Louisiana Healthy Homes and Childhood Lead Poisoning Prevention Program
Surveillance System Report, 2016

Prepared by:

Ngoc Huynh, MD, MPH

Program Epidemiologist

Cheryl Harris, MPH
Program Administrator

Ann Johnson-Bludsaw, LMSW

Case Manager

Trina Evans Williams, ScD, MPH

Program Coordinator

Executive Summary

The surveillance component of the Louisiana Healthy Homes and Childhood Lead Poisoning Prevention Program (), the Healthy Homes and Lead Poisoning Surveillance System (HHLPSS), collects information about blood lead tests conducted on children between the ages of 6 and 72 months who reside in Louisiana. The Lead Poisoning Surveillance System provides blood lead test results to other state agencies including Environmental Epidemiology, WIC, Head Start Centers and local health departments as needed, and upon request to third parties for research and planning.

Since 2000, the Lead Poisoning Prevention has released a comprehensive Annual Report on statewide childhood blood lead testing which includes a detailed breakdown of blood lead data by age, jurisdiction, blood lead level, and the trend of blood lead levels over time. The current report presents the blood lead test results for children for calendar year 2016. All numbers are based on blood lead testing (venous or capillary) on children 6-72 months of age.

2016 Surveillance Highlights:

- During 2016, 59,594 children were tested among 406,701 children 6-72 months of age in Louisiana. The population of children under age 6 was obtained from the 2015 American community survey, 5-year estimate for Louisiana population.
- The analysis shows that 14.7% of children under age 6 were tested. This was a decrease of 9,925 children tested compared to 69,519 (18.4%) during 2015. This represents a 2.6% decrease in testing from 2015 to 2016.
- During 2016, 35.6% of 1-year-olds and 28.9% of 2-year-olds were tested for lead poisoning among total population of children 1 year of age (n=66,798) and 2 years of age (n=64,878).
- During 2016, of the 59,594 children tested for blood lead statewide, 750 (1.3%) were found to have initial blood lead level (BLL) ≥10µg/dl. During 2016, 1,903 children had an initial blood lead level of 5-9.9µg/dl.
- While there has been a decrease in the number of children tested in 2016 compared to 2015, there has also been a decrease in the number of children found with elevated blood lead levels (Figure1).
- Screening rates between parishes varied in both estimation and reliability. Parishes with higher screening rates and larger numbers of children screened had more stable estimates for the prevalence of elevated lead levels than those with lower screening rates or with very few children screened. Similarly, parishes with higher screening rates and larger numbers of children screened also had estimates that are more reliable. Consumers of the data presented in this report should keep these limitations of the data in mind when reviewing or interpreting the information presented here.

- Caldwell Parish had the highest testing rate (29.1%), followed by Franklin Parish (27.5%), Sabine Parish (24.1%), Claiborne Parish (22.7%), and Concordia Parish (22.6%).
- Franklin Parish had the highest cumulative testing rate for children at 1 year and 2 years of age at 70.3% (Table 3).
- Eighty-seven percent of the addresses were geo-coded at the longitude, latitude level. The parish assignment is based on: 1) County-FIPS as determined by geocoding, 2) Child's zip code address and 3) the original parish name if it was included in the address information.
- In 2016, the Lead Poisoning Surveillance System received blood lead reports from 78 establishments (laboratories, clinics, medical offices and hospital labs). About 90% of reports received electronically were from 69 establishments and the remaining 10% were received in hard copy through fax or mail from the other nine establishments. The average reporting time, from the time the sample was drawn to the time the results were entered into the Lead Poisoning Surveillance System database, was about 14 days. The average time for reporting elevated BLL ≥10µg/dl was approximately 48 hours.
- Louisiana Administrative Code 48:V§ 7005 requires blood lead testing for all children ages 6-72 months who spend more than 10 hours a week in Louisiana.

Overview

Exposure to lead is still the most significant and widespread environmental hazard for children in Louisiana, although substantial reduction in lead exposure and lead poisoning have been achieved. While the rate of children with elevated BLLs in Louisiana has decreased dramatically over the years, continues to capture cases of elevated BLLs annually.

The Centers for Disease Control and Prevention (CDC) has concluded that even low blood lead levels can cause lifelong health effects. As of January 2012, CDC uses a reference level of 5µg/dl to identify children who have been exposed to lead and who require case management.

Statistical Report

In 2016, 59,594 children 6-72 months of age were tested for lead exposure statewide. Table 1 provides a summary for statewide statistics of blood lead screening in 2016.

Findings

The overall proportion of children with BLL ≥5µg/dl declined in 2016 (Figure 1). This represents a 1.1% decrease in lead poisoning (Table 2 and Figure 3). Additionally, although the number of children with BLLs ≥10µg/dl decreased, the proportion stayed the same at 1.3% in 2015 and 2016 (Figures 2 and 2.1).
The decline in lead exposure is demonstrated by the decline in the total number and percent of children with elevated blood lead levels (Figure 1).

Appendix A provides a breakdown of blood lead testing and the status of children by age groups of <2 years of age and ≥3 years of age by high-risk parishes in 2016. For detailed breakdowns of blood lead data, the reader is referred to the supplementary data tables.

