

Robinson, Mikelle (DHHS)

From: Robinson, Mikelle (DCH)
Sent: Thursday, September 24, 2015 2:14 PM
To: Lasher, GERALYN (DCH); Hertel, Elizabeth (DCH)
Cc: Moran, Susan (DCH); Miller, Mark (DCH)
Subject: FW: Env. Health Perspectives on Washington DC. lead in Drinking Water
Attachments: Pages from CLPPP 2013 Data Report.pdf; 2014 Lead Testing and EBL 0-5 072015.pdf

FYI – on the call with EPA that Wes participated in today.

From: Priem, Wesley F. (DCH)
Sent: Thursday, September 24, 2015 1:31 PM
To: Klevs, Mardi (klevs.mardi@epa.gov); Martig, Anton (Tony) (martig.anton@epa.gov)
Cc: Miller, Corinne (DCH); Robinson, Mikelle (DCH); Dykema, Linda D. (DCH); Groetsch, Kory J. (DCH); Peeler, Nancy (DCH); Scott, Robert L. (DCH)
Subject: FW: Env. Health Perspectives on Washington DC. lead in Drinking Water

Mardi and Tony;

I will be sending you at three emails regarding the Flint lead in water concern. This being the article on the D.C. study and a summary of our meeting. I will also send you a response DEQ has prepared and also the M Live article.

Summary from our meeting this morning:

1. Dialog regarding the DEG Frequently asked questions and there was no objections to the information presented.
2. Discussion on who was taking the lead from the municipalities whether it was the city of Genesee County Health Department. It appears the city and mayor is taking the lead.
3. Local Health Department is working on preparing information for the public
4. Information being prepared from our, State, CLPPP and this information can still be revised to include more information on drinking water.
5. Our Environmental Toxicological Section can provide assistance if needed for the public outreach materials, although the staff person who would do this work is on vacation till next week.
6. CLPPP is working to review the epi study and will prepare a power point to explain what the results imply. They will work closely with the Department's epidemiologist who prepared the first results to ensure validity and the proper discussion of the study.
7. The idea of providing filters to the public was discussed. A call to the National Sanitation Foundation was made to discuss this issue further and determine proper filters.
8. CLPPP can provide EPA with 2013- 2014. See attached. 2015 data-to-date is not yet available but can be later if needed.
9. Our department was informed while we were meeting the Flint advocates along with others are to be holding a press conference at 3:00 today. The advocates are demanding that the water supply revert back to the city of Detroit's drinking water.

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1868000/>

Excerpt below with the plan they implemented.

Following the LCR (U.S. EPA 1991), guidance from the U.S. EPA, consultation with the DC Department of Health, and its own contingency plans, in 2003 the DCWASA implemented plans for families living in homes with lead lines or testing above the LAL:

- Advisories were disseminated recommending that water lines should be flushed for 10 min before consuming drinking water.
- Specific advice for limiting exposure to children < 6 years of age and pregnant and nursing women was sent to all households with suspected lead service lines, in the form of flyers prepared in English, Spanish, Korean, Chinese, Vietnamese, and Amharic.
- Filters were distributed to homes with suspected lead service lines and later to all homes with a test result > 15 ppb (the LAL). Replacement filter cartridges were then sent to the same homes at 6-month intervals for the duration of the period of the exceedance, ending in June 2006.
- The board of directors of the DCWASA decided to adopt a voluntarily accelerated program to replace the public segment of all lead service lines in the District of Columbia, exceeding requirements of the LCR (U.S. EPA 1991).
- Homeowners were offered replacement of the private segment of lead service lines on their property, at cost, at the same time that the public segments of the lead service lines were replaced. When the public line is replaced but the private line is not, lead levels are reduced proportionally to the length of pipe replaced but not eliminated.
- Low-cost financing was arranged with a local bank for qualifying property owners who wished to replace the private part of the lead service line on their property. The DC government later made grants available to low-income eligible residents for this purpose.
- The DCWASA offered free water testing to any customer in the distribution area who requested it.

