### Lead-Safe Virginia Program

Childhood Lead Poisoning Prevention Program 2005 Surveillance Summary Report





#### LEAD-SAFE VIRGINIA PROGRAM Childhood Lead Poisoning Prevention Program Nancy Van Voorhis, M.P.H., Director

For more information, please visit our Web site at <a href="www.vahealth.org/leadsafe">www.vahealth.org/leadsafe</a>
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#### **Table of Contents:**

Background	1
Mission	1
Program Activities	1
2005 Data and Statistics	2
<b>Figure 1</b> . Number of children tested for lead exposure, by age category:  Virginia, 2001 – 2005	•
<b>Figure 2.</b> Number of children $< 72$ months of age with reported confirmed elevated blood lead levels $\ge 10 \ \mu g/dL$ , by age category: Virginia, 2005	
<b>Figure 3.</b> Reported confirmed elevated blood lead levels ≥ 10 μg/dL, children < 72 months of age: Virginia, 2005 (2005 Incidence Map)	
Figure 4. Percent of children < 36 months of age with confirmed elevated blood lead levels ≥ 15 μg/dL, requiring environmental investigation:  Virginia, 2001 – 2005	
<b>Figure 5.</b> Number and type of lead hazards identified through environmental inspections or risk assessments: Virginia, 2005	
<b>Table 1.</b> Number of children confirmed for lead exposure, by age category,         by blood lead level: Virginia, 2001 – 2005.       3	
Table 2. Summary of environmental investigations: Virginia, 2005.    6	
Reported number of children tested for elevated blood lead levels (EBLLs), by locality of residence, under 36 months of age: Virginia, 2005	
Reported number of children tested for elevated blood lead levels (EBLLs), by locality of residence, under 72 months of age: Virginia, 2005	
Guidelines for Childhood Lead Poisoning Screening in Virginia	
Virginia High-Risk Zip Codes: Locality	
Virginia High-Risk Zip Codes: Numerical 20	

#### Background

Based on the Centers for Disease Control and Prevention (CDC) predictor model, Virginia ranks  $14^{th}$  among the 50 states in the estimated number of children with elevated blood lead levels (EBLLs)  $\geq 10 \text{ug/dL}$ . It is estimated that 13,800 children under the age of six (72 months) have elevated blood lead levels.

Lead poisoning is usually an asymptomatic disease; therefore blood lead testing needs to be performed based on risk and not just symptoms. The current screening/testing guidelines can be found on the VDH Lead-Safe Virginia Web page at <a href="http://www.vahealth.org/leadsafe/publications.asp">http://www.vahealth.org/leadsafe/publications.asp</a> or by calling toll free 877-668-7987.

Children under the age of three years (36 months) are the targeted high-risk age category due to this age group's frequent hand-to-mouth activity and their developing neurological system. The main source of lead exposure for children is house dust contaminated by leaded paint, and soil contaminated by decades of industrial and motor vehicle emissions (leaded gasoline). Although lead paint was banned from residential use in 1978, lead remains a hazard in homes built before the ban, especially pre-1950 housing. Renovation of these older homes can create additional lead hazards for families and workers. The primary phase-out of leaded gasoline was completed in 1986; however lead from this source still remains as a hazard because lead is not biodegradable.

Lead exposure can damage children's nervous, hematopoietic, and renal systems. It is especially harmful to the developing nervous systems of fetuses. There is no safe level for lead exposure.

The *Code of Virginia*, sections 32.1-46.1 requires all children determined to be at risk (which includes all Medicaid eligible children) to be tested for elevated blood lead levels at the age of one year (12 months), at the age of two years (24 months), and between the ages 36 - 72 months if never tested previously or are exposed to a new risk factor. All laboratories are required to report the results electronically within ten days. Lead poisoning is a reportable disease and completion of the Epi-1 Form is required. A statewide database for children tested for elevated lead levels has been established with the ability to provide timely data and statistics.

#### Mission

The mission of the Lead-Safe Virginia Childhood Lead Poisoning Prevention Program is to eliminate lead as a health hazard for children less than six years of age by the year 2010.

#### Program Activities

The Lead-Safe Virginia Program is funded by the Centers for Disease Control and Prevention (CDC) and the Environmental Protection Agency (EPA).

The objectives of the Lead-Safe Virginia Program include: 1) assure all at-risk children receive lead testing; 2) coordinate care and referrals for medical and environmental intervention for all children under six years of age with an elevated blood lead level; 3) educate the public and health care providers regarding childhood lead poisoning; 4) educate realtors, landlords, renovators, painters, homeowners, and others regarding lead-safe work practices and EPA regulations; 5) maintain a statewide childhood blood lead surveillance system; 6) implement primary prevention measures to reduce children's exposure to lead hazards through activities and

collaboration; and 7) coordinate the implementation and evaluation of the statewide lead elimination plan, A Collaborative Strategic Plan to Eliminate Childhood Lead Poisoning in Virginia by 2010.

#### 2005 Data and Statistics

This report summarizes the 2005 data to include both testing and elevated blood lead level data, and the identification of sources of exposure for children under 6 years of age.

Testing for lead exposure is a key component of reducing childhood lead exposure. Early detection of a child's elevated blood lead level (EBLL) provides the opportunity to identify and reduce lead hazards in order to prevent further elevation. During 2005, 69,647 Virginia children under 6 years (72 months) of age were tested for lead exposure. Of these, 747 children were reported as having at least one elevated blood lead test and 411 of these were determined to be confirmed new cases. Medicaid eligible children accounted for 47% of the children tested, but 62% of the EBLLs. Of the Medicaid eligible children required to be tested for lead exposure, only 16% were documented as receiving a test.

There has been a steady increase in the number of children under 6 years of age tested for elevated blood lead levels between 2001 and 2005. (Figure 1) This increase can be partially attributed to the regulations made effective July 1, 2001, that have testing and reporting requirements.

A confirmed EBLL is defined as a single elevated venous test  $\geq 10~\mu g/dL$  or two elevated capillary tests within 84 days/12 weeks and is only counted once in the year in which it initially occurred. Once an EBLL is confirmed the child will be provided care coordination.

Figure 4 shows the percent of children under 3 years (36 months) of age with confirmed elevated blood lead levels  $\geq 15~\mu g/dL$  requiring an environmental investigation during 2001 - 2005. Although the number of new cases each year remains fairly level, there is a significant drop in the percentage of those requiring an environmental investigation. Primary prevention is necessary to eliminate lead as a health hazard for children. One initiative that the program is coordinating is the referral of addresses that may have caused lead exposure to agencies with funding to abate or reduce the identified hazards.

