

## BENTON HARBOR DRINKING WATER – LEAD SAMPLING DATA

### Benton Harbor Lead Sampling Summary 2018 - December 2021

Monitoring Period	Number of Compliance Locations Sampled	Number of Locations Over15 ppb*	Percent of Locations Over15 ppb*	Range of Results (ppb)*	Lead 90th Percentile (ppb)*
2016 - 2018 (sampled September 2018)	30	8	27%	0 - 60	22
January - June 2019	46	12	26%	0 - 59	27
July - December 2019	39	10	26%	0 - 72	32
January - June 2020	63	9	14%	0 - 440	23
July - December 2020	67	11	16%	0 - 240	24
January - June 2021	79	11	14%	0 - 889	24
July – December 2021	63	6	10%	0 - 48	15

In 2019 Michigan began requiring both a 1st liter and a 5th liter sample be collected from locations with a lead service line.

The 90th percentile value is calculated using the highest result from each location.

The lead action level is 15 ppb. A lead 90th percentile value greater than 15 ppb (16 ppb or higher) is an exceedance of the lead action level.

\* Based on the highest result from each location sampled.

## Benton Harbor Sampling June - September 2018

Location	Collection Date	1st Liter Result (ppb)	5th Liter Result (ppb)	Highest Result (ppb)*
1	9/17/2018	21	N/S	21
2	9/18/2018	0	N/S	0
3	9/18/2018	2.7	N/S	2.7
4	9/18/2018	0	N/S	0
5	9/18/2018	2.5	N/S	2.5
6	9/18/2018	60	N/S	60
7	9/18/2018	0	N/S	0
8	9/18/2018	2.4	N/S	2.4
9	9/18/2018	0	N/S	0
10	9/18/2018	40	N/S	40
11	9/18/2018	2	N/S	2
12	9/18/2018	14	N/S	14
13	9/18/2018	4.7	N/S	4.7
14	9/18/2018	4.1	N/S	4.1
15	9/18/2018	14	N/S	14
16	9/18/2018	4.9	N/S	4.9
17	9/18/2018	17	N/S	17
18	9/18/2018	16	N/S	16
19	9/18/2018	4.4	N/S	4.4
20	9/19/2018	19	N/S	19
21	9/19/2018	4.9	N/S	4.9
22	9/19/2018	5.5	N/S	5.5
23	9/19/2018	13	N/S	13
24	9/19/2018	11	N/S	11
25	9/19/2018	4.4	N/S	4.4
26	9/23/2018	10	N/S	10
27	9/24/2018	29	N/S	29
28	9/24/2018	5.8	N/S	5.8
29	9/24/2018	22	N/S	22
30	9/24/2018	0	N/S	0

\* Used to calculate 90th percentile value

Location numbers identify the number of unique locations sampled within this monitoring period. N/S = Not Sampled or No Result. Michigan began requiring a 1st *and* 5th liter sample in 2019.

## Benton Harbor Sampling January - June 2019

Location	Collection Date	1st Liter Result (ppb)	5th Liter Result (ppb)	Highest Result (ppb)*
1	6/24/2019	7	5	7
2	6/24/2019	44	23	44
3	6/24/2019	11	19	19
4	6/24/2019	12	17	17
5	6/25/2019	9	8	9
6	6/25/2019	5	5	5
7	6/25/2019	0	0	0
8	6/25/2019	0	0	0
9	6/25/2019	0	0	0
10	6/25/2019	5	12	12
11	6/25/2019	3	2	3
12	6/25/2019	4	2	4
13	6/25/2019	14	18	18
14	6/25/2019	21	13	21
15	6/25/2019	15	6	15
16	6/25/2019	0	0	0
17	6/25/2019	0	0	0
18	6/25/2019	3	3	3
19	6/25/2019	12	12	12
20	6/25/2019	0	0	0
21	6/25/2019	35	22	35
22	6/25/2019	5	3	5
23	6/26/2019	6	7	7
24	6/26/2019	1	0	1
25	6/26/2019	2	3	3
26	6/26/2019	6	3	6
27	6/26/2019	13	5	13
28	6/26/2019	23	8	23
29	6/26/2019	3	3	3
30	6/26/2019	0	0	0
31	6/26/2019	10	36	36
32	6/26/2019	4	11	11
33	6/26/2019	4	0	4
34	6/26/2019	3	2	3
35	6/27/2019	8	31	31
36	6/27/2019	8	5	8