Table 1: Calendar Year 2016 –Number and Percent of Children Tested aged 6-72 months N=406,701

Item	Number of tests	Percent (%) of total population
Number of tests	59,594	14.7
Age		
Under 1 Year	1804	3
1 Year	23757	35.6
2 Years	18756	28.9
3 Years	6411	10.7
4 Years	6417	10.8
5 Years	2332	3.9
6 Years	117	0.2
Gender		
Female	29,023	48.7
Male	30,274	50.8
Unknown	294	0.5
Blood Lead Level (µg/dl)		
<5	56,941	95.5
5-9.9	1903	3.2
10-14.9	395	0.7
15-19.9	160	0.3
≥20	70	0.1
Mean BLL	2.45	
Blood Specimens		
Capillary	32,224	54.1
Venous	486	0.8
Unknown	26,884	45.1

Table 2: Summary of the Numbers of Children with Elevated Blood Lead levels by Parish
2016 Data

Parish	Population of Children 6 and under[1]	2016 Data									
		Total tested (n)	Percent tested (%)	5- 9.9 µg/dl	10-14.9 µg/dl	15-19.9 µg/dl	≥ 20 µg/dl	≥5 µg/dl	≥10 µg/dl	%≥5 µg/dl	%≥10 µg/dl
Acadia	6386	312	4.9	13	1	0	0	14	1	4.5	0.3
Allen	2190	241	11.0	5	1	0	0	6	1	2.5	0.4
Ascension	11385	964	8.5	4	1	0	0	5	1	0.5	0.1
Assumption	1903	144	7.6	3	0	0	0	3	0	2.1	0.0
Avoyelles	3560	589	16.5	19	3	2	1	25	6	4.2	1.0
Beauregard	3168	228	7.2	8	1	1	2	12	4	5.3	1.8
Bienville	987	89	9.0	4	0	0	0	4	0	4.5	0.0
Bossier	11651	1278	11.0	40	6	2	2	50	10	3.9	0.8
Caddo	23558	2761	11.7	153	21	5	5	184	31	6.7	1.1
Calcasieu	17147	1345	7.8	81	6	5	5	97	16	7.2	1.2
Caldwell	687	200	29.1	9	1	0	1	11	2	5.5	1.0
Cameron	557	34	6.1	1	0	0	0	1	0	2.9	0.0
Catahoula	814	166	20.4	2	1	0	0	3	1	1.8	0.6
Claiborne	1089	247	22.7	30	7	1	1	39	9	15.8	3.6
Concordia	1878	425	22.6	8	0	0	0	8	0	1.9	0.0
De Soto	2387	246	10.3	6	1	0	0	7	1	2.8	0.4
East Baton Rouge	37137	4260	11.5	144	25	4	5	178	34	4.2	0.8
East Carroll	452	48	10.6	4	0	0	0	4	0	8.3	0.0
East Feliciana	1359	257	18.9	5	1	0	1	7	2	2.7	0.8
Evangeline	3043	346	11.4	9	2	0	0	11	2	3.2	0.6
Franklin	2058	567	27.5	11	1	0	1	13	2	2.3	0.4
Grant	1903	120	6.3	4	0	0	0	4	0	3.3	0.0
Iberia	7261	220	3.0	7	1	0	1	9	2	4.1	0.9
Iberville	2609	178	6.8	6	1	1	2	10	4	5.6	2.2
Jackson	1316	225	17.1	4	2	0	0	6	2	2.7	0.9
Jefferson	36422	4098	11.3	90	21	7	7	125	35	3.1	0.9
Jefferson Davis	2796	276	9.9	19	4	1	1	25	6	9.1	2.2
Lafayette	20912	653	3.1	15	1	0	0	16	1	2.5	0.2
Lafourche	8464	850	10.0	19	5	1	0	25	6	2.9	0.7
LaSalle	1153	245	21.2	1	2	0	0	3	2	1.2	0.8
Lincoln	3530	436	12.4	7	0	0	0	7	0	1.6	0.0
Livingston	12176	1081	8.9	27	1	0	1	29	2	2.7	0.2

(Contd.)