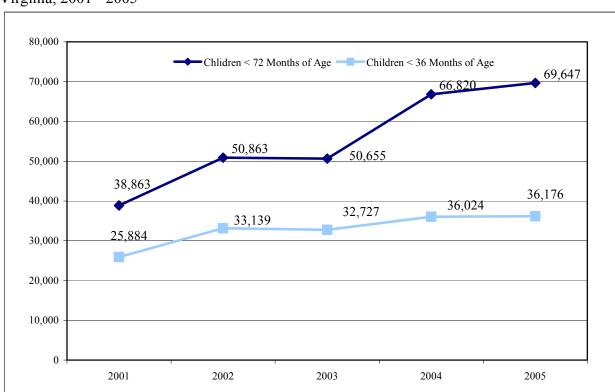


Figure 1. Number of children tested for lead exposure, by age category: Virginia, 2001 - 2005

Note: Results based on one test per child per year. The reporting of elevated blood lead levels is required under the Regulations for Disease Reporting and Control. Effective July 1, 2001, regulations require the reporting of all lead tests performed on children under 72 months of age. The number of children tested each year is influenced by several factors that include the number of children born in Virginia each year, migration of children into and out of the state or to a different locality, and the number of children tested in compliance with the regulations. These statistics are preliminary, as the database will accept historical data as made available and continuous data quality control may depict minor changes.

Table 1. Number of children confirmed for lead exposure, by age category, by blood lead level: Virginia, 2001 - 2005

$10 - 14 \mu g/dL$	15 - 19 μg/dL	$20$ - $44 \mu g/dL$	45 - 69 μg/dL	$\geq 70~\mu g/dL$	Total
102	39	35	2	0	178
176	59	51	5	0	291
163	52	41	2	1	259
186	44	42	6	0	278
169	48	28	3	0	248
138	65	51	3	0	257
236	84	63	7	0	390
242	72	60	3	3	380
317	69	66	6	2	460
287	70	47	6	1	411
	102 176 163 186 169 138 236 242 317 287	102     39       176     59       163     52       186     44       169     48       138     65       236     84       242     72       317     69       287     70	102     39     35       176     59     51       163     52     41       186     44     42       169     48     28       138     65     51       236     84     63       242     72     60       317     69     66       287     70     47	102     39     35     2       176     59     51     5       163     52     41     2       186     44     42     6       169     48     28     3       138     65     51     3       236     84     63     7       242     72     60     3       317     69     66     6       287     70     47     6	102     39     35     2     0       176     59     51     5     0       163     52     41     2     1       186     44     42     6     0       169     48     28     3     0       236     84     63     7     0       242     72     60     3     3       317     69     66     6     2

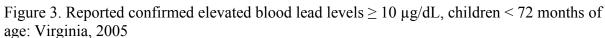
Note: A 'confirmed' elevated blood lead level (EBLL) is defined as a single elevated venous test  $\ge 10 \,\mu\text{g/dL}$  or two elevated capillary tests within 84 days/12 weeks and is only counted once in the year in which it initially occurred. The reporting of elevated blood lead levels is required under the Regulations for Disease Reporting and Control. Effective July 1, 2001, regulations require the reporting of all blood lead tests performed on children under 72 months of age. The number of children tested each year is influenced by several factors that include the number of children born in Virginia each year, migration of children into and out of the state or to a different locality, and the number of children tested in compliance with the regulations. These statistics are preliminary, as the database will accept historical data as made available and continuous data quality control may depict minor changes.

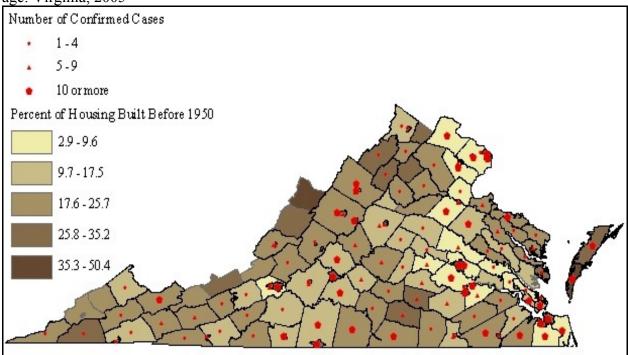
127 120 101 100 80 59 57 60 47 40 20 20 0 0 - 11 36 - 47 12 - 23 24 - 35 48 - 59 60 - 71

Figure 2. Number of children < 72 months of age with reported confirmed elevated blood lead levels  $\geq 10 \,\mu\text{g/dL}$ , by age category: Virginia, 2005

Note: A 'confirmed' elevated blood lead level (EBLL) is defined as a single elevated venous test  $\ge 10 \,\mu\text{g/dL}$  or two elevated capillary tests within 84 days/12 weeks and is only counted once in the year in which it initially occurred. The reporting of elevated blood lead levels is required under the Regulations for Disease Reporting and Control. Effective July 1, 2001, regulations require the reporting of all blood lead tests performed on children under 72 months of age. These statistics are preliminary, as the database will accept historical data as made available and continuous data quality control may depict minor changes.

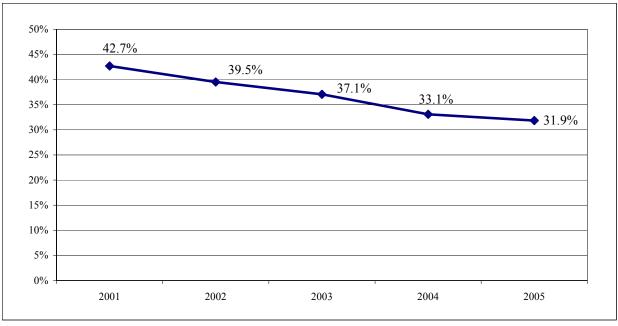
Age (Months)





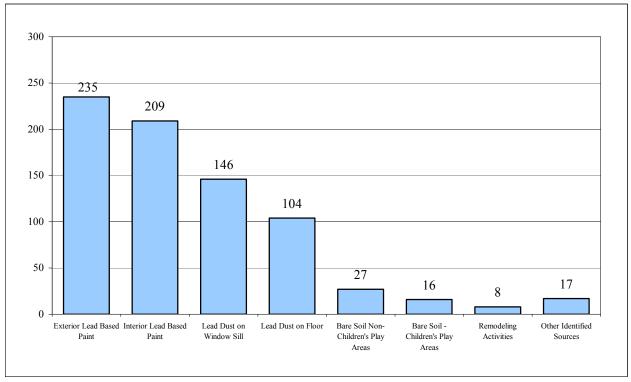
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Figure 4. Percent of children < 36 months of age with confirmed elevated blood lead levels  $\ge$  15  $\mu g/dL$ , requiring environmental investigation: Virginia, 2001 - 2005



Note: Percentage is based on the total number of children under 36 months tested. Environmental intervention blood lead investigations are performed on all confirmed venous elevated blood lead levels  $\geq 20$  µg/dL or persistent confirmed lead levels of 15 to 19 µg/dL on children < 72 months of age. The reporting of elevated blood lead levels is required under the Regulations for Disease Reporting and Control. Effective July 1, 2001, regulations require the reporting of all lead tests performed on children under 72 months of age. These statistics are preliminary, as the database will accept historical data as made available and continuous data quality control may depict minor changes in data.

