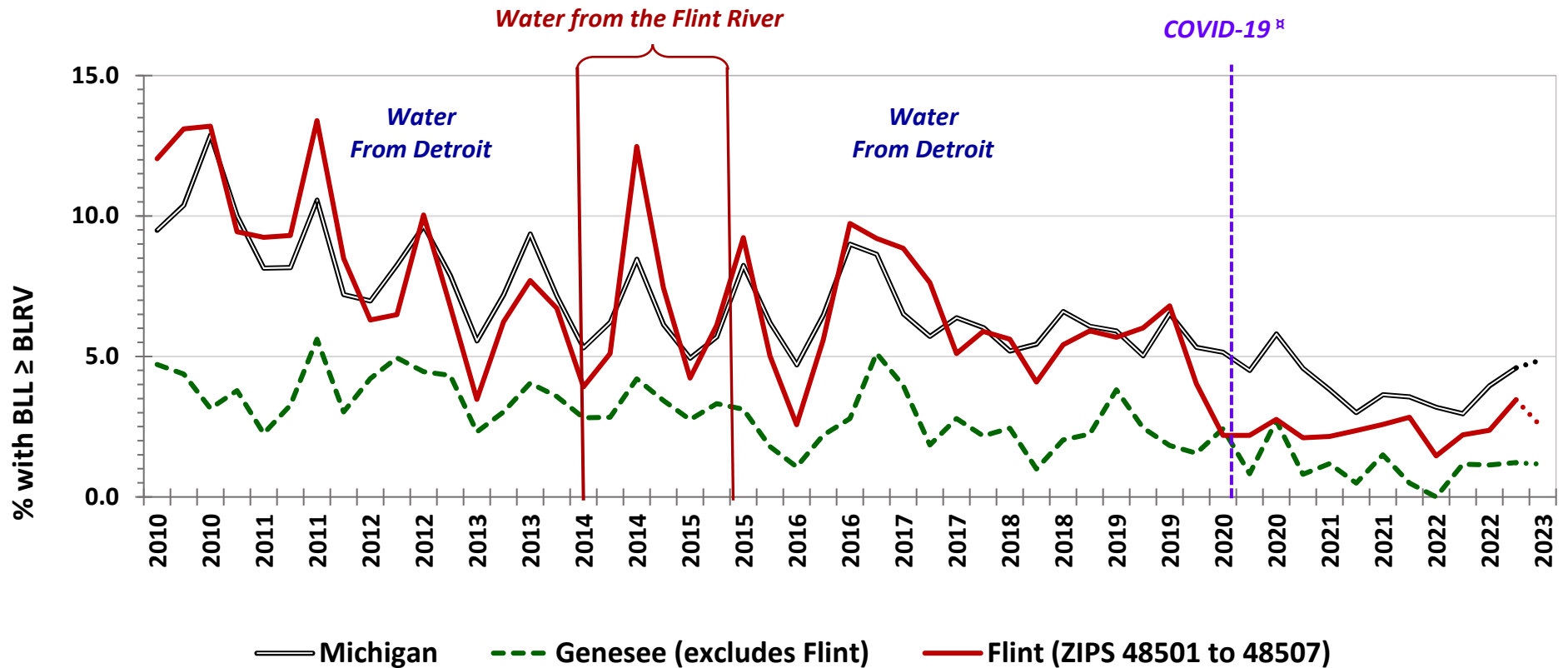
Data Presentation

- Each person is included only once per time period in this table.
 - If a person had multiple tests in the time period, the highest blood lead level from a venous test was counted.
 - If no venous test was performed, the highest blood lead level from a capillary test was counted.
 - If the type of test was unknown, the highest blood lead level obtained from an unknown sample type was counted.

Summary of Findings

- Between 10/1/2015 and 03/31/2023, 48,234 people had a blood lead test in the City of Flint in zip codes 48501-48507.
- Since 10/1/2015, 881 children under age 18 in Flint in zip codes 48501-48507 had BLLs greater than or equal to 3.5 µg/dL.
- Of the children under age 6 tested for lead in Flint since 10/1/2015, 5.0% had BLLs greater than or equal to the BLRV of 3.5 µg/dL.

Figure 1. Percentage of Children < 6 Years of Age^A with Blood Lead Levels Greater Than or Equal to the Blood Lead Reference Value (3.5 µg/dL) by Quarter^B, Michigan, 2010 - 2023*



* Data source: MDHHS Data Warehouse, Data current as of December 07, 2023. Data for 2023 are incomplete and considered provisional

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

^B 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.

