

WATER TESTING AND CORE UPDATE

Michigan Department of Environmental Quality
12/01/2017

5 Prongs of Testing

- ▣ Residential
- ▣ Schools
- ▣ Food Services (MDARD)
- ▣ EBL Investigations (MDHHS)
- ▣ Sentinel Sites

Additional Efforts

- ▣ High Lead Visits
- ▣ CLEAR
- ▣ CORE
- ▣ Fixture Replacement Program
- ▣ Focused Residential Testing Outreach
- ▣ LCR

CORE Efforts to Date

- ▣ Pilot in August of 2016
- ▣ Original Goal of 36 Team Members
- ▣ Expanded to 160 Team Members
- ▣ > 434,000 Door Knocks
- ▣ > 137,000 Conversations

We are Persistent!

- ▣ Focused effort started on April 11, 2017 with 4695 homes without a conversation
- ▣ As of 11/30/17 there are only 136 active water accounts remaining where we have not had at least 1 completed visit
- ▣ We have knocked on these doors an average of 43 times each !

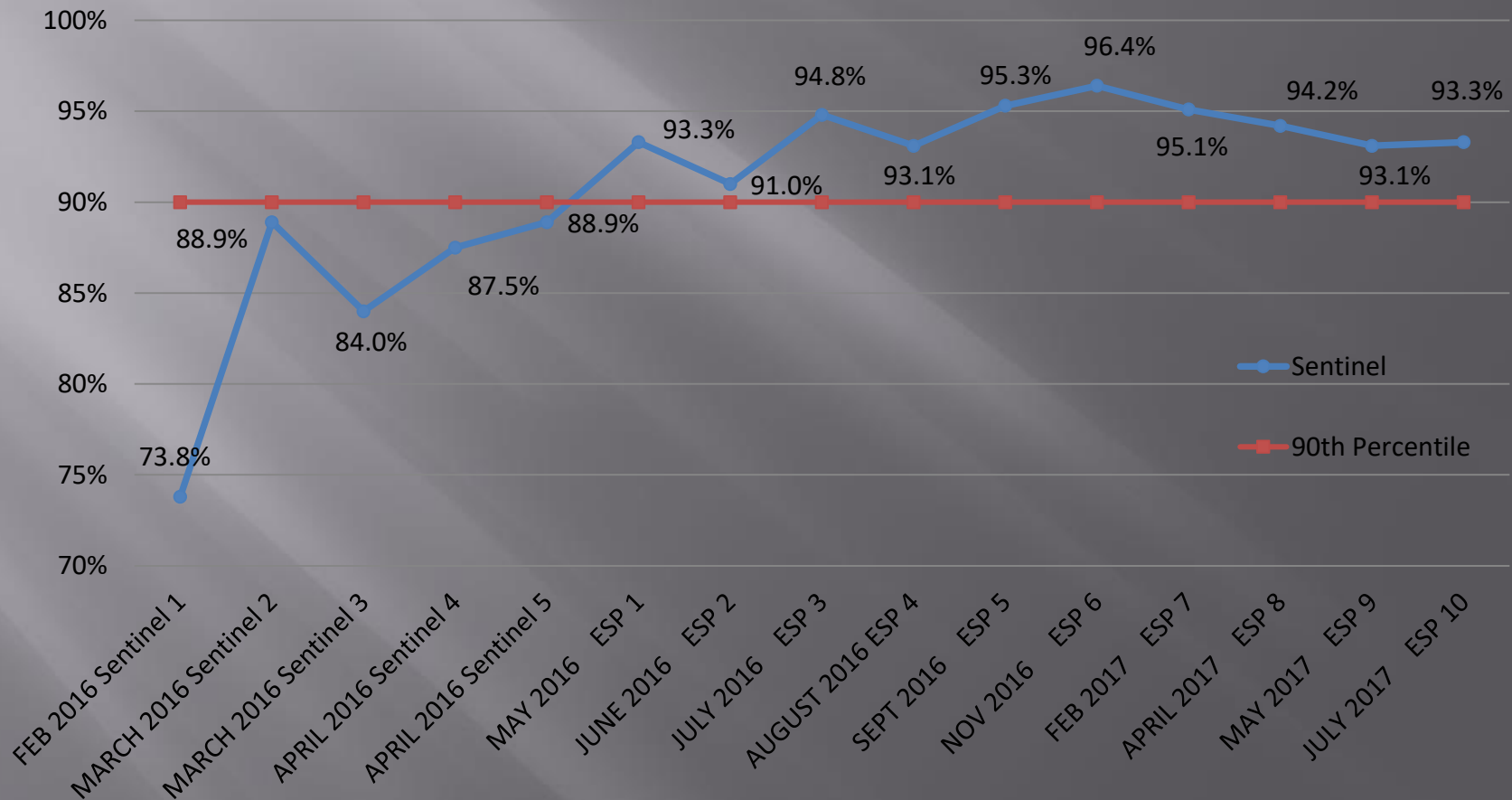
Ward	Number
1	8
2	4
3	7
4	15
5	13
6	19
7	27
8	29
9	14
Total	136