Figure 5. Number and type of lead hazards identified through environmental inspections or risk assessments: Virginia, 2005



Note: Environmental intervention blood lead investigations are performed on all confirmed venous elevated blood lead levels  $\geq 20 \,\mu\text{g/dL}$  or persistent confirmed lead levels of 15 to 19  $\mu\text{g/dL}$  on children < 72 months of age. Environmental investigations / risk assessments not conducted or completed were due to varying

reasons such as the family moved to a new address or the family refused inspection. Multiple environmental investigations may be required for the same child due to the possibility of lead exposure from more than one location.

Table 2. Summary of environmental investigations: Virginia, 2005

Environmental Investigations / Risk Assessments Required	95	
Environmental Investigations / Risk Assessments Conducted	83	
Lead Haza	rds Identified	
Exterior Lead Based Paint	235	
Interior Lead Based Paint	209	
Lead Dust Window Sill	146	
Lead Dust on Floor	104	
Bare Soil - Non Play Areas	27	
Bare Soil - Children's Play Areas	16	
Recent Remodeling Activity	8	
Occupational (Painter - 1)	1	
Water (Private wells - 3)	3	
Cultural / Medicines (Kohl - 3)	3	
Other *	10	

Note: Environmental intervention blood lead investigations are performed on all confirmed venous elevated blood lead levels  $\geq 20~\mu g/dL$  or persistent confirmed blood lead levels of 15 to 19  $\mu g/dL$  on children < 72 months of age. Environmental investigations / risk assessments not conducted or completed were due to varying reasons such as the family moved to a new address or the family refused inspection. Multiple environmental investigations may be required for the same child due to the possibility of lead exposure from more than one location.

purchased in China, 1-beads on breast-feeding bracelet.

		Population		Testing	Number	Percent	Confirmed Blood Lead Level Category				
Locality	FIPS	< 36 Months	Number Tested	Rate/1000	Confirmed Elevated	Confirmed Elevated	10-14 μg/dL	15-19 μg/dL	20-44 μg/dL	45-69 μg/dL	≥ 70 µg/dL
Accomack County	51001	1,401	461	329	0	0.0%	0	0	0	0	0
Albemarle County	51003	2,965	216	73	1	0.5%	1	0	0	0	0
Alleghany County	51005	428	23	54	1	4.3%	1	0	0	0	0
Amelia County	51007	423	37	87	1	2.7%	0	1	0	0	0
Amherst County	51009	1,055	78	74	1	1.3%	1	0	0	0	0
Appomattox County	51011	500	45	90	0	0.0%	0	0	0	0	0
Arlington County	51013	6,564	1,695	258	3	0.2%	3	0	0	0	0
Augusta County	51015	2,197	244	111	0	0.0%	0	0	0	0	0
Bath County	51017	131	14	107	0	0.0%	0	0	0	0	0
Bedford County	51019	1,996	95	48	0	0.0%	0	0	0	0	0
Bland County	51021	173	12	69	0	0.0%	0	0	0	0	0
Botetourt County	51023	1,055	191	181	1	0.5%	1	0	0	0	0
Bruns wick County	51025	546	55	101	1	1.8%	1	0	0	0	0
Buchanan County	51027	738	100	136	0	0.0%	0	0	0	0	0
Buckingham County	51029	419	59	141	0	0.0%	0	0	0	0	0
Campbell County	51031	1,748	71	41	2	2.8%	2	0	0	0	0
Caroline County	51033	858	174	203	0	0.0%	0	0	0	0	0
Carroll County	51035	992	104	105	1	1.0%	1	0	0	0	0
Charles City County	51036	242	24	99	0	0.0%	0	0	0	0	0
Charlotte County	51037	398	94	236	0	0.0%	0	0	0	0	0
Chesterfield County	51041	10,159	921	91	4	0.4%	3	1	0	0	0
Clarke County	51043	369	10	27	0	0.0%	0	0	0	0	0
Craig County	51045	163	25	153	0	0.0%	0	0	0	0	0
Culpeper County	51047	1,315	211	160	0	0.0%	0	0	0	0	0
Cumberland County	51049	350	38	109	0	0.0%	0	0	0	0	0
Dickenson County	51051	535	41	77	0	0.0%	0	0	0	0	0
Dinwiddie County	51053	786	40	51	0	0.0%	0	0	0	0	0
Essex County	51057	314	35	111	0	0.0%	0	0	0	0	0

		Population	•	Testing	Number	Percent	Confirmed Blood Lead Level Category				
Locality	FIPS	< 36 Months	Number Tested	Rate/1000	Confirmed Elevated	Confirmed Elevated	10-14 μg/dL	15-19 μg/dL	20-44 μg/dL	45-69 μg/dL	≥ 70 µg/dL
Fairfax County	51059	40,580	3,363	83	8	0.2%	5	1	2	0	0
Fauquier County	51061	2,048	86	42	1	1.2%	1	0	0	0	0
Floyd County	51063	462	44	95	1	2.3%	1	0	0	0	0
Fluvanna County	51065	762	90	118	0	0.0%	0	0	0	0	0
Franklin County	51067	1,520	85	56	0	0.0%	0	0	0	0	0
Frederick County	51069	2,296	56	24	2	3.6%	2	0	0	0	0
Giles County	51071	581	23	40	0	0.0%	0	0	0	0	0
Gloucester County	51073	1,141	25	22	0	0.0%	0	0	0	0	0
Goochland County	51075	492	84	171	0	0.0%	0	0	0	0	0
Grayson County	51077	507	38	75	0	0.0%	0	0	0	0	0
Greene County	51079	668	50	75	0	0.0%	0	0	0	0	0
Greens ville County	51081	261	0	0	0	0.0%	0	0	0	0	0
Halifax County	51083	1,323	149	113	1	0.7%	0	1	0	0	0
Hanover County	51085	3,290	318	97	3	0.9%	2	0	1	0	0
Henrico County	51087	10,648	1,401	132	18	1.3%	10	5	3	0	0
Henry County	51089	1,920	71	37	2	2.8%	1	1	0	0	0
Highland County	51091	58	8	138	0	0.0%	0	0	0	0	0
Isle of Wight County	51093	1,047	163	156	0	0.0%	0	0	0	0	0
James City County	51095	1,597	89	56	0	0.0%	0	0	0	0	0
King and Queen County	51097	220	18	82	0	0.0%	0	0	0	0	0
King George County	51099	715	39	55	0	0.0%	0	0	0	0	0
King William County	51101	517	25	48	0	0.0%	0	0	0	0	0
Lancaster County	51103	286	62	217	0	0.0%	0	0	0	0	0
Lee County	51105	808	102	126	0	0.0%	0	0	0	0	0
Loudoun County	51107	9,919	508	51	3	0.6%	2	0	0	1	0
Louisa County	51109	939	52	55	0	0.0%	0	0	0	0	0
Lunenburg County	51111	393	72	183	1	1.4%	1	0	0	0	0
Madison County	51113	391	25	64	0	0.0%	0	0	0	0	0