⌘ Beginning of COVID-19 lockdowns and movement restrictions in Michigan

Table 1. Percentage of blood lead levels $\geq 3.5 \mu\text{g/dL}$ among Michigan residents in the time periods before and after exposure to Flint River Water, 2014 – 2023*

			Michigan	Genesee County	Flint in ZIPs 48501-48507	
Children Less Than Six Years of Age	During Flint River Use	4/1/2014 to 9/30/2015	Total # of children tested for lead	197,492	9,252	4,156
			Children with test results $\geq 5 \mu\text{g/dL}$	13,409	495	317
			% of children with results $\geq 5 \mu\text{g/dL}$	6.8	5.4	7.6
	After Flint River Use	10/01/2015 to 03/31/2023	Total # of children tested for lead	683,775	32,879	15,212
			Children with test results $\geq 5 \mu\text{g/dL}$	39,370	1,147	768
			% of children with results $\geq 5 \mu\text{g/dL}$	5.8	3.5	5.0
Children Ages 6 to 17	During Flint River Use	4/1/2014 to 9/30/2015	Total # of children tested for lead	14,879	1,179	580
			Children with test results $\geq 5 \mu\text{g/dL}$	611	14	10
			% of children with results $\geq 5 \mu\text{g/dL}$	4.1	1.2	1.7
	After Flint River Use	10/01/2015 to 03/31/2023	Total # of children tested for lead	75,590	15,132	10,393
			Children with test results $\geq 5 \mu\text{g/dL}$	2,234	150	113
			% of children with results $\geq 5 \mu\text{g/dL}$	3.0	1.0	1.1
Adults 18 Years and Older	During Flint River Use	4/1/2014 to 9/30/2015	Total # of adults tested for lead	15,658	674	202
			Adults with test results $\geq 5 \mu\text{g/dL}$	1,978	66	19
			% of adults with results $\geq 5 \mu\text{g/dL}$	12.6	9.8	9.4
	After Flint River Use	10/01/2015 to 03/31/2023	Total # of adults tested for lead	115,871	33,563	22,629
			Adults with test results $\geq 5 \mu\text{g/dL}$	6,496	804	559
			% of adults with results $\geq 5 \mu\text{g/dL}$	5.6	2.4	2.5
Residents of All Ages	During Flint River Use	4/1/2014 to 9/30/2015	Total # of people tested for lead	228,029	11,105	4,938
			People with test results $\geq 5 \mu\text{g/dL}$	15,998	575	346
			% of people with results $\geq 5 \mu\text{g/dL}$	7.0	5.2	7.0
	After Flint River Use	10/01/2015 to 03/31/2023	Total # of people tested for lead	875,236	81,574	48,234
			People with test results $\geq 5 \mu\text{g/dL}$	48,100	2,101	1,440
			% of people with results $\geq 5 \mu\text{g/dL}$	5.5	2.6	3.0

* Data source: MDHHS Data Warehouse, Data current as of December 07, 2023

Table 2. Percentage of Blood Lead Levels (BLL) \geq 3.5 $\mu\text{g}/\text{dL}^1$ Among Tested Children Less Than 6 Years of Age, 2014 – 2023*

Year	Michigan			Genesee County			Flint in ZIPs 48501-48507		
	# Tested for lead	# with BLL \geq 3.5 $\mu\text{g}/\text{dL}^1$	% with BLL \geq 3.5 $\mu\text{g}/\text{dL}^1$	# Tested for lead	# with BLL \geq 3.5 $\mu\text{g}/\text{dL}^1$	% with BLL \geq 3.5 $\mu\text{g}/\text{dL}^1$	# Tested for lead	# with BLL \geq 3.5 $\mu\text{g}/\text{dL}^1$	% with BLL \geq 3.5 $\mu\text{g}/\text{dL}^1$
2014	143,888	9,592	6.7	6,812	362	5.3	3,096	237	7.7
2015	141,551	9,040	6.4	6,984	305	4.4	3,388	206	6.1
2016	157,650	11,438	7.3	11,661	458	3.9	6,584	334	5.1
2017	150,259	9,270	6.2	6,722	308	4.6	3,108	210	6.8
2018	142,188	8,337	5.9	6,359	220	3.5	2,979	156	5.2
2019	143,284	8,204	5.7	6,079	238	3.9	2,784	159	5.7
2020	97,191	4,943	5.1	3,857	80	2.1	1,635	38	2.3
2021	98,088	3,439	3.5	3,935	62	1.6	1,643	40	2.4
2022	108,265	4,021	3.7	4,370	67	1.5	1,817	43	2.4
2023*	31,874	1,561	4.9	1,171	20	1.7	489	12	2.5

Table 3. Percentage of Blood Lead Levels (BLL) \geq 3.5 $\mu\text{g}/\text{dL}^1$ Among Tested Children 6 to 17 Years of Age, 2014 – 2023*