Parish	of Children 6 and under[1]	2016 Data									
		tested (n)	tested(%)	5- 9.9	10-14.9	15-19.9	≥ 20	≥5 µg/dl	≥10 µg/dl	%≥5 µg/dl	%≥10 µg/dl
				µg/dl							
Madison	1048	201	19.2	5	0	0	0	5	0	2.5	0.0
Morehouse	2684	308	11.5	10	2	1	0	13	3	4.2	1.0
Natchitoches	3378	573	17.0	16	3	0	0	19	3	3.3	0.5
Orleans	29898	4570	15.3	368	94	28	20	510	142	11.2	3.1
Ouachita	14518	1314	9.1	86	21	9	2	118	32	9.0	2.4
Plaquemines	2108	209	9.9	3	1	1		5	2	2.4	1.0
Pointe Coupee	1866	300	16.1	7	3	0	0	10	3	3.3	1.0
Rapides	11754	817	7.0	36	16	4	0	56	20	6.9	2.4
Red River	860	112	13.0	8	0	0	0	8	0	7.1	0.0
Richland	1783	314	17.6	2	1	0	1	4	2	1.3	0.6
Sabine	2020	486	24.1	16	2	0	0	18	2	3.7	0.4
St. Bernard	4480	126	2.8	3	2	0	0	5	2	4.0	1.6
St. Charles	4693	125	2.7	5	0	0	0	5	0	4.0	0.0
St. Helena	887	15	1.7	1	0	0	0	1	0	6.7	0.0
St. James	1798	44	2.4	2	0	0	0	2	0	4.5	0.0
St. John the Baptist	4000	47	1.2	4	0	0	0	4	0	8.5	0.0
St. Landry	8384	173	2.1	12	4	0	0	16	4	9.2	2.3
St. Martin	4913	28	0.6	1	0	1	1	3	2	10.7	7.1
St. Mary	4772	98	2.1	8	2	2	1	13	5	13.3	5.1
St. Tammany	19967	427	2.1	4	4	0	1	9	5	2.1	1.2
Tangipahoa	11595	737	6.4	36	3	2	0	41	5	5.6	0.7
Tensas	435	94	21.6	3	1	0	0	4	1	4.3	1.1
Terrebonne	10819	657	6.1	21	6	0	3	30	9	4.6	1.4
Union	1983	276	13.9	8	0	1	0	9	1	3.3	0.4
Vermilion	5607	545	9.7	3	1	1	0	5	2	0.9	0.4
Vernon	6009	94	1.6	2	0	0	1	3	1	3.2	1.1
Washington	4121	490	11.9	25	3	1	0	29	4	5.9	0.8
Webster	3323	334	10.1	13	5	0	1	19	6	5.7	1.8
West Baton Rouge	2312	200	8.7	8	0	0	1	9	1	4.5	0.5
West Carroll	926	103	11.1	1	0	0	0	1	0	1.0	0.0
West Feliciana	831	81	9.7	3	1	0	0	4	1	4.9	1.2
Winn	995	213	21.4	16	4	4	2	26	10	12.2	4.7

[1] U.S Census Bureau, 2015 American Community Survey, five year estimates

Figure 1
Blood Lead Distribution of Children 6-72 Months Tested for Lead in 2015 and 2016

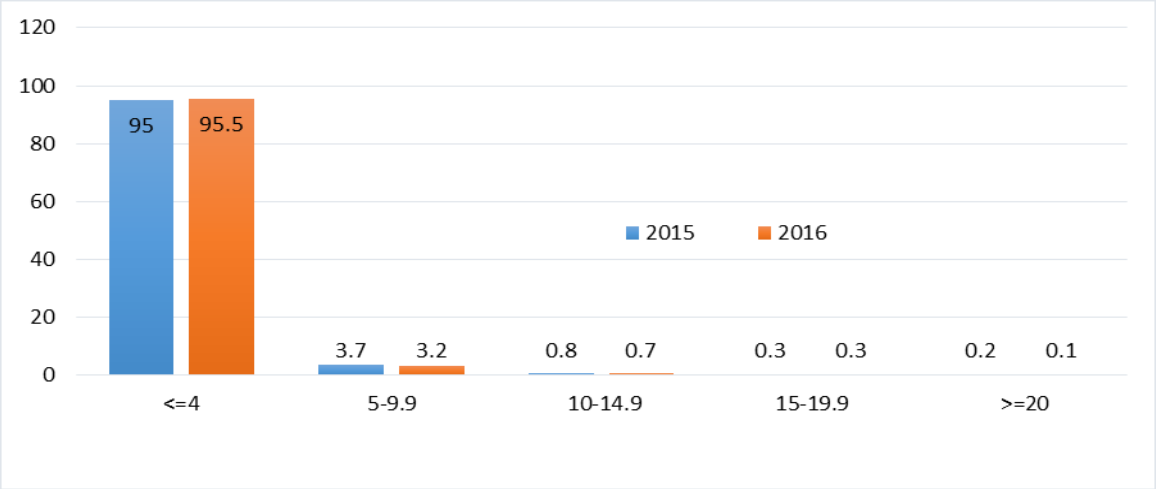


Figure 2
Number of Children 6-72 Months tested for Lead and Number Reported to have BLL ≥10ug/dL: 2003-2016