		Population < 36	Number	Testing	Number Confirmed	Percent Confirmed	Confirmed Blood Lead Level Category				
Locality	FIPS	Months	Tested	Rate/1000^	Elevated	Elevated	10-14 μg/dL	15-19 μg/dL	20-44 μg/dL	45-69 μg/dL	≥ 70 µg/dL
Mathews County	51115	230	12	52	0	0.0%	0	0	0	0	0
Mecklenburg County	51117	1,033	106	103	3	2.8%	3	0	0	0	0
Middles ex County	51119	211	36	171	0	0.0%	0	0	0	0	0
Montgomery County	51121	2,421	138	57	0	0.0%	0	0	0	0	0
Nelson County	51125	469	48	102	4	8.3%	4	0	0	0	0
New Kent County	51127	420	55	131	0	0.0%	0	0	0	0	0
Northampton County	51131	437	217	497	5	2.3%	4	0	1	0	0
Northumberland County	51133	317	52	164	0	0.0%	0	0	0	0	0
Nottoway County	51135	517	80	155	1	1.3%	0	1	0	0	0
Orange County	51137	918	99	108	0	0.0%	0	0	0	0	0
Page County	51139	756	65	86	0	0.0%	0	0	0	0	0
Patrick County	51141	675	96	142	0	0.0%	0	0	0	0	0
Pittsylvania County	51143	2,100	199	95	0	0.0%	0	0	0	0	0
Powhatan County	51145	786	50	64	1	2.0%	1	0	0	0	0
Prince Edward County	51147	573	149	260	1	0.7%	1	0	0	0	0
Prince George County	51149	1,159	33	28	0	0.0%	0	0	0	0	0
Prince William County	51153	14,421	655	45	0	0.0%	0	0	0	0	0
Pulaski County	51155	1,149	55	48	0	0.0%	0	0	0	0	0
Rappahannock County	51157	217	18	83	0	0.0%	0	0	0	0	0
Richmond County	51159	213	43	202	0	0.0%	0	0	0	0	0
Roanoke County	51161	2,627	256	97	2	0.8%	2	0	0	0	0
Rockbridge County	51163	681	27	40	0	0.0%	0	0	0	0	0
Rockingham County	51165	2,512	304	121	2	0.7%	2	0	0	0	0
Russell County	51167	919	122	133	0	0.0%	0	0	0	0	0
Scott County	51169	708	90	127	0	0.0%	0	0	0	0	0
Shenandoah County	51171	1,126	177	157	2	1.1%	1	1	0	0	0
Smyth County	51173	1,064	103	97	0	0.0%	0	0	0	0	0
Southampton County	51175	532	41	77	1	2.4%	0	0	1	0	0

		Population < 36	Number	Testing	Number Confirmed	Percent Confirmed	Confirmed Blood Lead Level Category				
Locality	FIPS	Months	Tested	Rate/1000 <sup>^</sup>	Elevated	Elevated	10-14 μg/dL	15-19 μg/dL	20-44 μg/dL	45-69 μg/dL	≥ 70 µg/dL
Spotsylvania County	51177	4,013	243	61	2	0.8%	1	1	0	0	0
Stafford County	51179	4,089	125	31	2	1.6%	2	0	0	0	0
Surry County	51181	230	22	96	0	0.0%	0	0	0	0	0
Sussex County	51183	375	37	99	0	0.0%	0	0	0	0	0
Tazewell County	51185	1,358	317	233	2	0.6%	1	1	0	0	0
Warren County	51187	1,255	72	57	0	0.0%	0	0	0	0	0
Washington County	51191	1,565	98	63	1	1.0%	0	0	1	0	0
Westmoreland County	51193	551	72	131	2	2.8%	2	0	0	0	0
Wise County	51195	1,382	97	70	0	0.0%	0	0	0	0	0
Wythe County	51197	899	62	69	3	4.8%	1	0	2	0	0
York County	51199	2,021	59	29	0	0.0%	0	0	0	0	0
Alexandria	51510	5,177	939	181	5	0.5%	3	2	0	0	0
Bedford	51515	211	66	313	1	1.5%	0	1	0	0	0
Bristol	51520	557	68	122	0	0.0%	0	0	0	0	0
Buena Vista	51530	231	15	65	0	0.0%	0	0	0	0	0
Charlottesville	51540	1,237	184	149	0	0.0%	0	0	0	0	0
Chesapeake	51550	8,475	639	75	7	1.1%	6	1	0	0	0
Colonial Heights	51570	517	56	108	0	0.0%	0	0	0	0	0
Covington	51580	216	133	616	0	0.0%	0	0	0	0	0
Danville	51590	1,747	246	141	3	1.2%	1	1	1	0	0
Emporia	51595	216	19	88	0	0.0%	0	0	0	0	0
Fairfax	51600	807	248	307	0	0.0%	0	0	0	0	0
Falls Church	51610	344	74	215	0	0.0%	0	0	0	0	0
Franklin	51620	263	59	224	0	0.0%	0	0	0	0	0
Fredericksburg	51630	710	79	111	2	2.5%	1	1	0	0	0
Galax	51640	275	108	393	0	0.0%	0	0	0	0	0
Hampton	51650	5,595	785	140	5	0.6%	4	0	1	0	0
Harrisonburg	51660	1,208	151	125	2	1.3%	2	0	0	0	0

		Population		Testing	Number	Percent	Confirmed Blood Lead Level Category				
Locality	FIPS	< 36 Months	Number Tested	Rate/1000	Confirmed Elevated	Confirmed Elevated	10-14 μg/dL	15-19 μg/dL	20-44 μg/dL	45-69 μg/dL	≥ 70 µg/dL
Hopewell	51670	986	117	119	1	0.9%	0	1	0	0	0
Lexington	51678	113	10	88	0	0.0%	0	0	0	0	0
Lynchburg	51680	2,297	224	98	5	2.2%	3	0	2	0	0
Manassas	51683	1,817	272	150	1	0.4%	1	0	0	0	0
Manassas Park	51685	635	116	183	1	0.9%	1	0	0	0	0
Martinsville	51690	529	30	57	1	3.3%	0	0	1	0	0
Newport News	51700	8,617	1,021	118	9	0.9%	8	0	1	0	0
Norfolk	51710	10,201	1,775	174	19	1.1%	17	0	2	0	0
Norton	51720	116	10	86	0	0.0%	0	0	0	0	0
Petersburg	51730	1,313	144	110	1	0.7%	1	0	0	0	0
Poquoson	51735	344	6	17	0	0.0%	0	0	0	0	0
Portsmouth	51740	4,374	879	201	9	1.0%	3	4	2	0	0
Radford	51750	357	21	59	0	0.0%	0	0	0	0	0
Richmond	51760	7,608	1,803	237	48	2.7%	31	13	3	1	0
Roanoke	51770	3,837	1,078	281	20	1.9%	11	5	3	1	0
Salem	51775	671	220	328	1	0.5%	1	0	0	0	0
Staunton	51790	775	318	410	3	0.9%	2	1	0	0	0
Suffolk	51800	2,740	596	218	7	1.2%	5	1	1	0	0
Virginia Beach	51810	18,395	981	53	3	0.3%	2	1	0	0	0
Waynesboro	51820	786	250	318	2	0.8%	0	2	0	0	0
Williamsburg	51830	195	3	15	0	0.0%	0	0	0	0	0
Winchester	51840	853	43	50	1	2.3%	1	0	0	0	0
Unknown			5,701		1	0.0%	1	0	0	0	0
VIRGINIA		276,483	36,176	131	248	0.7%	169	48	28	3	0

