

2022 Annual Childhood Lead Poisoning Surveillance Report

PROGRAM HIGHLIGHTS

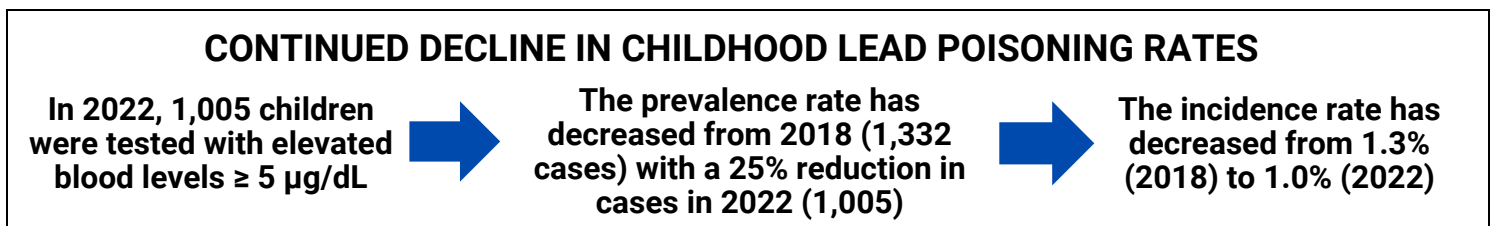
- Statistics regarding children under the age of 6 in 2022:
 - 61,705 children were tested for lead.
 - The prevalence of children with lead levels greater than ≥ 5 $\mu\text{g}/\text{dL}$ has steadily decreased since 2017 until 2022.
 - Incidence has decreased in 2022 with a total of 664 new cases of children younger than 6 years old lead poisoned (≥ 5 $\mu\text{g}/\text{dL}$).
- Both Non-Hispanic Blacks and Hispanics have a higher risk of lead poisoning compared to their Non-Hispanic counterparts, with rates of 1.6%, 1.4%, and 0.6% respectively.
- Deteriorated paint at dwelling units continues to be the most common source of lead exposure among young children; 91% of units inspected were identified with lead-based paint.
- Birth cohort analyses of children in 2022 showed that 96% were tested at least once by the age of 3. Seventy-three percent of children were tested twice before turning age 3, which was a 15% increase compared to 2021.

1. BACKGROUND

Childhood lead poisoning is a common pediatric public health problem, yet it is entirely preventable. Lead paint in homes built before 1978 continues to be the most common source of lead exposure. Lead harms children's nervous systems and is associated with reduced IQ, behavioral problems, and learning disabilities, among other health outcomes. Once a child has been poisoned, the impairment it may cause is irreversible. The Lead Hazard Reduction and Control (LHRC) Section is dedicated to reducing childhood lead poisoning by promoting mandatory blood lead testing, reporting, and surveillance, as well as linking families to services and targeted interventions.

This executive report summarizes the annual findings from blood lead surveillance for Connecticut children under the age of 6 years in 2022 and reviews the program's accomplishments in addressing this public health issue.

Connecticut local health departments are required to initiate case management actions for children with a blood level of $\geq 5 \mu\text{g}/\text{dL}$. This report defines a venous level of $5 \mu\text{g}/\text{dL}$ and greater as an elevated blood lead level.



Confirmatory Screening of Elevated Blood Lead Levels

The DPH LHRC Section requires venous confirmation of capillary blood lead levels $\geq 5 \mu\text{g}/\text{dL}$. Children with venous levels at or above $5 \mu\text{g}/\text{dL}$ receive printed educational materials, either in-person or via postal mail, from local health departments on lead exposure, proper nutrition, and medical monitoring from their local health department.