Children Tested for Lead Poisoning -- Calendar Year 2013

All Counties in Michigan

Children less than Six Years of Age

County	%Pre-1950 Housing	%Pre-1978 Housing	Children less than Six Years of Age	Children Tested		Children Tested, by Highest Blood Lead Level (BLL)									
				Number of Children Tested	% Tested	<5 ug/dL (capillary or venous)	5 to 9 ug/dL (capillary or venous)	Capillary >= 10 ug/dL, not confirmed by venous	Confirmed 10-19 ug/dL (venous only)	Confirmed 20-44 ug/dL (venous only)	Confirmed >= 45 ug/dL (venous only)	Total >= 5 ug/dL	Total Confirmed >= 10 ug/dL	% with BLL >= 5 ug/dL	% with Confirmed BLL >= 10 ug/dL
Alcona	12.4	61.5	415	51	12.3	50	1	0	0	0	0	1	0	2.0	0.0
Alger	29.5	64.1	461	76	16.5	75	1	0	0	0	0	1	0	1.3	0.0
Allegan	23.2	51.1	9,036	1,159	12.8	1,124	31	2	2	0	0	35	2	3.0	0.2
Alpena	25.3	71.6	1,766	302	17.1	295	6	1	0	0	0	7	0	2.3	0.0
Antrim	18.8	52.6	1,393	258	18.5	252	5	1	0	0	0	6	0	2.3	0.0
Arenac	19.8	58.2	894	163	18.2	161	2	0	0	0	0	2	0	1.2	0.0
Baraga	34.0	71.7	510	128	25.1	127	1	0	0	0	0	1	0	0.8	0.0
Barry	27.1	57.3	4,307	465	10.8	454	10	2	0	0	0	12	0	2.6	0.0
Bay	33.9	75.6	7,477	1,421	19.0	1,350	63	0	7	1	0	71	8	5.0	0.6
Benzie	18.6	46.3	1,119	231	20.6	225	6	0	0	0	0	6	0	2.6	0.0
Berrien	28.6	72.2	11,779	1,728	14.7	1,664	52	0	10	2	0	64	12	3.7	0.7
Branch	30.9	65.3	3,524	765	21.7	726	35	3	0	1	0	39	1	5.1	0.1
Calhoun	36.1	75.3	10,445	1,970	18.9	1,902	54	3	7	4	0	68	11	3.5	0.6
Cass	22.4	59.9	3,615	458	12.7	438	16	3	1	0	0	20	1	4.4	0.2
Charlevoix	25.3	54.4	1,655	297	17.9	295	2	0	0	0	0	2	0	0.7	0.0
Cheboygan	20.9	53.5	1,462	266	18.2	264	0	2	0	0	0	2	0	0.8	0.0
Chippewa	25.1	58.6	2,374	435	18.3	430	5	0	0	0	0	5	0	1.1	0.0
Clare	14.5	58.8	2,110	414	19.6	411	3	0	0	0	0	3	0	0.7	0.0
Clinton	22.5	52.8	5,279	565	10.7	553	12	0	0	0	0	12	0	2.1	0.0
Crawford	13.7	55.6	775	87	11.2	81	6	0	0	0	0	6	0	6.9	0.0
Delta	33.3	68.0	2,441	453	18.6	435	15	2	1	0	0	18	1	4.0	0.2
Dickinson	38.9	71.7	1,661	303	18.2	296	4	2	1	0	0	7	1	2.3	0.3
Eaton	20.4	56.4	7,375	1,132	15.3	1,117	13	2	0	0	0	15	0	1.3	0.0
Emmet	23.0	48.3	2,080	322	15.5	320	2	0	0	0	0	2	0	0.6	0.0
Genesee	19.9	68.0	32,974	7,067	21.4	6,909	134	13	5	6	0	158	11	2.2	0.2
Gladwin	12.4	49.5	1,527	245	16.0	240	5	0	0	0	0	5	0	2.0	0.0
Gogebic	50.0	76.7	869	193	22.2	188	5	0	0	0	0	5	0	2.6	0.0
Grand Traverse	14.7	43.5	6,080	1,032	17.0	995	30	7	0	0	0	37	0	3.6	0.0
Gratiot	34.7	69.8	2,814	475	16.9	468	7	0	0	0	0	7	0	1.5	0.0
Hillsdale	36.5	63.2	3,339	788	23.6	762	24	1	1	0	0	26	1	3.3	0.1
Houghton	53.4	75.5	2,528	538	21.3	514	23	0	0	1	0	24	1	4.5	0.2
Huron	31.8	68.9	1,901	394	20.7	371	22	0	1	0	0	23	1	5.8	0.3
Ingham	24.9	68.2	19,293	4,702	24.4	4,487	208	2	4	1	0	215	5	4.6	0.1
Ionia	35.8	63.0	4,937	825	16.7	811	12	1	1	0	0	14	1	1.7	0.1
Iosco	12.7	65.6	1,183	146	12.3	142	3	1	0	0	0	4	0	2.7	0.0
Iron	44.1	72.1	579	149	25.7	146	3	0	0	0	0	3	0	2.0	0.0
Isabella	16.3	48.2	4,294	731	17.0	723	6	1	0	1	0	8	1	1.1	0.1
Jackson	33.0	67.9	11,435	2,965	25.9	2,777	162	12	13	2	1	190	16	6.4	0.5
Kalamazoo	22.5	62.6	18,472	3,536	19.1	3,411	104	12	10	1	0	127	11	3.6	0.3
Kalkaska	13.2	49.3	1,218	223	18.3	219	4	0	0	0	0	4	0	1.8	0.0
Kent	24.8	59.2	52,878	10,376	19.6	9,825	483	15	43	9	1	551	53	5.3	0.5
Keweenaw	46.9	77.6	119	28	23.5	26	2	0	0	0	0	2	0	7.1	0.0
Lake	12.5	52.6	597	121	20.3	120	1	0	0	0	0	1	0	0.8	0.0
Lapeer	20.4	52.9	5,814	1,052	18.1	1,013	38	1	0	0	0	39	0	3.7	0.0
Leelanau	17.9	46.5	1,119	213	19.0	206	6	1	0	0	0	7	0	3.3	0.0