Note: 2000 U.S. Census Population Data were used. Results based on one test per child per year. A confirmed elevated blood lead level (EBLL) is defined as a single elevated venous test  $\geq 10~\mu g/dL$  or two elevated capillary tests within 84 days/12 weeks and is only counted once in the year in which it initially occurred. The reporting of elevated blood lead levels is required under the Regulations for Disease Reporting and Control. Effective July 1, 2001, regulations require the reporting of all lead tests performed on children under 72 months of age. The number of children tested each year is influenced by several factors that include the number of children born in Virginia each year, migration of children into and out of the state or to a different locality, and the number of children tested in compliance with the regulations. A Regulations only require testing at 1 and 2 years of age if determined to be at risk. These statistics are preliminary, as the database will accept historical data as made available and continuous data quality control may depict minor changes.

		Population <72	Number	Number Confirmed	Percent Confirmed		Confirmed Blood Lead Level Category				
Locality	FIPS	Months	Tested	Elevated	Elevated	10-14 μg/dL	15-19 μg/dL	20-44 μg/dL	45-69 μg/dL	≥ 70 µg/dL	
Accomack County	51001	2,792	632	1	0.2%	0	1	0	0	0	
Albemarle County	51003	6,000	304	3	1.0%	3	0	0	0	0	
Alleghany County	51005	905	56	1	1.8%	1	0	0	0	0	
Amelia County	51007	870	73	1	1.4%	0	1	0	0	0	
Amherst County	51009	2,234	118	1	0.8%	1	0	0	0	0	
Appomattox County	51011	1,047	76	0	0.0%	0	0	0	0	0	
Arlington County	51013	12,144	2,284	7	0.3%	5	2	0	0	0	
Augusta County	51015	4,521	381	1	0.3%	1	0	0	0	0	
Bath County	51017	279	35	0	0.0%	0	0	0	0	0	
Bedford County	51019	4,290	183	1	0.5%	1	0	0	0	0	
Bland County	51021	379	30	0	0.0%	0	0	0	0	0	
Botetourt County	51023	2,107	421	1	0.2%	1	0	0	0	0	
Brunswick County	51025	1,124	150	2	1.3%	2	0	0	0	0	
Buchanan County	51027	1,583	234	1	0.4%	0	0	1	0	0	
Buckingham County	51029	926	113	1	0.9%	1	0	0	0	0	
Campbell County	51031	3,678	138	2	1.4%	2	0	0	0	0	
Caroline County	51033	1,690	276	1	0.4%	1	0	0	0	0	
Carroll County	51035	1,998	137	1	0.7%	1	0	0	0	0	
Charles City County	51036	472	49	0	0.0%	0	0	0	0	0	
Charlotte County	51037	863	177	0	0.0%	0	0	0	0	0	
Chesterfield County	51041	21,322	1,752	9	0.5%	6	1	1	0	1	
Clarke County	51043	835	35	0	0.0%	0	0	0	0	0	
Craig County	51045	356	47	0	0.0%	0	0	0	0	0	
Culpeper County	51047	2,660	254	1	0.4%	1	0	0	0	0	
Cumberland County	51049	689	56	0	0.0%	0	0	0	0	0	
Dickenson County	51051	1,038	99	0	0.0%	0	0	0	0	0	
Dinwiddie County	51053	1,650	126	1	0.8%	1	0	0	0	0	
Essex County	51057	635	69	0	0.0%	0	0	0	0	0	

		Population <72	Number	Number Confirmed	Percent Confirmed		Confirmed Blood Lead Level Category				
Locality	FIPS	Months	Tested	Elevated	Elevated	10-14 μg/dL	15-19 μg/dL	20-44 μg/dL	45-69 μg/dL	≥ 70 µg/dL	
Fairfax County	51059	81,675	6,607	17	0.3%	11	2	3	1	0	
Fauquier County	51061	4,256	164	1	0.6%	1	0	0	0	0	
Floyd County	51063	950	83	1	1.2%	1	0	0	0	0	
Fluvanna County	51065	1,567	118	1	0.8%	1	0	0	0	0	
Franklin County	51067	3,147	164	0	0.0%	0	0	0	0	0	
Frederick County	51069	4,657	151	2	1.3%	2	0	0	0	0	
Giles County	51071	1,138	74	0	0.0%	0	0	0	0	0	
Gloucester County	51073	2,483	40	0	0.0%	0	0	0	0	0	
Goochland County	51075	1,044	136	1	0.7%	1	0	0	0	0	
Grayson County	51077	1,061	49	0	0.0%	0	0	0	0	0	
Greene County	51079	1,372	83	0	0.0%	0	0	0	0	0	
Greens ville County	51081	528	6	0	0.0%	0	0	0	0	0	
Halifax County	51083	2,714	268	1	0.4%	0	1	0	0	0	
Hanover County	51085	6,872	563	4	0.7%	3	0	1	0	0	
Henrico County	51087	21,575	2,437	21	0.9%	12	5	4	0	0	
Henry County	51089	3,911	114	2	1.8%	1	1	0	0	0	
Highland County	51091	112	9	0	0.0%	0	0	0	0	0	
Isle of Wight County	51093	2,190	268	0	0.0%	0	0	0	0	0	
James City County	51095	3,307	164	0	0.0%	0	0	0	0	0	
King and Queen County	51097	451	30	0	0.0%	0	0	0	0	0	
King George County	51099	1,510	124	0	0.0%	0	0	0	0	0	
King William County	51101	1,121	69	0	0.0%	0	0	0	0	0	
Lancaster County	51103	577	91	2	2.2%	2	0	0	0	0	
Lee County	51105	1,648	297	0	0.0%	0	0	0	0	0	
Loudoun County	51107	19,682	1,507	4	0.3%	2	0	1	1	0	
Louisa County	51109	1,904	108	1	0.9%	1	0	0	0	0	
Lunenburg County	51111	784	137	4	2.9%	3	0	1	0	0	
Madison County	51113	864	56	0	0.0%	0	0	0	0	0	