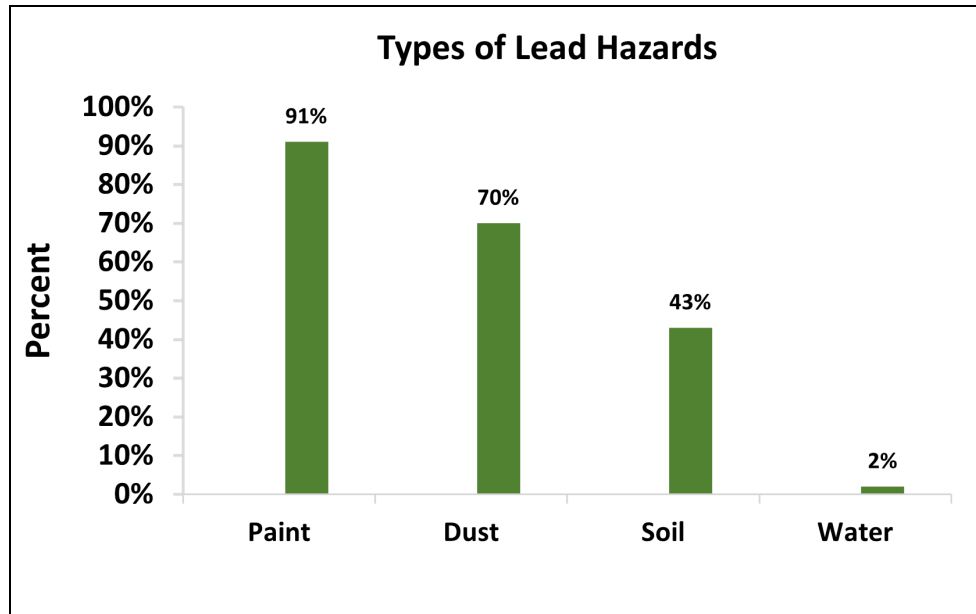
Capillary blood lead testing is a useful tool for preliminary lead screening. For capillary test results $\geq 5 \mu\text{g}/\text{dL}$, local health department staff contact parents to ensure the child materials receives a confirmation venous test within the appropriate follow-up window.

Blood Lead Screening

In 2022, 61,705 children under the age of 6 were tested. Compared to the previous year, there was a decrease in the number of children with elevated blood lead levels at $5 \mu\text{g}/\text{dL}$ and greater from 2021 (1,046 children) to 2022 (1,005 children). This reflects a 4% decrease in the number of children who are considered lead poisoned.

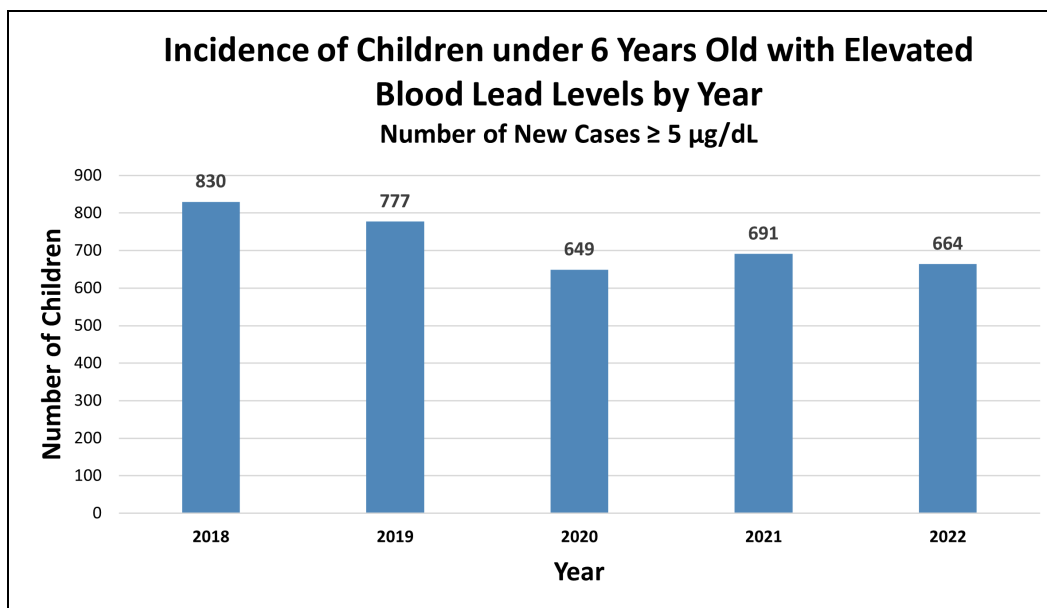
Lead Hazards By Type

Deteriorated paint in dwelling units is the most common source of lead exposure among young children. Of the 44 residences investigated in 2022, a total of 40 (91%) were identified with a lead-based paint hazard, 31 (70%) were identified with a lead dust hazard, 19 (43%) were identified with a lead soil hazard, and 1 (2%) were identified with a lead in drinking water hazard.