Year	Michigan			Genesee County			Flint in ZIPs 48501-48507		
	# Tested for lead	# with BLL \geq 3.5 $\mu\text{g}/\text{dL}^1$	% with BLL \geq 3.5 $\mu\text{g}/\text{dL}^1$	# Tested for lead	# with BLL \geq 3.5 $\mu\text{g}/\text{dL}^1$	% with BLL \geq 3.5 $\mu\text{g}/\text{dL}^1$	# Tested for lead	# with BLL \geq 3.5 $\mu\text{g}/\text{dL}^1$	% with BLL \geq 3.5 $\mu\text{g}/\text{dL}^1$
2014	10,554	460	4.4	786	9	1.1	371	6	1.6
2015	10,432	466	4.5	1,575	21	1.3	1,085	18	1.7
2016	24,316	808	3.3	9,679	118	1.2	7,318	90	1.2
2017	13,670	481	3.5	2,493	27	1.1	1,671	21	1.3
2018	12,069	436	3.6	1,807	20	1.1	1,140	16	1.4
2019	11,602	395	3.4	1,352	16	1.2	862	10	1.2
2020	7,382	243	3.3	778	10	1.3	463	4	0.9
2021	9,010	271	3.0	839	7	0.8	524	4	0.8
2022	9,472	346	3.7	691	10	1.4	405	8	2.0
2023*	2,603	138	5.3	204	3	1.5	103	3	2.9

* Data source: MDHHS Data Warehouse, Data current as of December 07, 2023. Data for 2023 are incomplete and considered provisional

¹ Percent calculated as the number with BLL divided by the number tested

Table 4. Percentage of Blood Lead Levels (BLL) \geq 3.5 $\mu\text{g}/\text{dL}^1$ Among Adults at least 18 Years of Age, 2014 – 2023*

Year	Michigan			Genesee County			Flint in ZIPs 48501-48507		
	# Tested for lead	# with BLL \geq 3.5 $\mu\text{g}/\text{dL}^1$	% with BLL \geq 3.5 $\mu\text{g}/\text{dL}^1$	# Tested for lead	# with BLL \geq 3.5 $\mu\text{g}/\text{dL}^1$	% with BLL \geq 3.5 $\mu\text{g}/\text{dL}^1$	# Tested for lead	# with BLL \geq 3.5 $\mu\text{g}/\text{dL}^1$	% with BLL \geq 3.5 $\mu\text{g}/\text{dL}^1$
2014	10,765	1,524	14.2	437	48	11.0	112	14	12.5
2015	11,820	1,435	12.1	1,250	65	5.2	810	30	3.7
2016	34,532	2,001	5.8	20,223	550	2.7	15,831	434	2.7
2017	18,271	1,437	7.9	5,370	143	2.7	3,229	95	2.9
2018	18,597	1,294	7.0	4,671	93	2.0	2,537	43	1.7
2019	17,466	1,357	7.8	3,677	87	2.4	1,955	32	1.6
2020	13,752	1,126	8.2	1,949	35	1.8	1,050	12	1.1
2021	15,236	1,138	7.5	1,609	42	2.6	880	19	2.2
2022	14,542	1,117	7.7	1,116	38	3.4	556	13	2.3
2023*	3,997	366	9.2	245	12	4.9	117	3	2.6

Table 5. Percentage of Blood Lead Levels (BLL) \geq 3.5 $\mu\text{g}/\text{dL}^1$ Among Tested Residents of All Ages, 2014 – 2023*

Year	Michigan			Genesee County			Flint in ZIPs 48501-48507		
	# Tested for lead	# with BLL \geq 3.5 $\mu\text{g}/\text{dL}^1$	% with BLL \geq 3.5 $\mu\text{g}/\text{dL}^1$	# Tested for lead	# with BLL \geq 3.5 $\mu\text{g}/\text{dL}^1$	% with BLL \geq 3.5 $\mu\text{g}/\text{dL}^1$	# Tested for lead	# with BLL \geq 3.5 $\mu\text{g}/\text{dL}^1$	% with BLL \geq 3.5 $\mu\text{g}/\text{dL}^1$
2014	165,207	11,576	7.0	8,035	419	5.2	3,579	257	7.2
2015	163,803	10,941	6.7	9,809	391	4.0	5,283	254	4.8
2016	216,498	14,247	6.6	41,563	1,126	2.7	29,733	858	2.9
2017	182,200	11,188	6.1	14,585	478	3.3	8,008	326	4.1
2018	172,854	10,067	5.8	12,837	333	2.6	6,656	215	3.2
2019	172,352	9,956	5.8	11,108	341	3.1	5,601	201	3.6
2020	118,325	6,312	5.3	6,584	125	1.9	3,148	54	1.7
2021	122,334	4,848	4.0	6,383	111	1.7	3,047	63	2.1
2022	132,279	5,484	4.1	6,177	115	1.9	2,778	64	2.3
2023*	38,474	2,065	5.4	1,620	35	2.2	709	18	2.5

* Data source: MDHHS Data Warehouse, Data current as of December 07, 2023. Data for 2023 are incomplete and considered provisional

¹ Percent calculated as the number with BLL divided by the number tested