		Population < 72	Number	Number Confirmed	Percent Confirmed		Confirmed Blood Lead Level Category					
Locality	FIPS	Months	Tested	Elevated	Elevated	10-14 μg/dL	15-19 μg/dL	20-44 μg/dL	45-69 μg/dL	≥ 70 µg/dL		
Mathews County	51115	504	15	1	6.7%	1	0	0	0	0		
Mecklenburg County	51117	2,093	218	7	3.2%	6	1	0	0	0		
Middles ex County	51119	452	60	0	0.0%	0	0	0	0	0		
Montgomery County	51121	4,758	228	0	0.0%	0	0	0	0	0		
Nelson County	51125	927	90	4	4.4%	4	0	0	0	0		
New Kent County	51127	927	87	0	0.0%	0	0	0	0	0		
Northampton County	51131	867	281	5	1.8%	4	0	1	0	0		
Northumberland County	51133	658	76	0	0.0%	0	0	0	0	0		
Nottoway County	51135	1,057	154	2	1.3%	0	2	0	0	0		
Orange County	51137	1,856	160	0	0.0%	0	0	0	0	0		
Page County	51139	1,599	104	0	0.0%	0	0	0	0	0		
Patrick County	51141	1,359	118	0	0.0%	0	0	0	0	0		
Pittsylvania County	51143	4,194	448	0	0.0%	0	0	0	0	0		
Powhatan County	51145	1,589	103	1	1.0%	1	0	0	0	0		
Prince Edward County	51147	1,178	248	1	0.4%	1	0	0	0	0		
Prince George County	51149	2,402	121	0	0.0%	0	0	0	0	0		
Prince William County	51153	28,789	1,428	2	0.1%	2	0	0	0	0		
Pulaski County	51155	2,339	121	1	0.8%	0	0	1	0	0		
Rappahannock County	51157	420	28	0	0.0%	0	0	0	0	0		
Richmond County	51159	430	70	0	0.0%	0	0	0	0	0		
Roanoke County	51161	5,587	486	2	0.4%	2	0	0	0	0		
Rockbridge County	51163	1,351	54	0	0.0%	0	0	0	0	0		
Rockingham County	51165	5,163	472	3	0.6%	3	0	0	0	0		
Russell County	51167	1,955	243	0	0.0%	0	0	0	0	0		
Scott County	51169	1,487	255	0	0.0%	0	0	0	0	0		
Shenandoah County	51171	2,379	401	3	0.7%	2	1	0	0	0		
Smyth County	51173	2,158	250	1	0.4%	1	0	0	0	0		
Southampton County	51175	1,070	104	1	1.0%	0	0	1	0	0		

		Population <72	Number	Number Confirmed	Percent Confirmed		Confirmed Blood Lead Level Category				
Locality	FIPS	Months	Tested	Elevated	Elevated	10-14 μg/dL	15-19 μg/dL	20-44 μg/dL	45-69 μg/dL	≥ 70 µg/dL	
Spotsylvania County	51177	8,430	861	4	0.5%	2	2	0	0	0	
Stafford County	51179	8,810	460	3	0.7%	3	0	0	0	0	
Surry County	51181	477	62	1	1.6%	1	0	0	0	0	
Sussex County	51183	713	112	0	0.0%	0	0	0	0	0	
Tazewell County	51185	2,879	664	2	0.3%	1	1	0	0	0	
Warren County	51187	2,576	148	0	0.0%	0	0	0	0	0	
Washington County	51191	3,147	191	2	1.0%	1	0	1	0	0	
Westmoreland County	51193	1,046	159	3	1.9%	3	0	0	0	0	
Wise County	51195	2,802	204	0	0.0%	0	0	0	0	0	
Wythe County	51197	1,823	221	4	1.8%	2	0	2	0	0	
York County	51199	4,439	82	0	0.0%	0	0	0	0	0	
Alexandria	51510	9,262	1,663	6	0.4%	4	2	0	0	0	
Bedford	51515	424	105	1	1.0%	0	1	0	0	0	
Bristol	51520	1,114	163	0	0.0%	0	0	0	0	0	
Buena Vista	51530	461	37	0	0.0%	0	0	0	0	0	
Charlottesville	51540	2,368	260	2	0.8%	1	0	1	0	0	
Chesapeake	51550	17,265	1,252	15	1.2%	12	2	1	0	0	
Colonial Heights	51570	1,113	170	0	0.0%	0	0	0	0	0	
Covington	51580	471	335	0	0.0%	0	0	0	0	0	
Danville	51590	3,502	782	12	1.5%	5	2	4	1	0	
Emporia	51595	436	78	0	0.0%	0	0	0	0	0	
Fairfax	51600	1,538	448	0	0.0%	0	0	0	0	0	
Falls Church	51610	690	127	0	0.0%	0	0	0	0	0	
Franklin	51620	538	145	0	0.0%	0	0	0	0	0	
Fredericksburg	51630	1,332	308	3	1.0%	2	1	0	0	0	
Galax	51640	525	129	0	0.0%	0	0	0	0	0	
Hampton	51650	11,272	1,373	8	0.6%	7	0	1	0	0	
Harrisonburg	51660	2,281	220	3	1.4%	3	0	0	0	0	

		Population		Number	Percent	Confirmed Blood Lead Level Category				
Locality	FIPS	< 72 Months	Number Tested	Confirmed Elevated	Confirmed Elevated	10-14 μg/dL	15-19 μg/dL	20-44 μg/dL	45-69 μg/dL	≥ 70 µg/dL
Hopewell	51670	2,020	361	4	1.1%	3	1	0	0	0
Lexington	51678	247	24	0	0.0%	0	0	0	0	0
Lynchburg	51680	4,660	339	8	2.4%	5	1	2	0	0
Manassas	51683	3,636	556	1	0.2%	1	0	0	0	0
Manassas Park	51685	1,235	254	1	0.4%	1	0	0	0	0
Martinsville	51690	1,051	46	2	4.3%	1	0	1	0	0
Newport News	51700	17,107	1,322	10	0.8%	9	0	1	0	0
Norfolk	51710	19,719	3,390	27	0.8%	24	1	2	0	0
Norton	51720	255	30	0	0.0%	0	0	0	0	0
Petersburg	51730	2,610	618	9	1.5%	6	2	1	0	0
Poquoson	51735	738	12	0	0.0%	0	0	0	0	0
Portsmouth	51740	8,555	1,626	14	0.9%	4	6	4	0	0
Radford	51750	661	35	0	0.0%	0	0	0	0	0
Richmond	51760	14,788	3,860	78	2.0%	55	17	5	1	0
Roanoke	51770	7,453	2,028	28	1.4%	18	5	4	1	0
Salem	51775	1,479	430	1	0.2%	1	0	0	0	0
Staunton	51790	1,493	466	3	0.6%	2	1	0	0	0
Suffolk	51800	5,586	1,006	10	1.0%	7	2	1	0	0
Virginia Beach	51810	37,054	2,139	8	0.4%	4	3	0	1	0
Waynesboro	51820	1,546	352	3	0.9%	0	2	1	0	0
Williamsburg	51830	370	3	0	0.0%	0	0	0	0	0
Winchester	51840	1,722	147	1	0.7%	1	0	0	0	0
Unknown			11,199	2	0.0%	2	0	0	0	0
VIRGINIA		557,454	69,647	411	0.6%	287	70	47	6	1