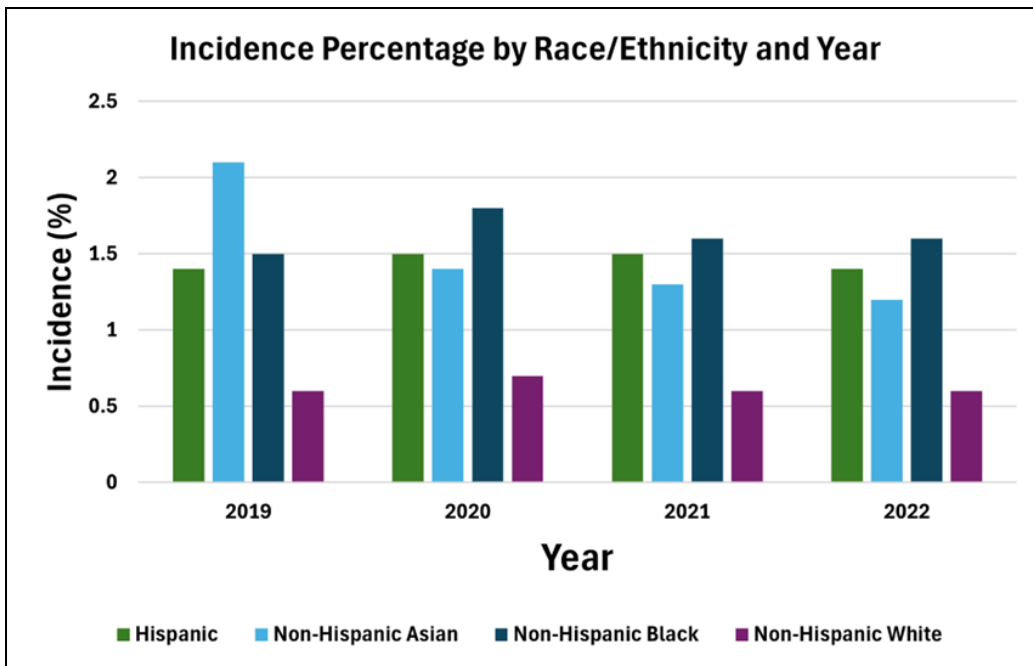


2. INCIDENCE AND RISK

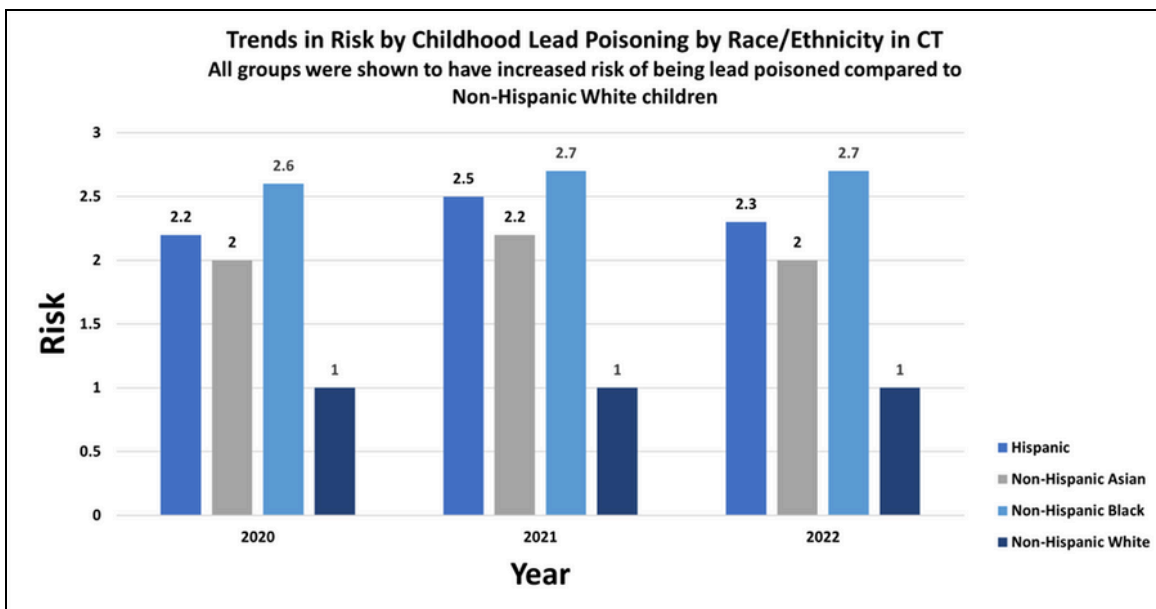
In 2022, there were 664 new cases of children under the age of 6 with elevated blood lead levels. There were minimal changes in incidence from 2021 to 2022.