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All Counties in Michigan

Children less than Six Years of Age

				Children Tested		Children Tested, by Highest Blood Lead Level (BLL)									
County	%Pre-1950 Housing	%Pre-1978 Housing	Children less than Six Years of Age	Number of Children Tested	% Tested	<5 ug/dL (capillary or venous)	5 to 9 ug/dL (capillary or venous)	Capillary >= 10 ug/dL, not confirmed by venous	Confirmed 10-19 ug/dL (venous only)	Confirmed 20-44 ug/dL (venous only)	Confirmed >= 45 ug/dL (venous only)	Total >= 5 ug/dL	Total Confirmed >= 10 ug/dL	% with BLL >= 5 ug/dL	% with Confirmed BLL >= 10 ug/dL
Lenawee	33.6	67.2	6,995	1,512	21.6	1,425	72	11	3	1	0	87	4	5.8	0.3
Livingston	11.4	39.0	12,406	1,106	8.9	1,094	11	0	0	1	0	12	1	1.1	0.1
Luce	23.8	64.3	374	73	19.5	71	2	0	0	0	0	2	0	2.7	0.0
Mackinac	23.4	58.6	560	116	20.7	110	6	0	0	0	0	6	0	5.2	0.0
Macomb	9.3	59.1	58,786	10,093	17.2	9,937	130	8	12	6	2	158	20	1.6	0.2
Manistee	28.8	63.9	1,324	248	18.7	233	12	1	2	0	0	15	2	6.0	0.8
Marquette	27.9	69.4	4,050	514	12.7	494	17	1	2	0	0	20	2	3.9	0.4
Mason	32.1	64.6	1,886	362	19.2	323	33	5	2	0	0	40	2	11.0	0.6
Mecosta	18.2	53.4	2,644	367	13.9	361	6	0	0	0	0	6	0	1.6	0.0
Menominee	35.4	73.2	1,434	262	18.3	252	9	0	1	0	0	10	1	3.8	0.4
Midland	15.2	58.7	5,746	501	8.7	493	7	1	0	0	0	8	0	1.6	0.0
Missaukee	21.2	56.2	1,120	133	11.9	133	0	0	0	0	0	0	0	0.0	0.0
Monroe	23.0	59.0	10,597	1,705	16.1	1,663	39	3	0	0	0	42	0	2.5	0.0
Montcalm	27.3	57.7	4,666	615	13.2	607	8	0	0	0	0	8	0	1.3	0.0
Montmorency	18.1	58.6	424	80	18.9	80	0	0	0	0	0	0	0	0.0	0.0
Muskegon	25.8	66.2	13,543	3,022	22.3	2,877	124	7	12	2	0	145	14	4.8	0.5
Newaygo	19.3	53.6	3,686	426	11.6	422	4	0	0	0	0	4	0	0.9	0.0
Oakland	14.7	60.5	83,905	14,244	17.0	14,025	188	8	20	4	1	221	25	1.6	0.2
Oceana	25.8	57.8	2,130	515	24.2	498	14	1	2	0	0	17	2	3.3	0.4
Ogemaw	12.8	61.6	1,271	96	7.6	94	2	0	0	0	0	2	0	2.1	0.0
Ontonagon	39.1	73.2	280	48	17.1	48	0	0	0	0	0	0	0	0.0	0.0
Osceola	22.6	56.6	1,748	362	20.7	350	8	0	1	2	1	12	4	3.3	1.1
Oscoda	17.8	62.1	541	48	8.9	47	1	0	0	0	0	1	0	2.1	0.0
Otsego	12.2	50.3	1,654	316	19.1	315	1	0	0	0	0	1	0	0.3	0.0
Ottawa	15.7	45.3	21,541	2,928	13.6	2,836	82	7	3	0	0	92	3	3.1	0.1
Presque Isle	21.1	66.3	640	121	18.9	121	0	0	0	0	0	0	0	0.0	0.0
Roscommon	13.1	58.7	1,159	216	18.6	212	4	0	0	0	0	4	0	1.9	0.0
Saginaw	28.1	73.1	14,346	3,775	26.3	3,646	110	6	12	1	0	129	13	3.4	0.3
St Clair	25.8	59.4	11,371	2,597	22.8	2,477	109	9	3	0	0	121	3	4.7	0.1
St Joseph	27.5	65.1	5,155	981	19.0	943	32	4	1	1	0	38	2	3.9	0.2
Sanilac	30.7	64.6	3,012	544	18.1	527	16	0	1	0	0	17	1	3.1	0.2
Schoolcraft	25.5	63.3	465	88	18.9	88	0	0	0	0	0	0	0	0.0	0.0
Shiawassee	33.9	68.2	4,734	1,230	26.0	1,184	40	1	3	2	0	46	5	3.7	0.4
Tuscola	30.2	67.4	3,772	906	24.0	885	21	0	0	0	0	21	0	2.3	0.0
Van Buren	23.3	58.1	5,982	879	14.7	859	15	1	4	0	0	20	4	2.3	0.5
Washtenaw	17.2	56.5	22,904	2,743	12.0	2,696	43	1	2	1	0	47	3	1.7	0.1
Wayne ex Det	22.6	74.5	82,994	19,466	23.5	18,980	408	27	43	11	0	489	54	2.5	0.3
Wexford	23.0	53.7	2,588	329	12.7	319	9	1	0	0	0	10	0	3.0	0.0
Detroit, City of	62.2	93.2	60,638	25,026	41.3	23,030	1,583	63	281	62	7	1,996	350	8.0	1.4
MICHIGAN	24.7	64.8	720,994	147,841	20.5	142,153	4,793	256	517	123	13	5,702	653	3.9	0.4

Sources: US Census Bureau, Census 2010 (Pre-1950 Housing and Pre-1978 Housing) and American Community Survey 2012 5-year estimates (Detroit and county populations); MDCH Data Warehouse (children tested)