Note: 2000 U.S. Census Population Data were used. Results based on one test per child per year. A confirmed elevated blood lead level (EBLL) is defined as a single elevated venous test  $\geq 10~\mu\text{g}/\text{dL}$  or two elevated capillary tests within 84 days/12 weeks and is only counted once in the year in which it initially occurred. The reporting of elevated blood lead levels is required under the Regulations for Disease Reporting and Control. Effective July 1, 2001, regulations require the reporting of all lead tests performed on children under 72 months of age. The number of children tested each year is influenced by several factors that include the number of children born in Virginia each year, migration of children into and out of the state or to a different locality, and the number of children tested in compliance with the regulations. Regulations only require testing at 1 and 2 years of age if determined to be at risk, and up to 6 years if not previously tested or new risk factors occur. These statistics are preliminary, as the database will accept historical data as made available and continuous data quality control may depict minor changes.

#### **Guidelines for Childhood Lead Poisoning Screening in Virginia**

#### SCREENING/RISK FACTOR QUESTIONS

Blood lead levels shall be obtained in children at ages 1 and 2 if they meet ANY one of the criteria noted in the box below. In addition, children ages 3-5 years of age who have not previously been tested and meet ANY one of the criteria in the box below shall also be tested.

- 1. Eligible for or receiving Medicaid, or WIC benefits?
- 2. Living in a ZIP code determined to be high risk based on age of housing and other factors? (see attached High –Risk ZIP Code list)
- 3. Living in or regularly visiting a house or day care center built before 1950?
- 4. Living in or regularly visiting a house built before 1978 with peeling or chipping paint or recent (within the last 6 months), ongoing or planned renovation?
- 5. Living with or regularly visiting a sibling, housemate or playmate with lead poisoning?
- 6. Living with an adult whose job or hobby involves exposure to lead?
- 7. Living near an active lead smelter, battery recycling plant, or other industry likely to release lead?
- Take careful history regarding possible lead exposure at each routine visit.
- A child must be tested if the parent or guardian requests testing due to possible exposure.
- Screening may be performed by venipuncture or capillary. Filter paper methods are also acceptable. The use of the
  hand held testing machines must be approved through the Lead-Safe Virginia Program at 804-864-7694 to assure
  proper quality assurance and reporting of data.

#### CONFIRMATION OF SCREENING RESULTS

If result of capillary screening test (µg/dL) is:	Perform diagnostic test on venous blood <u>within:</u>
10-19	3 months
20-44	1 month - 1 week (The higher the screen, the sconer the diagnostic test should be performed.)
45-59	48 hours
60-69	24 hours
≥70	Immediately as an emergency lab test

- Confirm elevated capillary blood lead levels ≥10 μg/dL.
- A second capillary is allowable if performed within 12 weeks. A venous sample is considered "confirmed" and required for environmental investigations.

Virginia regulations require reporting of blood lead levels  $\geq$ 10 µg/dL (using the EPI-1 form) to the Office of Epidemiology. Regulations effective July 1, 2001 require laboratories to report all blood lead tests on children under the age of six within ten days of analysis.

#### MANAGEMENT OF CHILDREN WITH CONFIRMED ELEVATED BLOOD LEAD LEVELS

BLOOD LEAD LEVEL (µg/dL)	ACTION (Case manager assures coordinated action and follow-up)	TIME FRAME (Begin intervention)
10-14	<ul> <li>Provide caregiver lead education: Dietary and Environmental</li> <li>Follow-up blood lead testing</li> <li>Refer for WIC and social services, if needed</li> </ul>	Within 30 days
15-19	<ul> <li>Above actions, plus:</li> <li>Proceed according to actions for 20-40 ug/dL if: A follow-up blood lead level is in this range at least three months after initial venous test, or the blood lead levels increase</li> </ul>	Within 2 weeks
20-44	<ul> <li>Above actions, plus:</li> <li>Provide coordination of care (case management)</li> <li>Provide environmental investigation and control lead hazards</li> </ul>	Within 1 week
45-69	Above actions	Within 48 hours
70 and above	<ul> <li>Above actions, plus:</li> <li>Hospitalize child and begin medical treatment (chelation therapy) immediately.</li> <li>Contact a regional treatment center listed below.</li> </ul>	Within 24 hours

Current CDC management recommendations adapted from Managing Elevated Blood Lead Levels Among Young Children: Recommendations from the Advisory Committee on Childhood Lead Poisoning Prevention. (CDC, 2002).

#### Regional Treatment Centers

Children's Hospital of the King's Daughters (Norfolk) Medical College of Virginia (Richmond) University of Virginia (Charlottesville) Children's National Medical Center (DC) Toll Free Emergency	(757) 668-7179 (804) 828-7010 (800) 451-1428 (202) 884-5000 (866) 767-5323 (866) SOS-LEAD
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Note: For questions related to your local area, refer to your local health department. Local health policy and lead ordinances may have additional requirements.

Developed by the Virginia Department of Health Statewide Screening Plan Work Group, following CDC Guidelines and Virginia Regulations. Funded by the Centers for Disease Control and Prevention and the Virginia Department of Health. Rev July 2006.