The incidence rate of Non-Hispanic Blacks (1.6%), Non-Hispanic Asians (1.2%), and Hispanics (1.4%) showed a disparity compared to Non-Hispanic Whites (0.6%), demonstrating an elevated risk by at least two-fold for all groups as compared to Non-Hispanic Whites.



While all race and ethnicity groups in Connecticut were shown to have an increased risk of lead poisoning, Non-Hispanic Black children were 2.7 times as likely to be lead poisoned than Non-Hispanic White children. Hispanic children were 2.3 times as likely to be lead poisoned than Non-Hispanic White children.



While lead continues to affect children in all communities across Connecticut, data collected by the LHRC Section demonstrates that lead exposure disproportionately impacts lower-income communities and communities of color, making lead exposure a critical health equity issue.

3. HEALTH EQUITY

Figure 1: Number of Cases $\geq 5 \mu\text{g/dL}$ By Town Among Children Under 6 Years Old

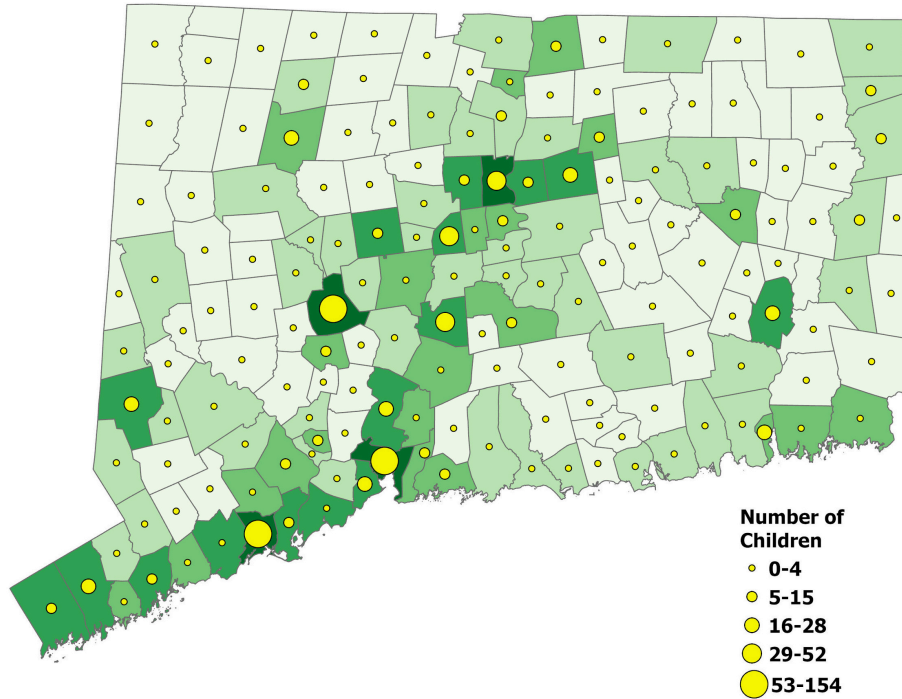
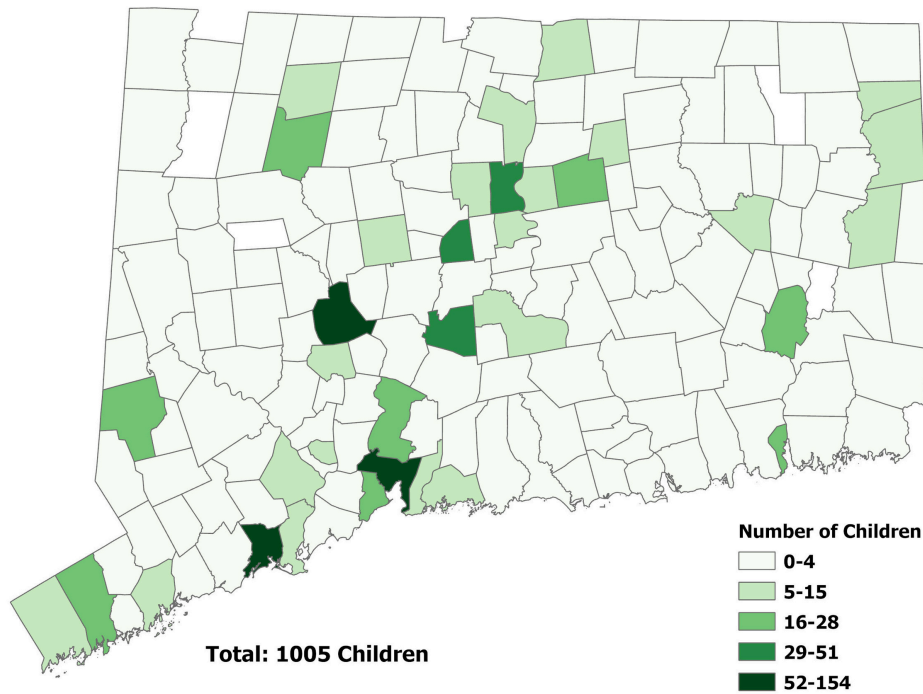
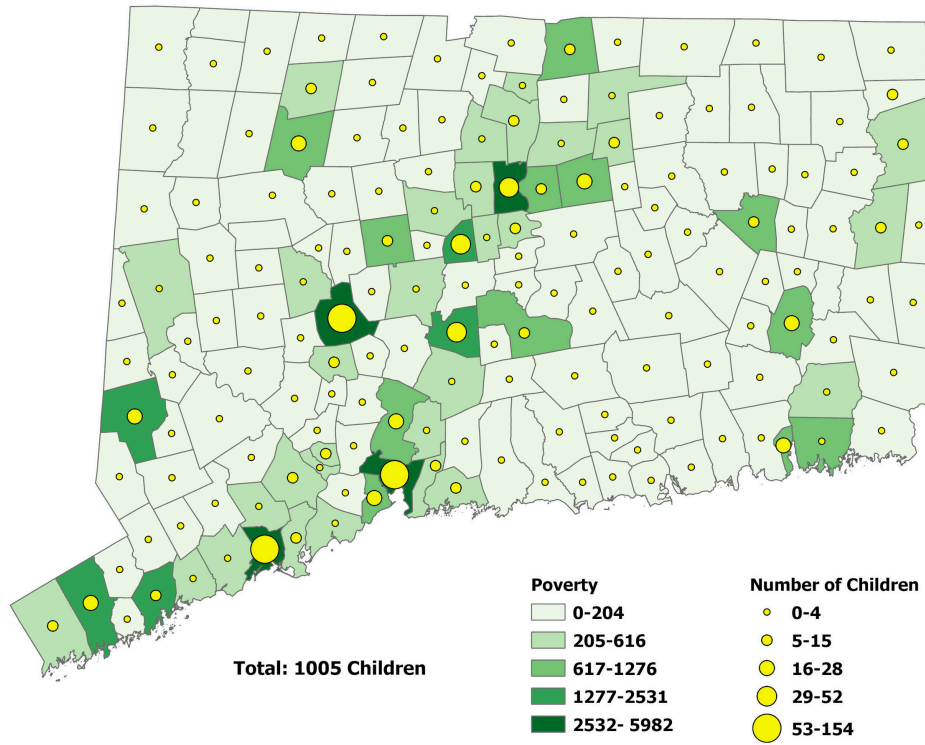