April 30, 2014

Children Tested for Lead Poisoning -- Calendar Year 2014

All Counties in Michigan

Children less than Six Years of Age

				Children Tested		Children Tested, by Highest Blood Lead Level (BLL)										
County	%Pre-1950 Housing	%Pre-1978 Housing	Children less than Six Years of Age	Number of Children Tested	% Tested	<5 ug/dL	5 to 9 ug/dL, not confirmed by venous	≥= 10 ug/dL, not confirmed by venous	Confirmed < 5 ug/dL (venous only)	Confirmed 10-14 ug/dL (venous only)	Confirmed 15-14 ug/dL (venous only)	Confirmed ≥15 ug/dL (venous only)	Total confirmed ≥ 5 ug/dL	% with confirmed BLL ≥= 5 ug/dL	Total ≥ 5 ug/dL, confirmed & unconfirmed*	% with BLL ≥= 5 ug/dL, confirmed & unconfirmed*
Alcona	12.4	61.5	398	53	13.3	51	2	0	0	0	0	0	0	0.0	2	3.8
Alger	29.5	64.1	427	92	21.5	90	1	0	0	1	0	0	1	1.1	2	2.2
Allegan	23.2	51.1	8,806	1,208	13.7	1,177	26	2	3	0	0	0	3	0.2	31	2.6
Alpena	25.3	71.6	1,758	257	14.6	248	7	1	1	0	0	0	1	0.4	9	3.5
Antrim	18.8	52.6	1,370	260	19.0	258	0	0	2	0	0	0	2	0.8	2	0.8
Arenac	19.8	58.2	870	186	21.4	185	1	0	0	0	0	0	0	0.0	1	0.5
Baraga	34.0	71.7	477	135	28.3	134	1	0	0	0	0	0	0	0.0	1	0.7
Barry	27.1	57.3	4,143	491	11.9	468	19	0	3	1	0	0	4	0.8	23	4.7
Bay	33.9	75.6	7,322	1,408	19.2	1,358	31	2	10	3	3	1	17	1.2	50	3.6
Benzie	18.6	46.3	1,041	268	25.7	266	2	0	0	0	0	0	0	0.0	2	0.7
Berrien	28.6	72.2	11,681	1,943	16.6	1,884	24	5	21	4	5	0	30	1.5	59	3.0
Branch	30.9	65.3	3,506	668	19.1	645	18	1	1	3	0	0	4	0.6	23	3.4
Calhoun	36.1	75.3	10,149	2,390	23.5	2,290	36	0	51	7	6	0	64	2.7	100	4.2
Cass	22.4	59.9	3,444	426	12.4	414	7	1	3	1	0	0	4	0.9	12	2.8
Charlevoix	25.3	54.4	1,624	295	18.2	294	1	0	0	0	0	0	0	0.0	1	0.3
Cheboygan	20.9	53.5	1,414	286	20.2	279	6	0	1	0	0	0	1	0.3	7	2.4
Chippewa	25.1	58.6	2,345	440	18.8	436	1	0	3	0	0	0	3	0.7	4	0.9
Clare	14.5	58.8	2,083	446	21.4	442	4	0	0	0	0	0	0	0.0	4	0.9