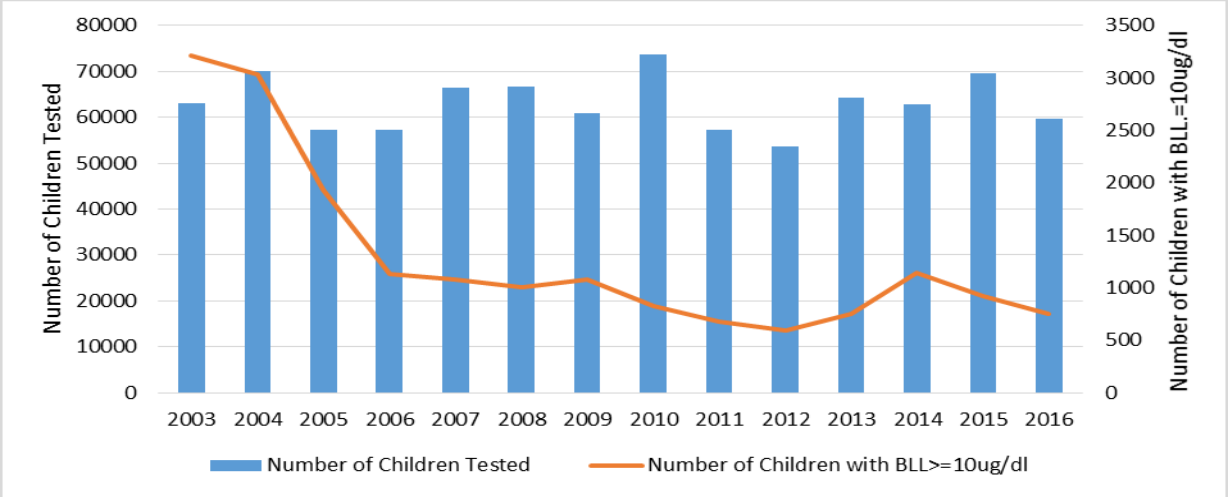


Figure 2.1
Percent of Children 6-72 Months tested for Lead and Percent Reported to have BLL ≥10µg/dl: 2003-2016

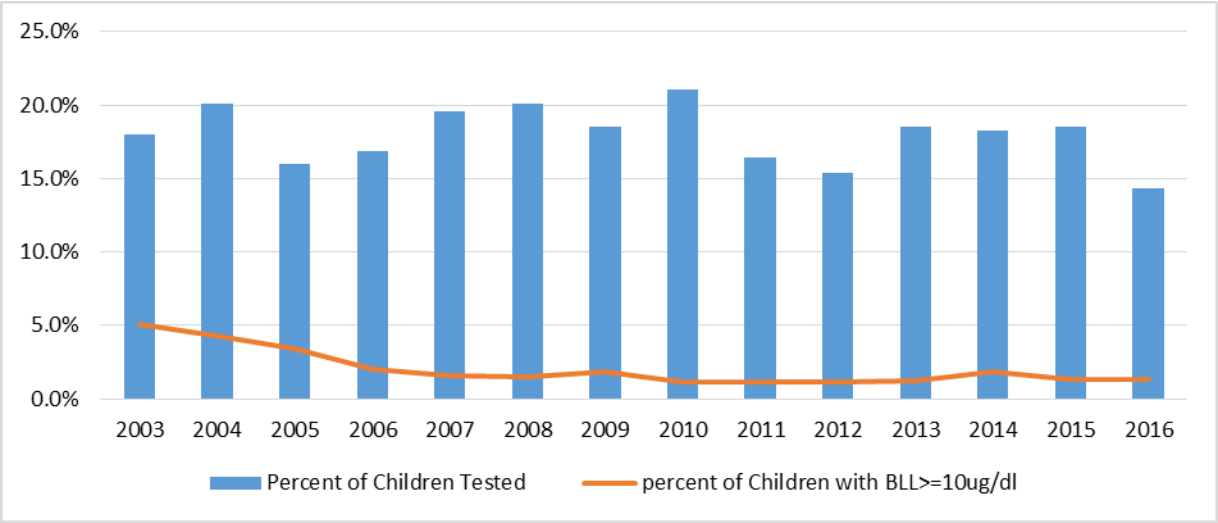
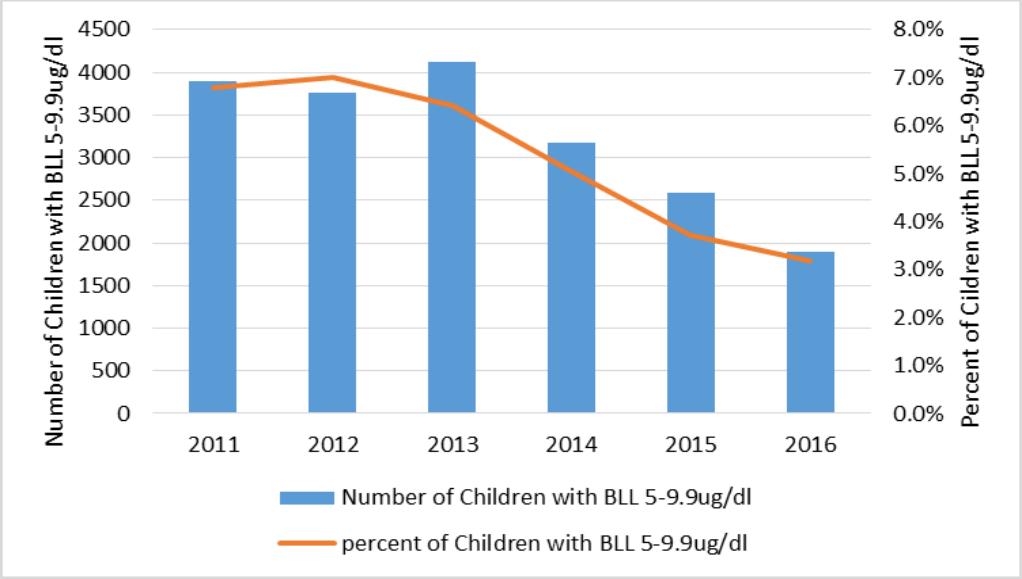