Focused Residential Testing Outreach

- ▣ Approximately ½ of the current active water accounts have submitted at least one drinking water sample
- ▣ The focused outreach began November 3, 2017
- ▣ Efforts so far:
 - 14,156 Door Knocks (only ~500 remaining COB 11/29/17)
 - 4,032 Conversations
 - 2813 kits provided to Residents who agreed to test their water
 - Will be circling back around for another round of door knocks where we did not have a conversation

Tier 1 Sites in Sentinel & ESP

Percent of Tier 1 Sentinel Samples at or Below 15 PPB

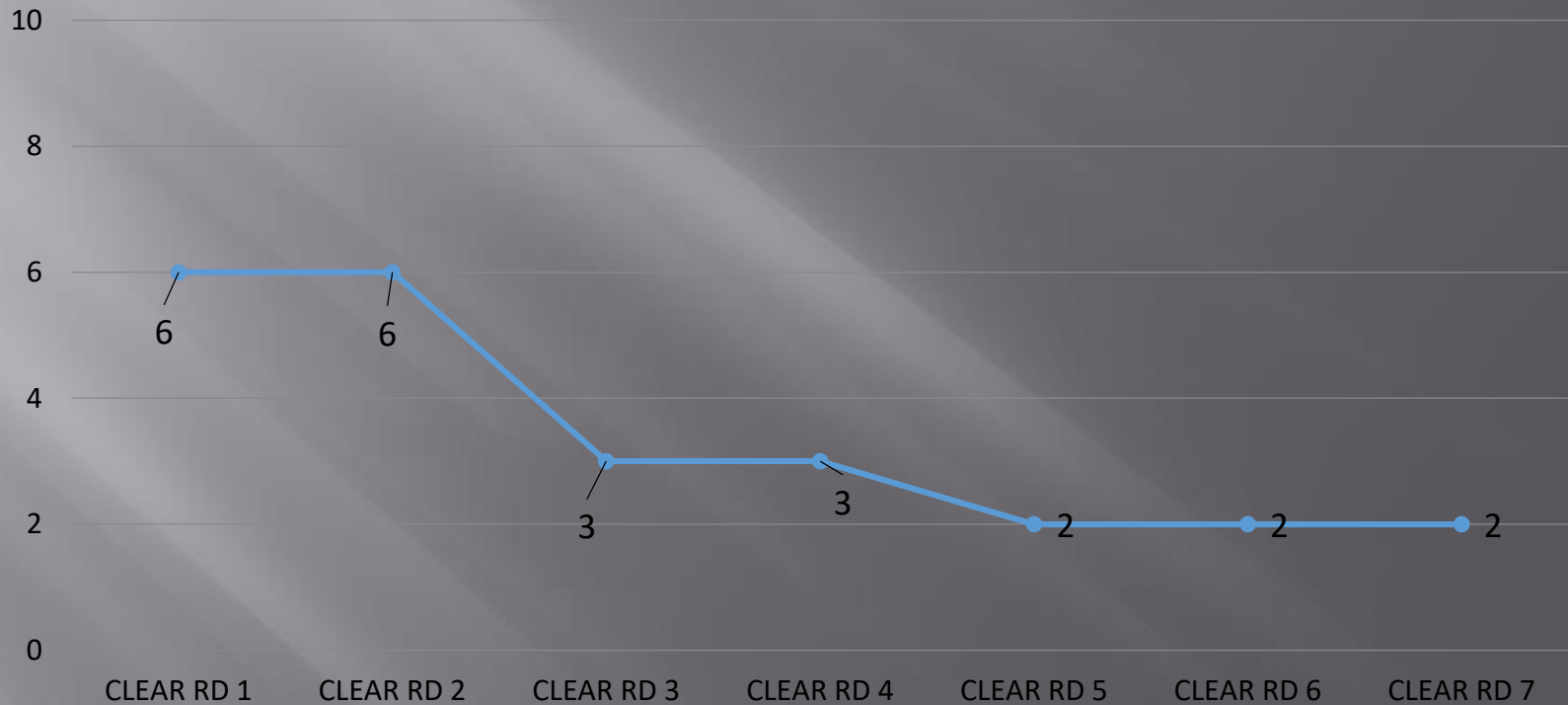


CLEAR

- ▣ Round 1 began in April of 2017
- ▣ Rounds 2-7 conducted June through November
- ▣ Round 1 easily met LCR requirements
- ▣ Data continued to improve
- ▣ Looked at 90th and 95th Percentiles in order to better see trends
- ▣ “Heat Mapping” by Zip Code
- ▣ 100% of the samples in RD 7 met the 15 PPB Action Level for Lead

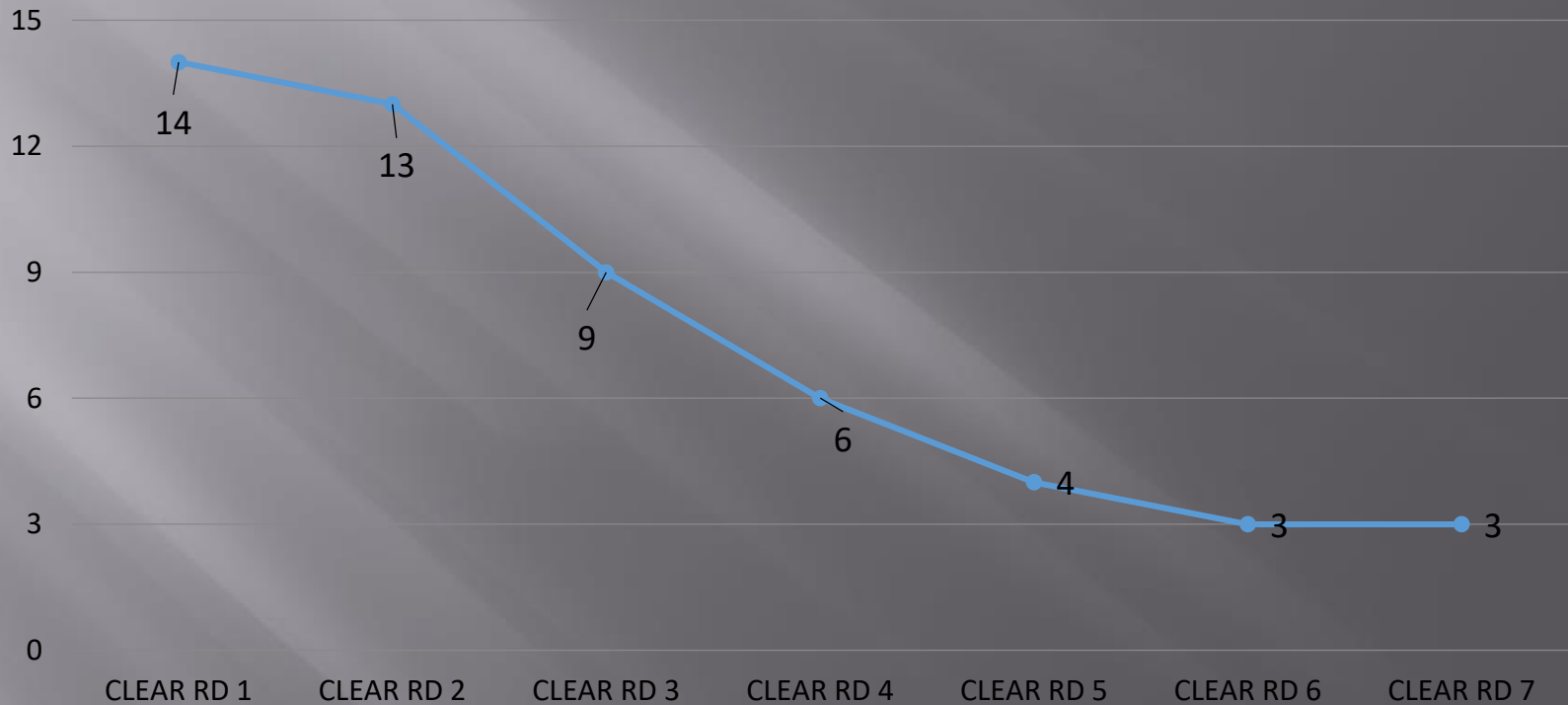
CLEAR 90th Percentiles

Lead 90th Percentile for CLEAR Rounds (PPB)