Clinton	22.5	52.8	5,140	585	11.4	579	1	0	5	0	0	0	5	0.9	6	1.0
Crawford	13.7	55.6	727	85	11.7	84	1	0	0	0	0	0	0	0.0	1	1.2
Delta	33.3	68.0	2,388	413	17.3	397	14	0	1	0	1	0	2	0.5	16	3.9
Dickinson	38.9	71.7	1,575	318	20.2	317	0	0	1	0	0	0	1	0.3	1	0.3
Eaton	20.4	56.4	7,356	1,140	15.5	1,113	20	3	4	0	0	0	4	0.4	27	2.4
Emmet	23.0	48.3	2,042	362	17.7	362	0	0	0	0	0	0	0	0.0	0	0.0
Genesee	19.9	68.0	31,997	6,824	21.3	6,646	97	11	56	9	5	0	70	1.0	178	2.6
Gladwin	12.4	49.5	1,495	291	19.5	291	0	0	0	0	0	0	0	0.0	0	0.0
Gogebic	50.0	76.7	855	154	18.0	152	2	0	0	0	0	0	0	0.0	2	1.3
Grand Traverse	14.7	43.5	6,000	1,371	22.9	1,359	6	3	3	0	0	0	3	0.2	12	0.9
Gratiot	34.7	69.8	2,754	496	18.0	491	4	0	1	0	0	0	1	0.2	5	1.0
Hillsdale	36.5	63.2	3,283	814	24.8	795	14	2	3	0	0	0	3	0.4	19	2.3
Houghton	53.4	75.5	2,477	599	24.2	585	6	0	4	2	2	0	8	1.3	14	2.3
Huron	31.8	68.9	1,873	393	21.0	381	9	0	2	1	0	0	3	0.8	12	3.1
Ingham	24.9	68.2	19,248	4,747	24.7	4,606	94	5	25	11	6	0	42	0.9	141	3.0
Ionia	35.8	63.0	4,878	843	17.3	816	20	2	4	0	1	0	5	0.6	27	3.2
Iosco	12.7	65.6	1,233	150	12.2	146	3	0	1	0	0	0	1	0.7	4	2.7
Iron	44.1	72.1	573	138	24.1	135	3	0	0	0	0	0	0	0.0	3	2.2
Isabella	16.3	48.2	4,208	640	15.2	632	7	0	1	0	0	0	1	0.2	8	1.3
Jackson	33.0	67.9	11,296	2,757	24.4	2,602	107	14	27	3	4	0	34	1.2	155	5.6
Kalamazoo	22.5	62.6	18,588	3,257	17.5	3,172	48	7	23	4	2	1	30	0.9	85	2.6
Kalkaska	13.2	49.3	1,180	217	18.4	216	1	0	0	0	0	0	0	0.0	1	0.5
Kent	24.8	59.2	52,655	10,115	19.2	9,645	325	8	89	22	26	0	137	1.4	470	4.6
Keweenaw	46.9	77.6	115	25	21.7	23	2	0	0	0	0	0	0	0.0	2	8.0
Lake	12.5	52.6	585	120	20.5	118	2	0	0	0	0	0	0	0.0	2	1.7
Lapeer	20.4	52.9	5,687	919	16.2	890	22	3	3	0	1	0	4	0.4	29	3.2
Leelanau	17.9	46.5	1,111	239	21.5	234	4	1	0	0	0	0	0	0.0	5	2.1
Lenawee	33.6	67.2	6,911	1,196	17.3	1,074	78	16	21	3	4	0	28	2.3	122	10.2