Figure 3
Percent of Children 6-72 Months Tested for Lead with BLL 5-9.9ug/dL: 2013-2016



Statewide Activities to Eliminate Childhood Lead Poisoning

1. Universal Screening: A primary goal of the Lead Poisoning Prevention Program is to identify children who may be at risk of lead exposure, so that preventive actions can be implemented. Because of their hand-mouth behavior, children ages 1 and 2 are most likely to be exposed to lead. To that end, the State of Louisiana called for universal screening to require blood lead testing for all children 6-72 months old, especially children at ages 1 and 2. Approximately 21% of children ages 1 and 2 were tested for lead in 2016, with rates as high as 70.3% for Franklin parish and 68.5% for Concordia parish (Table 3).

Table 3: Blood Lead Testing of Children One and Two Years Old by Parish

Parish	1 Year Old			2 Years Old			Total 1 and 2 Years Old		
	Children Population	Children Tested		Children Population	Children Tested		Children Population	Children Tested	
		Number	Percent		Number	Percent		Number	Percent
Acadia	1084	136	12.5	1053	113	10.7	2137	249	11.7
Allen	291	77	26.4	283	77	27.2	575	154	26.8
Ascension	1864	565	30.3	1810	215	11.9	3674	780	21.2
Assumption	238	66	27.7	231	46	19.9	469	112	23.9
Avoyelles	599	196	32.7	582	145	24.9	1181	341	28.9
Beauregard	503	103	20.5	488	60	12.3	991	163	16.4
Bienville	196	44	22.5	190	19	10.0	386	63	16.3
Bossier	1920	583	30.4	1865	365	19.6	3785	948	25.0
Caddo	4108	1063	25.9	3990	804	20.1	8099	1867	23.1
Calcasieu	3020	578	19.1	2934	320	10.9	5954	898	15.1
Caldwell	56	22	39.2	55	11	20.2	111	33	29.8
Cameron	61	15	24.5	60	8	13.4	121	23	19.0
Catahoula	120	67	56.0	116	25	21.5	236	92	39.0
Claiborne	206	95	46.2	200	96	48.1	405	191	47.1
Concordia	219	202	92.1	213	94	44.1	432	296	68.5
De Soto	413	111	26.9	401	86	21.4	814	197	24.2
East Baton Rouge	6007	1942	32.3	5834	1565	26.8	11841	3507	29.6
East Carroll	76	23	30.2	74	15	20.3	150	38	25.3
East Feliciana	263	107	40.7	255	91	35.6	518	198	38.2
Evangeline	560	118	21.1	544	120	22.1	1104	238	21.6
Franklin	289	219	75.9	280	181	64.6	569	400	70.3
Grant	248	28	11.3	241	43	17.9	489	71	14.5
Iberia	1100	131	11.9	1068	58	5.4	2168	189	8.7
Iberville	379	70	18.5	368	41	11.1	747	111	14.9
Jackson	201	82	40.8	195	70	35.9	396	152	38.4
Jefferson	5755	1974	34.3	5590	1286	23.0	11345	3260	28.7
Jefferson Davis	464	91	19.6	450	86	19.1	914	177	19.4
Lafayette	3521	294	8.4	3419	275	8.0	6940	569	8.2
Lafourche	1303	351	26.9	1265	302	23.9	2568	653	25.4
LaSalle	194	88	45.3	189	61	32.4	383	149	38.9
Lincoln	626	161	25.7	608	101	16.6	1233	262	21.2
Livingston	2176	546	25.1	2114	390	18.5	4290	936	21.8
Madison	214	76	35.5	208	54	26.0	422	130	30.8
Morehouse	365	126	34.5	354	64	18.1	719	190	26.4
Natchitoches	589	249	42.3	572	170	29.7	1160	419	36.1
Orleans	5091	1941	38.1	4945	1306	26.4	10036	3247	32.4
Ouachita	2464	386	15.7	2393	327	13.7	4856	713	14.7
Plaquemines	429	96	22.4	417	78	18.7	846	174	20.6
Pointe Coupee	284	117	41.2	276	89	32.3	559	206	36.8
Rapides	2056	300	14.6	1997	295	14.8	4052	595	14.7
Red River	138	53	38.3	134	29	21.6	273	82	30.1
Richland	319	111	34.8	310	83	26.8	630	194	30.8
Sabine	364	120	32.9	354	109	30.8	718	229	31.9
St. Bernard	761	61	8.0	739	40	5.4	1500	101	6.7
St. Charles	666	50	7.5	647	52	8.0	1313	102	7.8