CLEAR 95th Percentile

Lead 95th Percentile for CLEAR Rounds (PPB)



CLEAR “Heat Mapping”

90th > 10
95th > 15
%ND < 60
% < 5PPB < 90
% > 15 PPB > 5

Round 1 (BEFORE REPLACEMENT)						
Zip Code	90th	95th	%ND	% < 5PPB	%>15PPB	n
48503	7	4	60.00%	93.33%	1.67%	60
48504	3	4	54.05%	94.59%	0.00%	37
48505	5	23	56.82%	86.36%	9.09%	44
48506	9	18	51.92%	84.62%	7.69%	52
48507	12	17	48.78%	85.37%	7.32%	41

90th > 10
95th > 15
%ND < 60
% < 5PPB < 90
% > 15 PPB > 5

Round 2 (AFTER REPLACEMENT)						
Zip Code	90th	95th	%ND	% < 5PPB	%>15PPB	n
48503	4	6	68.89%	93.33%	0.00%	45
48504	1	2	75.00%	96.43%	3.57%	28
48505	3	13	64.71%	91.18%	5.88%	34
48506	11	15	50.00%	79.55%	4.55%	44
48507	3	13	70.00%	90.00%	3.33%	30

90th > 10
95th > 15
%ND < 60
% < 5PPB < 90
% > 15 PPB > 5

Round 3 (AFTER REPLACEMENT)						
Zip Code	90th	95th	%ND	% < 5PPB	%>15PPB	n
48503	1	2	72.22%	100.00%	0.00%	36
48504	2	3	64.00%	96.00%	0.00%	25
48505	2	4	64.86%	94.59%	2.70%	37
48506	10	128	54.55%	81.82%	9.09%	44
48507	3	5	68.57%	94.29%	0.00%	35

90th > 10
95th > 15
%ND < 60
% < 5PPB < 90
% > 15 PPB > 5

Round 4 (AFTER REPLACEMENT)						
Zip Code	90th	95th	%ND	% < 5PPB	%>15PPB	n
48503	4	7	70.50%	88.60%	2.27%	44
48504	2	3	76.47%	97.06%	0.00%	34
48505	3	4	75.00%	94.44%	0.00%	36
48506	4	4	67.50%	95.00%	2.50%	40
48507	2	5	69.70%	90.91%	3.03%	33

CLEAR “Heat Mapping”

90th > 10
95th > 15
%ND < 60
% < 5PPB < 90
% > 15 PPB > 5

Round 5 (AFTER REPLACEMENT)						
Zip Code	90th	95th	%ND	% < 5PPB	%>15PPB	n
48503	3	4	64.10%	94.90%	0.00%	39
48504	3	7	78.13%	90.63%	3.13%	32
48505	1	1	80.00%	97.14%	0.00%	35
48506	2	3	72.73%	100.00%	0.00%	33
48507	2	3	60.61%	96.77%	0.00%	31

90th > 10
95th > 15
%ND < 60
% < 5PPB < 90
% > 15 PPB > 5

Round 6 (AFTER REPLACEMENT)						
Zip Code	90th	95th	%ND	% < 5PPB	%>15PPB	n
48503	2	6	67.60%	91.90%	0.00%	37
48504	3	4	64.00%	100.00%	0.00%	25
48505	1	6	78.60%	92.90%	3.57%	28
48506	3	3	67.60%	100.00%	0.00%	34
48507	1	2	75.90%	100.00%	0.00%	29

90th > 10
95th > 15
%ND < 60
% < 5PPB < 90
% > 15 PPB > 5

Round 7 (AFTER REPLACEMENT)						
Zip Code	90th	95th	%ND	% < 5PPB	%>15PPB	n
48503	2	2	64.29%	96.43%	0.00%	28
48504	1	2	79.31%	100.00%	0.00%	29
48505	2	3	66.67%	96.30%	0.00%	27
48506	3	3	67.57%	94.59%	0.00%	37
48507	1	3	88.00%	96.00%	0.00%	25