Location	Collection Date	1st Liter Result (ppb)	5th Liter Result (ppb)	Highest Result (ppb)*
37	6/27/2019	0	0	0
38	6/27/2019	29	59	59
39	6/27/2019	2	2	2
40	6/27/2019	4	5	5
41	6/27/2019	14	12	14
42	6/27/2019	4	21	21
43	6/27/2019	2	3	3
44	6/27/2019	22	24	24
45	6/28/2019	7	7	7
46	6/29/2019	1	1	1

\* Used to calculated 90th percentile value

Location numbers identify the number of unique locations sampled within this monitoring period.

## Benton Harbor Sampling July - December 2019

Location	Collection Date	1st Liter Result (ppb)	5th Liter Result (ppb)	Highest Result (ppb)*
1	10/25/2019	0	2	2
2	10/26/2019	4	4	4
3	10/29/2019	7	7	7
4	10/29/2019	2	1	2
5	10/29/2019	2	5	5
6	11/1/2019	4	3	4
7	11/1/2019	0	0	0
8	11/10/2019	4.4	3.9	4.4
9	11/11/2019	0	8	0
10	11/30/2019	3.1	3.1	3.1
11	12/2/2019	0	0	0
12	12/3/2019	22	32	32
13	12/3/2019	10	12	12
14	12/3/2019	0	0	0
15	12/3/2019	0	0	0
16	12/4/2019	16	7.3	16
17	12/5/2019	3.4	1.9	3.4
18	12/5/2019	72	39	72
19	12/9/2019	8.6	5.3	8.6
20	12/9/2019	9.3	1.8	9.3
21	12/10/2019	38	24	38
22	12/10/2019	23	9.4	23
23	12/11/2019	4.9	11	11
24	12/11/2019	9.2	6.3	9.2
25	12/11/2019	25	18	25
26	12/11/2019	33	21	33
27	12/12/2019	3.6	2.2	3.6
28	12/13/2019	0	0	0
29	12/13/2019	0	0	0
30	12/13/2019	0	0	0
31	12/16/2019	3.7	14	14
32	12/16/2019	0	0	0
33	12/17/2019	5.6	0	5.6
34	12/18/2019	2.3	0	2.3
35	12/18/2019	10	7.8	10
36	12/19/2019	19	40	40
37	12/19/2019	18	11	18
38	12/20/2019	0	0	0
39	12/21/2019	19	30	30

\* Used to calculated 90th percentile value

Location numbers identify the number of unique locations sampled within this monitoring period.

## Benton Harbor Sampling January - June 2020

Location	Collection Date	1st Liter Result (ppb)	5th Liter Result (ppb)	Highest Result (ppb)*
1	4/28/2020	3.5	5.1	5.1
2	4/28/2020	0	0	0
3	4/28/2020	0	0	0
4	4/28/2020	1.2	1.6	1.6
5	4/28/2020	0	0	0
6	4/28/2020	5.2	5.1	5.2
7	4/29/2020	3	9.2	9.2
8	4/29/2020	0	0	0
9	4/29/2020	1.3	0	1.3
10	4/29/2020	7.2	10	10
11	4/29/2020	1.7	0	1.7
12	4/29/2020	440	1	440
13	4/29/2020	0	0	0
14	4/29/2020	3.8	5.1	5.1
15	4/29/2020	0	0	0
16	4/29/2020	0	0	0
17	4/29/2020	0	0	0
18	4/30/2020	0	0	0
19	4/30/2020	0	0	0
20	5/5/2020	0	0	0
21	5/6/2020	1.1	0	1.1
22	5/6/2020	1.1	2	2
23	5/6/2020	1.8	3.4	3.4
24	5/6/2020	0	0	0
25	5/7/2020	5.7	14	14
26	5/7/2020	9.2	23	23
27	5/7/2020	8.5	5.3	8.5
28	5/7/2020	0	0	0
29	5/7/2020	6.2	4.3	6.2
30	5/7/2020	2.4	1.3	2.4
31	5/7/2020	0	0	0
32	5/7/2020	0	0	0
33	5/7/2020	100	5.3	100
34	5/7/2020	0	0	0
35	5/7/2020	0	0	0
36	5/7/2020	21	4.2	21