St. Helena	117	9	7.7	113	4	3.5	230	13	5.6
St. James	309	16	5.2	300	12	4.0	608	28	4.6
St. John the Baptist	577	17	2.9	560	11	2.0	1137	28	2.5
St. Landry	1438	91	6.3	1397	55	3.9	2835	146	5.2
St. Martin	802	15	1.9	779	12	1.5	1582	27	1.7
St. Mary	790	41	5.2	767	25	3.3	1557	66	4.2
St. Tammany	3099	205	6.6	3010	153	5.1	6108	358	5.9
Tangipahoa	1669	317	19.0	1621	254	15.7	3290	571	17.4
Tensas	65	36	55.6	63	22	35.0	128	58	45.5
Terrebonne	1757	332	18.9	1707	254	14.9	3464	586	16.9
Union	286	113	39.5	278	86	31.0	564	199	35.3
Vermilion	911	219	24.1	884	252	28.5	1795	471	26.2
Vernon	1078	28	2.6	1047	16	1.5	2125	44	2.1
Washington	700	249	35.5	680	156	22.9	1381	405	29.3
Webster	611	114	18.7	593	93	15.7	1204	207	17.2
West Baton Rouge	351	97	27.6	341	61	17.9	693	158	22.8
West Carroll	149	52	35.0	144	40	27.7	293	92	31.4
West Feliciana	125	32	25.5	122	35	28.8	247	67	27.1
Winn	167	73	43.8	162	70	43.3	328	143	43.6

2. WIC Testing: Pilot testing for lead poisoning began in Region 1 (Orleans) on October 1, 2014. Testing is done on children who are initially certified and those who are recertified for WIC services. Approximately 81% of screened children were first time testers.

Table 4: Blood Lead Testing in WIC clinics from 01/01/2016 through 12/31/2016

Clinic name	Total	1year old	2years old	3years old	>=4years old	Retest
CHILDRENS MEDICAL CENTER GRETNA WIC	14	12	1	0	1	2
CRESCENT CITY WIC SERVICES	70	38	25	6	1	19
DAUGHTERS OF CHARITY CARROLLTON	224	162	26	14	22	46
DAUGHTERS OF CHARITY ST CECILIA	32	27	3	2	0	6
IDA HYMEL WIC CLINIC	17	9	5	1	2	5
JEFFERSON PARISH MARRERO HLTH UNIT	21	17	4	0	0	1
JEFFERSON PARISH METAIRIE HLTH UNIT	14	11	3	0	0	0
NEW ORLEANS EAST FAMILY HEALTH	2	1	1	0	0	0
ST BERNARD WIC CLINIC	28	21	6	1	0	6
ST CHARLES COMMUNITY HEALTH CENTER	10	10	0	0	0	0
EDNA PILSBURY WIC CLINIC	5	5	0	0	0	1
CHILDREN'S MEDICAL CENTER WIC CLINIC IN WESTWEGO	80	78	2	0	0	6
ULTIMATE HEALTH INC.	0	0	0	0	0	0

3. Healthy Louisiana/Medicaid Eligible Children: Another group of children at risk of lead poisoning are children on the Medicaid Assistance Program. Medicaid data is analyzed to determine the rate of screening among Medicaid eligible children aged 0-6 years for the calendar year 2016. To best assess the

rate for this population, it is necessary to review Medicaid recommendations regarding screening for lead. The recommendations suggest **1)** screening of children at 12 months and 24 months and **2)** screening of children 36 months to 72 months that were not previously screened. These recommendations will affect how the data is summarized as it is expected that as the patient population ages, the overall lead screening ever rate will increase. **The table below shows the summary of 2016 Lead Screening among Medicaid Eligible children 6 years old and under.**

Table 6 - 2016 Lead Screening Summary - Medicaid Eligible Population 6 Years old and under[2]

Age_group	Medicaid _LS	Medicaid Eligible Total	Ratio	Historical LS_last 6yrs	Medicaid no _LS	LS Ratio	No LS Ratio
	A	B	C=A/B	D	E=B-D	F=D/B	G=E/B
Age1	20,442	47,457	*43.1*	20,642	26,815	*43.5*	56.5
Age2	16,650	46,103	*36.1*	27,098	19,005	*58.8*	41.2
Age3	7,792	45,186	*17.2*	29,549	15,637	*65.4*	34.6
Age4	5,810	45,259	*12.8*	31,391	13,868	*69.4*	30.6
Age5	3,109	44,492	*7.0*	31,591	12,901	*71.0*	29.0
Age6	1,109	44,016	*2.5*	33,117	10,899	*75.2*	24.8
Age 6+	217	44,427	*0.5*	218	44,209	*0.5*	99.5
	55,129	**316,940**		**173,606**	**143,334**		

[2] Medicaid data analysis obtained from the Office of Public Health Bureau of Health Informatics

It is clear that the yearly screening rate decreases among eligible patients as age increases. While it is recommended screening for children at 12 and 24 months of age, the screening for children at the age of 2 decreased. When lead screening history is considered (last 6 years), lead screening rates increase as age increases with approximately 75% receiving a lead screening test by the age of 6 among its Medicaid population.