Figure 2: Number of Cases $\geq 5 \mu\text{g/dL}$ by Town Among Children Under 6 Years Old



*Towns with less than 50 children tested were not included to protect privacy

Figure 3: Number of Cases $\geq 5 \mu\text{g/dL}$ and Number of Households with Income Below Poverty Level

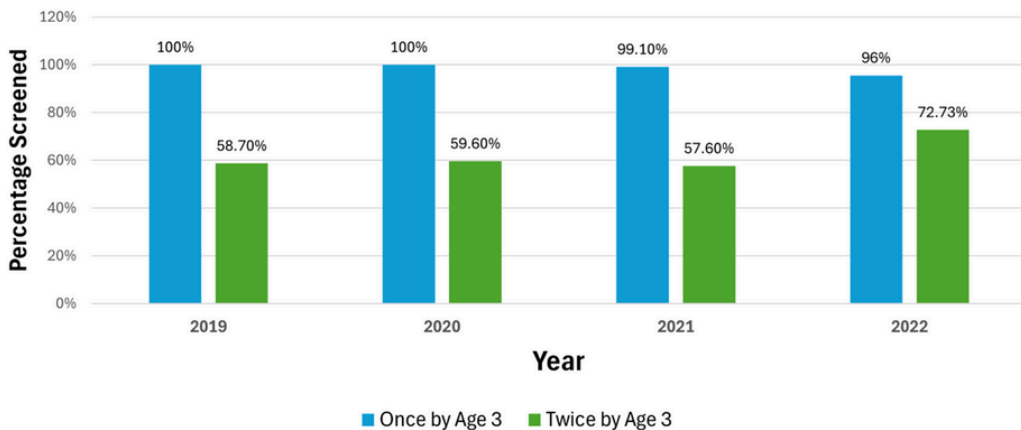


4. COMPLIANCE WITH MANDATORY UNIVERSAL SCREENING

In 2022, 61,705 children under age 6 were tested for lead in Connecticut. Birth cohort analyses of children in 2022 showed that over 96% of children were tested at least once by the age of 3. However, only 72.7% were tested twice before turning 3 years old, as [state law requires](#).

Figure 4: Percentage of Children Screened for Lead Poisoning by Relative 3 Year Old Birth Cohort By Year

As of January 1, 2009, Connecticut law mandates that medical providers must conduct a lead screening twice before the age of 35 months.



The effectiveness of the universal screening law for children under the age of 3 was evaluated by assessing the screening rate among the 2022 birth cohort (children turning 3 years old in 2022). The analysis used the total number of children who received a lead test while residing in Connecticut as the numerator, regardless of where the child was born, divided by the total number of births in 2019 from the Connecticut Vital Registry.

This method accounts for population relocation. This method is adopted by the CDC's National Environmental Public Health Tracking (EPHT) Program to assess lead screening in young children among the grantee states. This approach may lead to screening rates above 100%.

5. HIGH-RISK COMMUNITIES

Each year, the LHRC Section identifies communities with a higher risk of childhood lead poisoning to better focus resources and reduce health inequities associated with lead exposure in those communities. The LHRC Section determines risk by examining rates of newly poisoned children, the age of housing, and income levels for each of Connecticut's 169 towns.

In 2022, 629 of the 1,005 (63%) elevated blood lead levels cases occurred in the following 10 towns: New Haven, Bridgeport, Waterbury, Hartford, Meriden, New Britain, Norwich, Torrington, Stamford, and West Haven.