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All Counties in Michigan

Children less than Six Years of Age

				Children Tested		Children Tested, by Highest Blood Lead Level (BLL)											
County	%Pre-1950 Housing	%Pre-1978 Housing	Children less than Six Years of Age	Number of Children Tested	% Tested	<5 ug/dL	5 to 9 ug/dL, not confirmed by venous	≥ 10 ug/dL, not confirmed by venous	Confirmed 5-9 ug/dL (venous only)	Confirmed 10-14 ug/dL (venous only)	Confirmed 15-44 ug/dL (venous only)	Confirmed ≥45 ug/dL (venous only)	Total confirmed ≥ 5 ug/dL	% with confirmed BLL ≥ 5 ug/dL	Total ≥ 5 ug/dL, confirmed & unconfirmed*	% with BLL ≥ 5 ug/dL, confirmed & unconfirmed*	
Livingston	11.4	39.0	12,104	1,026	8.5	1,017	4	0	4	1	0	0	5	0.5	9	0.9	
Luce	23.8	64.3	370	88	23.8	88	0	0	0	0	0	0	0	0.0	0	0.0	
Mackinac	23.4	58.6	587	130	22.1	129	1	0	0	0	0	0	0	0.0	1	0.8	
Macomb	9.3	59.1	57,878	9,525	16.5	9,397	73	6	38	2	7	2	49	0.5	128	1.3	
Manistee	28.8	63.9	1,307	284	21.7	271	10	0	1	0	2	0	3	1.1	13	4.6	
Marquette	27.9	69.4	4,029	471	11.7	458	3	2	8	0	0	0	8	1.7	13	2.8	
Mason	32.1	64.6	1,864	414	22.2	387	25	0	2	0	0	0	2	0.5	27	6.5	
Mecosta	18.2	53.4	2,520	316	12.5	314	0	0	0	0	2	0	2	0.6	2	0.6	
Menominee	35.4	73.2	1,375	261	19.0	245	11	1	3	0	1	0	4	1.5	16	6.1	
Midland	15.2	58.7	5,685	477	8.4	472	2	0	2	1	0	0	3	0.6	5	1.0	
Missaukee	21.2	56.2	1,111	133	12.0	132	0	0	0	1	0	0	1	0.8	1	0.8	
Monroe	23.0	59.0	10,355	1,571	15.2	1,553	15	1	1	1	0	0	2	0.1	18	1.1	
Montcalm	27.3	57.7	4,527	748	16.5	735	6	0	5	1	1	0	7	0.9	13	1.7	
Montmorency	18.1	58.6	404	83	20.5	82	1	0	0	0	0	0	0	0.0	1	1.2	
Muskegon	25.8	66.2	13,224	2,572	19.4	2,415	66	13	62	10	6	0	78	3.0	157	6.1	
Newaygo	19.3	53.6	3,581	447	12.5	440	6	1	0	0	0	0	0	0.0	7	1.6	
Oakland	14.7	60.5	83,501	14,308	17.1	14,102	94	8	71	20	13	0	104	0.7	206	1.4	