4. Case Management/Environmental Investigations: The Lead Poisoning Prevention Program has well-established case management guidelines and environmental protocols for follow-up of children with elevated BLLs. **Tables 7 and 8 reflect the number of cases that received follow-up and the number that received environmental investigations.**

Table 7 – Management for Follow-Up Blood Lead Testing Chart

January 1, 2016 to December 31, 2016	
Blood Lead Level (µg/dL)	**Number of Cases Receiving Follow-up**
5-9	1890
10-14	395
15-19	160
20-29	125

30-44	60
45-69	6
≥70	3
TOTAL	**2639**

Table 8- Sources of Lead Based on Environmental Investigations

	2012	2013	2014	2015	2016	Totals
Number of Referrals	23	18	21	48	71	181
Number of Investigations	13	13	12	37	46	121
Paint	13	9	12	30	19	83
Soil	9	9	6	13	13	50
Dust	9	6	7	25	22	69
Other	0	1(fish sinker)	0	0	2 spices, cosmetics 2 fishing weights	5

5. Data Quality: Since 2011, the Lead Poisoning Prevention Program has successfully implemented and used the CDC -based Healthy Homes and Lead Poisoning Surveillance System (HHLPSS) to collect, compile and track information about blood lead tests conducted and lead hazards found among child residents of Louisiana. With the Lead Program Surveillance System, the Lead Poisoning Prevention Program has expanded its surveillance system into a comprehensive, population-based system. This includes the collection of all blood lead tests conducted on children between the ages of 6 and 72 months, providing environmental investigations, and recording the source of lead poisoning for children with venous BLLs ≥ 5µg/dl. The Lead Poisoning Prevention Program staff makes an effort to further improve data quality with respect to completeness, timeliness and accuracy.

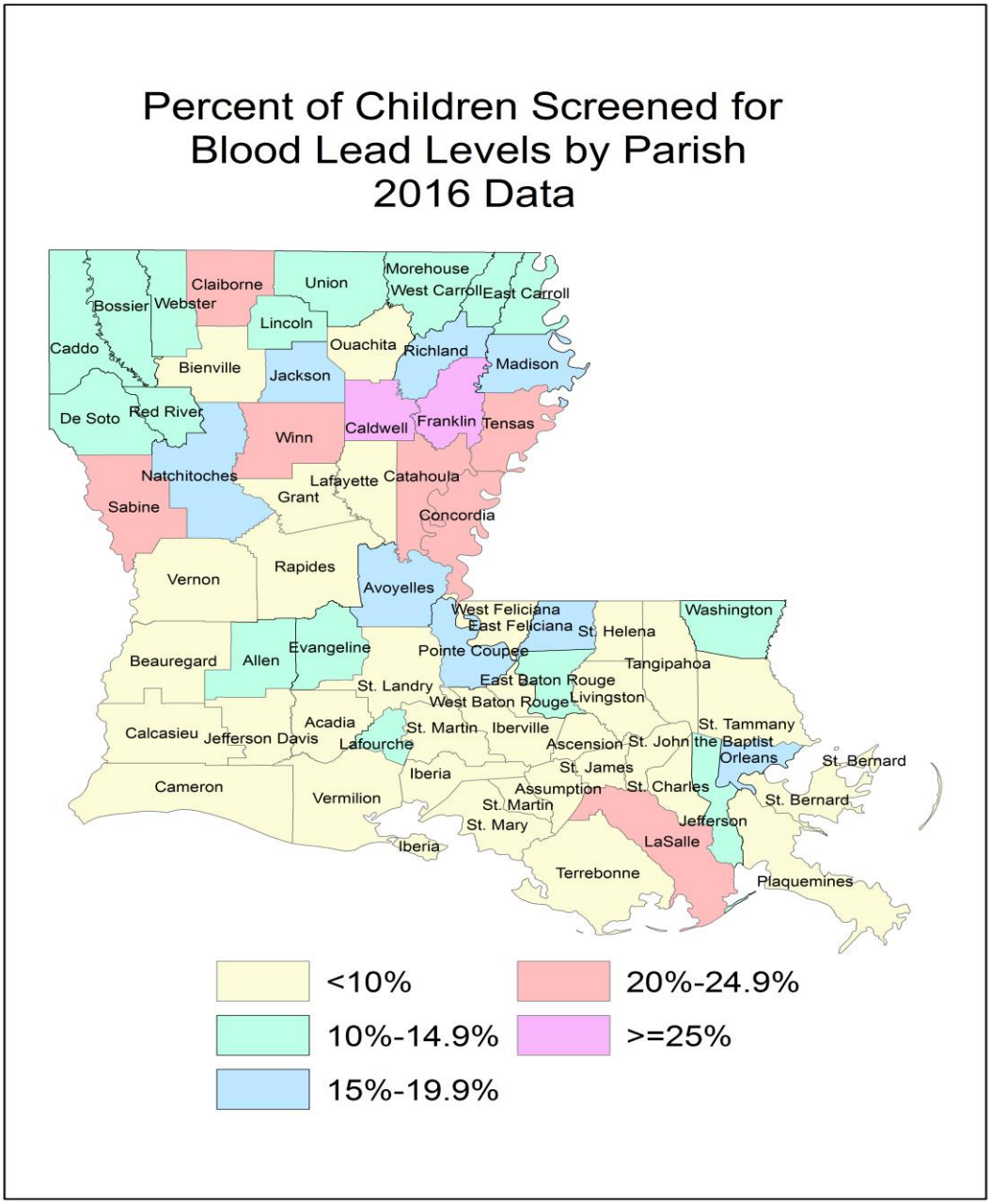
Staff keeps track on a daily basis of laboratory reporting to make sure laboratories are reporting all blood lead tests at least biweekly. Staff also checks the completeness of data with respect to the child and guardian's names, address, telephone number, and the child's Medicaid number.