2022 High-Risk Communities in Connecticut

- | | |
|---------------|----------------|
| 1. New Haven | 6. New Britain |
| 2. Bridgeport | 7. Norwich |
| 3. Waterbury | 8. Torrington |
| 4. Hartford | 9. Stamford |
| 5. Meriden | 10. West Haven |

Official Town	Total Confirmed Tests	< 5 µg/dL	≥ 5 µg/dL	≥ 10 µg/dL	≥ 15 µg/dL	≥ 20 µg/dL
2022 Totals	69119	67668	1005	270	116	60
Andover	42	42	0	0	0	0
Ansonia	429	411	13	3	1	1
Ashford	74	74	0	0	0	0
Avon	305	305	0	0	0	0
Barkhamsted	39	39	0	0	0	0
Beacon Falls	84	84	0	0	0	0
Berlin	322	322	0	0	0	0
Bethany	74	74	0	0	0	0
Bethel	345	343	2	0	0	0
Bethlehem	37	37	0	0	0	0
Bloomfield	324	324	0	0	0	0
Bolton	88	84	1	1	1	1
Bozrah	31	30	0	0	0	0
Branford	382	364	5	2	1	0
Bridgeport	4487	4228	111	33	12	6
Bridgewater	19	19	0	0	0	0
Bristol	1189	1114	15	3	2	0
Brookfield	267	267	0	0	0	0
Brooklyn	143	142	0	0	0	0
Burlington	156	154	0	0	0	0
Canaan	16	16	0	0	0	0
Canterbury	69	63	2	0	0	0
Canton	141	140	0	0	0	0
Chaplin	40	40	0	0	0	0
Cheshire	438	437	0	0	0	0
Chester	54	54	0	0	0	0
Clinton	216	210	2	1	0	0
Colchester	285	284	0	0	0	0
Colebrook	12	9	0	0	1	0

Official Town	Total Confirmed Tests	< 5 µg/dL	≥ 5 µg/dL	≥ 10 µg/dL	≥ 15 µg/dL	≥ 20 µg/dL
Columbia	86	86	0	0	0	0
Cornwall	21	S	S	S	0	0
Coventry	241	230	2	0	0	0
Cromwell	222	217	3	1	0	0
Danbury	2259	2163	20	8	2	2
Darien	507	504	0	0	0	0
Deep River	61	60	0	0	0	0
Derby	233	216	2	1	1	1
Durham	132	131	0	0	0	0
East Granby	113	113	0	0	0	0
East Haddam	143	136	1	0	0	0
East Hampton	250	239	3	0	0	0
East Hartford	1061	1039	12	1	0	0
East Haven	460	442	6	3	1	0
East Lyme	192	190	1	0	0	0
East Windsor	197	195	0	0	0	0
Eastford	26	S	S	S	S	0
Easton	130	127	0	0	0	0
Ellington	288	277	2	0	0	0
Enfield	778	752	5	2	0	0
Essex	98	95	1	0	0	0
Fairfield	1127	1118	1	0	0	0
Farmington	378	369	2	0	0	0
Franklin	28	28	0	0	0	0
Glastonbury	693	683	2	0	0	0
Goshen	30	30	0	0	0	0
Granby	116	115	0	0	0	0
Greenwich	888	870	8	0	0	0
Griswold	184	173	2	0	0	0
Groton	636	616	1	1	1	0

Official Town	Total Confirmed Tests	< 5 µg/dL	≥ 5 µg/dL	≥ 10 µg/dL	≥ 15 µg/dL	≥ 20 µg/dL
Guilford	230	226	1	0	0	0
Haddam	158	156	0	0	0	0
Hamden	1004	944	19	4	2	1
Hampton	39	37	0	0	0	0
Hartford	3120	2980	52	19	10	3
Hartland	17	17	0	0	0	0
Harwinton	90	89	0	0	0	0
Hebron	161	156	0	0	0	0
Kent	43	43	0	0	0	0
Killingly	377	351	8	2	0	0
Killingworth	120	120	0	0	0	0
Lebanon	130	126	2	1	0	0
Ledyard	278	274	1	0	0	0
Lisbon	40	S	S	0	0	0
Litchfield	106	103	2	1	0	0
Lyme	24	23	0	0	0	0
Madison	310	308	0	0	0	0
Manchester	1056	990	16	4	2	2
Mansfield	179	176	0	0	0	0
Marlborough	150	144	0	0	0	0
Meriden	1924	1812	37	11	3	2
Middlebury	94	89	1	0	0	0
Middlefield	66	66	0	0	0	0
Middletown	958	924	10	2	1	0
Milford	855	845	2	0	0	0
Monroe	360	356	0	0	0	0
Montville	261	253	3	2	1	1
Morris	26	S	S	S	0	0
Naugatuck	547	525	8	0	0	0
New Britain	2240	2145	37	14	6	4