Oceana	25.8	57.8	2,091	516	24.7	506	5	0	2	3	0	0	5	1.0	10	1.9	
Ogemaw	12.8	61.6	1,289	102	7.9	101	0	0	1	0	0	0	1	1.0	1	1.0	
Ontonagon	39.1	73.2	251	48	19.1	46	2	0	0	0	0	0	0	0.0	2	4.2	
Osceola	22.6	56.6	1,723	334	19.4	324	4	0	2	2	2	0	6	1.8	10	3.0	
Oscoda	17.8	62.1	521	35	6.7	32	2	1	0	0	0	0	0	0.0	3	8.6	
Otsego	12.2	50.3	1,641	325	19.8	324	1	0	0	0	0	0	0	0.0	1	0.3	
Ottawa	15.7	45.3	21,390	3,012	14.1	2,931	59	5	16	1	0	0	17	0.6	81	2.7	
Presque Isle	21.1	66.3	597	111	18.6	109	2	0	0	0	0	0	0	0.0	2	1.8	
Roscommon	13.1	58.7	1,156	218	18.9	218	0	0	0	0	0	0	0	0.0	0	0.0	
Saginaw	28.1	73.1	14,029	3,670	26.2	3,548	76	8	25	7	6	0	38	1.0	122	3.3	
Saint Clair	25.8	59.4	11,046	2,731	24.7	2,655	46	7	15	5	3	0	23	0.8	76	2.8	
Saint Joseph	27.5	65.1	5,125	1,012	19.7	971	27	4	7	2	1	0	10	1.0	41	4.1	
Sanilac	30.7	64.6	2,879	523	18.2	517	4	0	1	1	0	0	2	0.4	6	1.1	
Schoolcraft	25.5	63.3	471	99	21.0	98	0	0	1	0	0	0	1	1.0	1	1.0	
Shiawassee	33.9	68.2	4,622	1,169	25.3	1,131	19	2	15	2	0	0	17	1.5	38	3.3	
Tuscola	30.2	67.4	3,579	886	24.8	874	10	0	0	2	0	0	2	0.2	12	1.4	
Van Buren	23.3	58.1	5,884	862	14.6	832	9	1	17	1	2	0	20	2.3	30	3.5	
Washtenaw	17.2	56.5	22,833	2,604	11.4	2,572	15	2	10	2	3	0	15	0.6	32	1.2	
Wayne ex Det	22.6	74.5	82,002	18,348	22.4	16,021	164	12	185	33	15	0	233	1.3	409	2.2	
Wexford	23.0	53.7	2,582	362	14.0	359	1	0	0	0	2	0	2	0.6	3	0.8	
Detroit, City of	62.2	93.2	59,755	22,842	38.2	20,966	279	51	1,183	214	145	4	1,546	6.8	1,876	8.2	
MICHIGAN	24.7	64.8	710,976	143,123	20.1	136,152	2,119	212	2,050	387	277	8	2,722	1.9	5,053	3.5	

*These columns are included for comparison with previous years' data

July 20, 2015

Sources: US Census Bureau, Census 2010 (Pre-1950 Housing and Pre-1978 Housing) and American Community Survey 2013 5-year estimates (Detroit and county populations); MDCH Data Warehouse (children tested)