3. (表) (数) (数)			V	irginia High-F	Risk Zip Codes*				
Accomack	Augusta	<u>Charlotte</u>	Falls Church City	Hampton City	Lunenburg	Norfolk City	Powhatan	Rockingham	Surry
23301	22843	23923	22046	23651	23938	23503	23139	22811	23839
23302	22939	23934	<u>Fauquier</u>	23661	23944	23504	Prince Edward	22812	23846
23308	24430	23937	22639	23665	23952	23505	23901	22815	23881
23336	24432	23962	22643	<u>Hanover</u>	23974	23507	23942	22820	Sussex
23356	24437	23964	22734	23047	Lynchburg City	23508	Prince George	22821	23867
23357	24459	Charlottesville City	Floyd	23069	24501	23509	23842	22832	23888
23359	24467	22903	24072	<u>Henrico</u>	24503	23510	Prince William	22834	23890
23395	24476	Chesapeake City	24091	23226	24504	23511	22134	22841	Tazewell
23399	24479	23324	24105	23227	<u>Madison</u>	23517	Pulaski	22846	24602
23404	24485	Clarke	24380	23229	22709	23523	24301	22853	24605
23407	24486	22611	Fluvanna	23230	22719	<b>Northampton</b>	24347	24471	24613
23409	<u>Bath</u>	22620	23022	23231	22727	23310	Radford City	Russell	24622
23410	24445	22663	23084	Henry	22732	23350	24141	24237	24651
23417	24460	<b>Covington City</b>	Franklin City	24089	Martinsville City	23354	Rappahanock	24649	Virginia Beach Cit
23418	24484	24426	23851	<u>Highland</u>	24112	23405	22002	Scott	23521
23420	24487	Craig	<u>Frederick</u>	24413	<u>Mathews</u>	23413	22716	24245	Warren
23421	<b>Bedford</b>	24127	22645	24433	23021	Northumberland	22740	24250	22642
23426	24526	24131	22654	24442	23025	22435	22746	24251	22649
23440	Bland	Culpeper	Fredericksburg City	24458	23045	22473	22747	24258	Washington
23442	24315	22713	22401	24465	23066	22539	22749	<u>Shenandoah</u>	24236
<u>Albermarle</u>	24318	22718	Galax City	24468	23109	22579	Richmond City	22644	24270
22901	24366	22726	24333	Isle of Wright	23125	Norton City	23219	22657	24340
22931	<b>Botetourt</b>	22729	Giles	23315	23130	24273	23220	22660	Waynesboro City
22937	24066	22736	24086	James City	Mecklenburg	<b>Nottoway</b>	23221	22664	22980
22943	24085	Cumberland	24093	23185	23915	23824	23222	22810	Westmoreland
22947	24090	23027	24094	King and Queen	23924	23922	23223	22824	22488
22959	<u>Bristol</u>	<b>Danville City</b>	24124	23023	23968	23930	23224	22842	Winchester City
24590	24201	24540	24128	23108	23970	<b>Orange</b>	23225	22844	22601
Alexandria City	<u>Brunswick</u>	24541	24134	23110	<u>Middlesex</u>	22972	Roanoke City	22847	Wise
22301	23821	Dickenson	24147	23156	23079	Page	24011	<u>Smyth</u>	24216
22302	23868	24226	24150	23177	23149	22650	24013	24316	24219
22305	23920	24272	Goochland	King George	23176	22835	24014	24319	24230
22314	<b>Buchanan</b>	24289	23038	22448	23180	22849	24015	24370	24283
<u>Alleghany</u>	24639	<u>Dinwiddie</u>	23153	King William	<u>Montgomery</u>	22851	24016	24375	24285
24422	<u>Buckingham</u>	23830	Grayson	23009	24138	<u>Patrick</u>	Rockbridge	Southampton	24293
<u>Amelia</u>	23936	23840	24292	23181	24149	24185	24435	23827	Wythe
23083	Buena Vista City	23850	24326	Lancaster	Nelson	Petersburg City	24439	23828	24312
<b>Appomattox</b>	24416	23872	24330	22480	22938	23803	24472	23829	24322
23958	Caroline	23894	24378	22503	22964	<u>Pittsylvania</u>	24473	23837	24323
<u>Arlington</u>	22427	<b>Emporia</b>	Greene	Lee	22969	24139	24483	23844	24350
22201	22514	23847	22935	24221	22971	24531	24555	23866	24368
22203	Carroll	Essex	<u>Halifax</u>	24265	24464	24594	24578	23874	24382
22204	24325	22454	24534	24277	24553	Portsmouth City	24579	Staunton City	
22205	24343	22504	24539	24282	Newport News City	23701		24401	
22206	24352	22509	24577	Lexington City	23604	23702		Suffolk City	
22207		22560	24592	24450	23607	23704		23432	
22211		<u>Fairfax</u> 22307	24598	<u>Louisa</u> 23024		23707		23434	

<sup>2307 23024

\*</sup> Areas with these ZIP Codes have >27% of housing built before 1950 and/or an increased prevalence of children with elevated blood lead levels per available data. ZIP Codes are from the 2000
U.S.Census. View http://www.vahealth.org/leadsafe for updates and information on childhood lead poisoning in Virginia and access to publications available to medical professionals, parents and others. Toll free phone (877) 668-7987.

Virginia Department of Health, Revised June 2003

	1	/irginia	High-R	Risk Zip	Codes	*	
22002	22709	22969	23301	23701	23964	24270	24442
22046	22713	22971	23302	23702	23968	24272	24445
22134	22716	22972	23308	23704	23970	24273	24450
22201	22718	22980	23310	23707	23974	24277	24458
22203	22719	23009	23315	23803	24011	24282	24459
22204	22726	23021	23324	23821	24013	24283	24460
22205	22727	23022	23336	23824	24014	24285	24464
22206	22729	23023	23350	23827	24015	24289	24465
22207	22732	23024	23354	23828	24016	24292	24467
22211	22734	23025	23356	23829	24066	24293	24468
22301	22736	23027	23357	23830	24072	24301	24471
22302	22740	23038	23359	23837	24085	24312	24472
22305	22746	23045	23395	23839	24086	24315	24473
22307	22747	23047	23399	23840	24089	24316	24476
22314	22749	23066	23404	23842	24090	24318	24479
22401	22810	23069	23405	23844	24091	24319	24483
22427	22811	23079	23407	23846	24093	24322	24484
22435	22812	23083	23409	23847	24094	24323	24485
22448	22815	23084	23410	23850	24105	24325	24486
22454	22820	23108	23413	23851	24112	24326	24487
22473	22821	23109	23417	23866	24124	24330	24501
22480	22824	23110	23418	23867	24127	24333	24503
22488	22832	23125	23420	23868	24128	24340	24504
22503	22834	23130	23421	23872	24131	24343	24526
22504	22835	23139	23426	23874	24134	24347	24531
22509	22841	23149	23432	23881	24138	24350	24534
22514	22842	23153	23434	23888	24139	24352	24539
22539	22843	23156	23440	23890	24141	24366	24540
22560	22844	23176	23442	23894	24147	24368	24541
22579	22846	23177	23503	23901	24149	24370	24553
22601	22847	23180	23504	23915	24150	24375	24555
22611	22849	23181	23505	23920	24185	24378	24577
22620	22851	23185	23507	23922	24201	24380	24578
22639	22853	23219	23508	23923	24216	24382	24590
22642	22901	23220	23509	23924	24219	24401	24592
22643	22903	23221	23510	23930	24221	24413	24594
22644	22931	23222	23511	23934	24226	24416	24598
22645	22935	23223	23517	23936	24230	24422	24602
22649	22937	23224	23521	23937	24236	24426	24605
22650	22938	23225	23523	23938	24237	24430	24613
22654	22939	23226	23604	23942	24245	24432	24622
22657	22943	23227	23607 23651	23944 23952	24250 24251	24433 24435	24639 24649
22660	22947	23229	23661			24435	24649
22663	22959 22964	23230		23958	24258 24265		Z400 I
22664		23231	23665	23962	24265	24439	bloodloodlouds

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