Official Town	Total Confirmed Tests	< 5 µg/dL	≥ 5 µg/dL	≥ 10 µg/dL	≥ 15 µg/dL	≥ 20 µg/dL
New Canaan	457	450	2	0	0	0
New Fairfield	220	220	0	0	0	0
New Hartford	102	97	1	1	1	0
New Haven	3858	3452	154	39	17	10
New London	578	538	18	4	0	0
New Milford	474	458	2	0	0	0
Newington	548	538	4	0	0	0
Newtown	445	440	1	0	0	0
Norfolk	13	13	0	0	0	0
North Branford	208	206	1	0	0	0
North Canaan	42	S	S	0	0	0
North Haven	405	401	1	0	0	0
North Stonington	71	71	0	0	0	0
Norwalk	1689	1651	12	3	0	0
Norwich	708	627	26	12	8	6
Old Lyme	115	105	2	0	0	0
Old Saybrook	115	108	1	0	0	0
Orange	204	201	0	0	0	0
Oxford	167	166	0	0	0	0
Plainfield	254	236	10	2	0	0
Plainville	256	247	2	1	1	0
Plymouth	174	169	0	0	0	0
Pomfret	74	68	3	0	0	0
Portland	180	176	0	0	0	0
Preston	62	57	1	0	0	0
Prospect	125	124	0	0	0	0
Putnam	191	160	9	4	1	1
Redding	128	128	0	0	0	0
Ridgefield	383	381	1	0	0	0
Rocky Hill	371	360	3	1	0	0

Official Town	Total Confirmed Tests	< 5 µg/dL	≥ 5 µg/dL	≥ 10 µg/dL	≥ 15 µg/dL	≥ 20 µg/dL
Roxbury	17	16	0	0	0	0
Salem	55	54	0	0	0	0
Salisbury	20	20	0	0	0	0
Scotland	7	7	0	0	0	0
Seymour	314	304	2	0	0	0
Sharon	24	23	0	0	0	0
Shelton	674	654	7	1	1	1
Sherman	39	39	0	0	0	0
Simsbury	298	291	2	1	0	0
Somers	179	176	0	0	0	0
South Windsor	489	473	2	1	1	1
Southbury	169	163	1	1	1	0
Southington	619	609	2	1	0	0
Sprague	40	40	0	0	0	0
Stafford	206	193	3	1	0	0
Stamford	3266	3199	22	7	4	2
Sterling	59	55	1	1	0	0
Stonington	219	205	3	2	0	0
Stratford	996	963	11	1	0	0
Suffield	227	222	1	0	0	0
Thomaston	113	110	1	0	0	0
Thompson	159	139	4	2	1	1
Tolland	310	307	0	0	0	0
Torrington	684	601	28	5	3	1
Trumbull	642	633	4	2	1	0
Union	11	11	0	0	0	0
Vernon	642	618	5	1	1	2
Voluntown	27	25	0	0	0	0
Wallingford	776	753	2	0	0	0
Warren	10	10	0	0	0	0

Official Town	Total Confirmed Tests	< 5 µg/dL	≥ 5 µg/dL	≥ 10 µg/dL	≥ 15 µg/dL	≥ 20 µg/dL
Washington	54	50	1	1	0	0
Waterbury	3617	3341	138	34	15	6
Waterford	223	220	0	0	0	0
Watertown	292	291	1	0	0	0
West Hartford	1096	1043	14	2	2	1
West Haven	1038	977	24	5	4	1
Westbrook	87	86	0	0	0	0
Weston	193	188	1	0	0	0
Westport	506	499	1	0	0	0
Wethersfield	538	520	5	2	0	0
Willington	113	109	0	0	0	0
Wilton	339	325	3	2	2	2
Winchester	181	157	6	2	0	0
Windham	585	535	13	4	2	0
Windsor	518	496	5	0	0	0
Windsor Locks	205	193	2	0	0	0
Wolcott	220	209	2	1	1	1
Woodbridge	133	131	1	0	0	0
Woodbury	83	79	0	0	0	0
Woodstock	126	119	2	0	0	0