Schools Testing

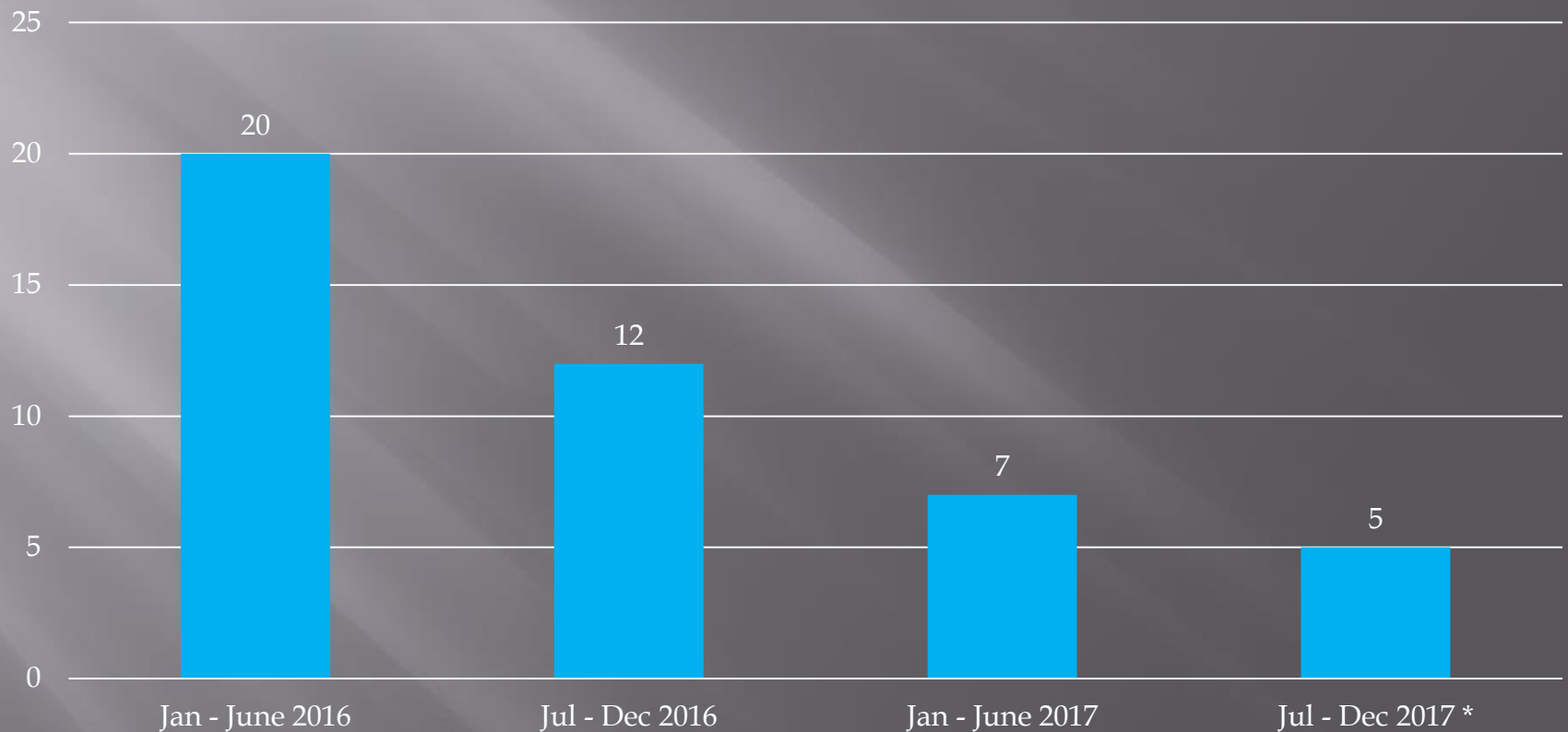
- ▣ New Round of Testing began Early November
 - 250ml sample size
 - Overnight stagnation after facility was flushed
 - Unfiltered wherever possible (In-line filters have no bypass)

Schools Testing

- ▣ Aggregated results for facilities tested so far:
 - Approximately 35 Facilities (~90 facilities total)
 - 746 Samples total
 - 606 Samples (81.2%) were Not Detected
 - 712 Samples (95.4%) met the Bottled Water Standard of 5 PPB or less
 - 9 samples (1.2%) exceeded 15 PPB (8 facilities)

LCR Monitoring

90th Percentile for Lead by Monitoring Period



■ *Current Monitoring Period is not Officially Closed

Questions?