Location	Collection Date	1st Liter Result (ppb)	5th Liter Result (ppb)	Highest Result (ppb)*
37	5/7/2020	3.6	7.9	7.9
38	5/8/2020	3.5	1.4	3.5
39	5/8/2020	2.4	1.3	2.4
40	5/12/2020	0	0	0
41	5/12/2020	29	11	29
42	5/12/2020	0	0	0
43	5/13/2020	0	0	0
44	5/13/2020	0	0	0
45	5/13/2020	0	0	0
46	5/13/2020	2.2	2.4	2.4
47	5/13/2020	0	8.3	8.3
48	5/13/2020	1.4	1.3	1.4
49	5/13/2020	44	81	81
50	5/13/2020	6.4	4.3	6.4
51	5/13/2020	2.4	2	2.4
52	5/13/2020	1.5	1.5	1.5
53	5/13/2020	0	0	0
54	5/13/2020	0	0	0
55	5/13/2020	1.5	0	1.5
56	5/13/2020	22	18	22
57	6/9/2020	23	2.4	23
58	6/10/2020	3.4	2.9	3.4
59	6/10/2020	11	3.9	11
60	6/10/2020	4.4	6.6	6.6
61	6/10/2020	1.4	1.6	1.6
62	6/10/2020	0	0	0
63	6/10/2020	17	23	23

\* Used to calculated 90th percentile value

Location numbers identify the number of unique locations sampled within this monitoring period.

## Benton Harbor Sampling July - December 2020

Location	Collection Date	1st Liter Result (ppb)	5th Liter Result (ppb)	Highest Result (ppb)*
1	10/6/2020	27	40	40
2	10/7/2020	29	62	62
3	10/7/2020	17	20	20
4	10/7/2020	18	19	19
5	10/7/2020	12	13	13
6	10/7/2020	3.4	4.4	4.4
7	10/7/2020	31	20	31
8	10/7/2020	21	24	24
9	10/7/2020	4.6	9.2	9.2
10	10/7/2020	9.8	28	28
11	10/14/2020	6.1	5.1	6.1
12	10/14/2020	4.1	0	4.1
13	10/14/2020	3.8	3.2	3.8
14	10/14/2020	2.9	2.9	2.9
15	10/14/2020	20	1.1	20
16	10/14/2020	6.3	5.1	6.3
17	10/14/2020	8.6	3.9	8.6
18	10/14/2020	1.3	1.1	1.3
19	10/14/2020	5.2	3	5.2
20	10/14/2020	100	1.6	100
21	10/20/2020	7	8.3	8.3
22	10/20/2020	5.2	3.6	5.2
23	10/21/2020	2.1	1.8	2.1
24	10/21/2020	25	25	25
25	10/21/2020	2.6	5.1	5.1
26	10/21/2020	8.7	4.2	8.7
27	10/21/2020	240	50	240
28	10/21/2020	6.9	7.1	7.1
29	10/29/2020	7	11	11
30	10/29/2020	0	0	0
31	10/29/2020	1.8	1.9	1.9
32	10/29/2020	0	0	0
33	10/29/2020	0	0	0
34	11/5/2020	3.6	3.9	3.9
35	11/9/2020	5.5	4.4	5.5



Location	Collection Date	1st Liter Result (ppb)	5th Liter Result (ppb)	Highest Result (ppb)*
36	11/9/2020	4.5	3.2	4.5
37	11/9/2020	4.1	2	4.1
38	11/9/2020	0	1.3	1.3
39	11/9/2020	0	6.6	6.6
40	11/9/2020	0	0	0
41	11/10/2020	0	0	0
42	11/10/2020	2.9	3.7	3.7
43	11/10/2020	0	1.1	1.1
44	11/10/2020	0	1.6	1.6
45	11/10/2020	1.6	1.3	1.6
46	11/10/2020	0	0	0
47	11/10/2020	1.2	2.4	2.4
48	12/2/2020	0	0	0
49	12/3/2020	1	1	1
50	12/4/2020	0	0	0
51	12/4/2020	4	2	4
52	12/4/2020	0	0	0
53	12/4/2020	5	4	5
54	12/4/2020	3	5	5
55	12/4/2020	0	0	0
56	12/4/2020	1	1	1
57	12/4/2020	2	2	2
58	12/4/2020	9	1	9
59	12/4/2020	1	1	1
60	12/4/2020	0	0	0
61	12/4/2020	0	0	0
62	12/4/2020	0	1	1
63	12/4/2020	0	0	0
64	12/4/2020	2	2	2
65	12/4/2020	2	2	2
66	12/4/2020	0	2	2
67	12/4/2020	0	0	0

\* Used to calculated 90th percentile value

Location numbers identify the number of unique locations sampled within this monitoring period.

## Benton Harbor Sampling January - June 2021

Location	Collection Date	1st Liter Result (ppb)	5th Liter Result (ppb)	Highest Result (ppb)*
1	4/21/2021	0	0	0
2	4/21/2021	0	0	0
3	4/21/2021	0	0	0
4	4/21/2021	1	2	2
5	4/21/2021	0	1	1
6	4/21/2021	2	0	2
7	4/21/2021	3	1	3
8	4/21/2021	4	3	4
9	4/22/2021	2	3	3
10	4/22/2021	5	2	5
11	4/22/2021	2	3	3
12	4/22/2021	21	107	107
13	4/22/2021	1	0	1
14	4/22/2021	605	145	605
15	4/23/2021	0	0	0
16	4/23/2021	1	0	1
17	4/23/2021	0	0	0
18	4/27/2021	5	109	109
19	4/27/2021	0	3	3
20	4/27/2021	0	0	0
21	4/27/2021	13	2	13
22	4/27/2021	4	0	4
23	4/27/2021	469	143	469
24	4/28/2021	0	0	0
25	4/28/2021	8	9	9
26	4/29/2021	9	12	12
27	4/29/2021	1	0	1
28	4/29/2021	22	9	22
29	4/29/2021	23	4	23
30	4/29/2021	0	0	0
31	4/29/2021	4	N/S	4
32	4/29/2021	10	10	10
33	4/29/2021	9	14	14
34	4/30/2021	9	8	9
35	5/4/2021	2	0	2
36	5/5/2021	0	0	0

Location	Collection Date	1st Liter Result (ppb)	5th Liter Result (ppb)	Highest Result (ppb)*
37	5/6/2021	0	0	0
38	5/6/2021	0	0	0
39	5/6/2021	1	0	1
40	5/6/2021	1	4	4
41	5/6/2021	0	0	0
42	5/6/2021	18	16	18
43	5/6/2021	0	0	0
44	5/6/2021	0	0	0
45	5/6/2021	2	2	2
46	5/6/2021	39	4	39
47	5/6/2021	11	11	11
48	5/6/2021	41	4	41
49	5/6/2021	7	3	7
50	5/6/2021	0	0	0
51	5/7/2021	889	7	889
52	5/7/2021	2	2	2
53	5/7/2021	0	0	0
54	5/7/2021	2	2	2
55	5/14/2021	2	1	2
56	5/14/2021	0	0	0
57	5/17/2021	1	1	1
58	5/18/2021	0	0	0
59	5/18/2021	1	1	1
60	5/18/2021	6	6	6
61	5/18/2021	6	5	6
62	5/18/2021	0	0	0
63	5/18/2021	1	0	1
64	5/18/2021	0	0	0
65	5/18/2021	0	0	0
66	6/22/2021	0	0	0
67	6/22/2021	3	9	9
68	6/22/2021	0	4	4
69	6/22/2021	28	2	28
70	6/22/2021	0	0	0
71	6/22/2021	7	7	7

Location	Collection Date	1st Liter Result (ppb)	5th Liter Result (ppb)	Highest Result (ppb)*
72	6/22/2021	0	2	2
73	6/22/2021	3	2	3
74	6/22/2021	6	14	14
75	6/22/2021	0	0	0
76	6/22/2021	2	1	2
77	6/23/2021	0	0	0
78	6/24/2021	1	1	1
79	6/24/2021	0	0	0

\* Used to calculated 90th percentile value

Location numbers identify the number of unique locations sampled within this monitoring period. N/S = Not Sampled or No Result