Appendix A

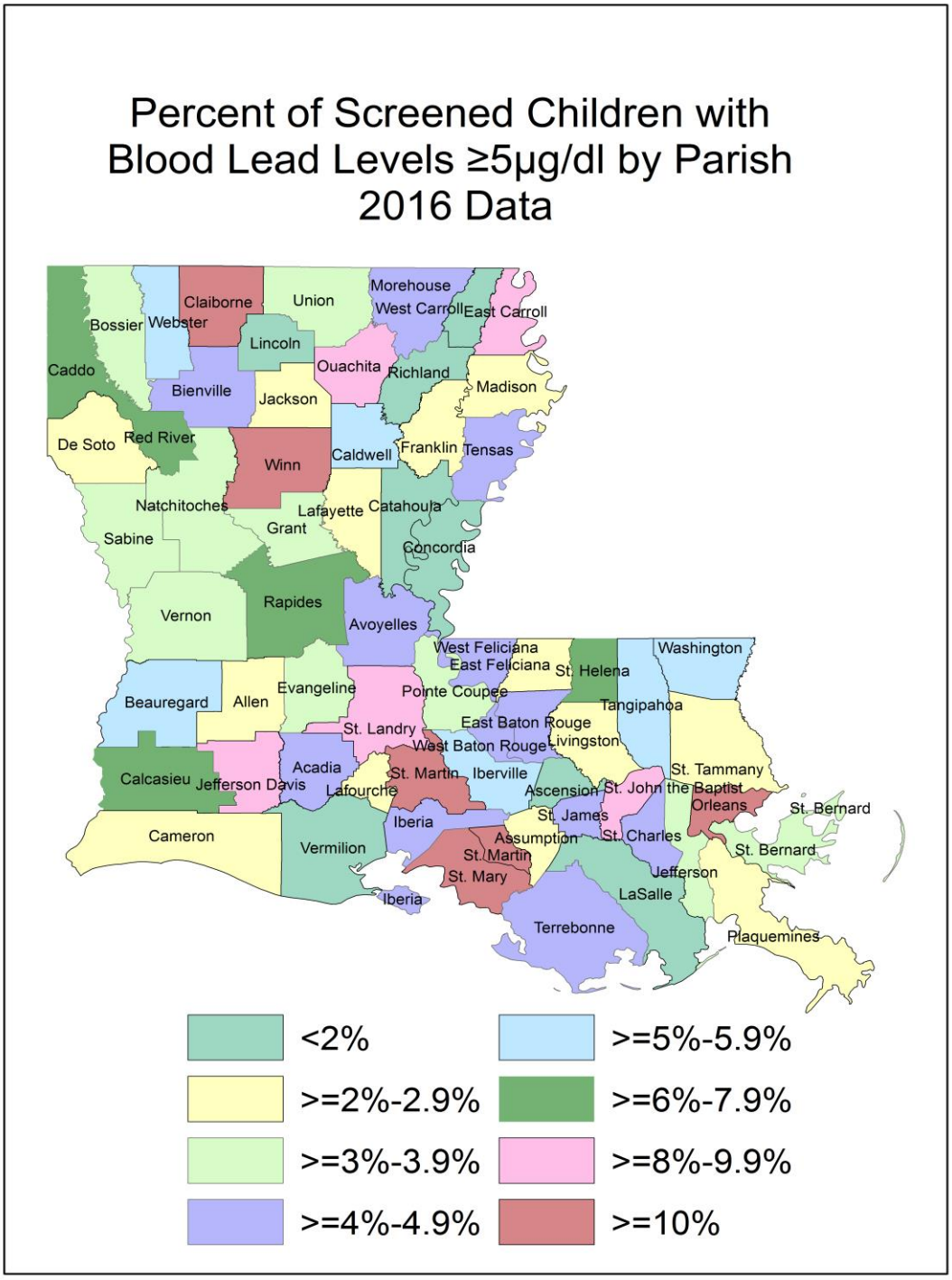
Blood Lead Levels of Children 6-72 Months by Major Age Group and High Risk Parishes in 2016

State Target Parishes	Population		Total tests	Percent tests	BLL 5-9.9µg/dl		BLLs >=10µg/dl	
					Number	Percent	Number	Percent
Louisiana	Under 2 years old	159663	44317	27.8	1602	3.6	618	1.4
	3 years and older	247038	15277	6.2	980	6.4	305	2.0
Avoyelles	Under 2 years old	1343	341	25.4	14	4.1	4	1.2
	3 years and older	2217	248	11.2	5	2.0	1	0.4
Beauregard	Under 2 years old	1176	163	13.9	7	4.3	2	1.2
	3 years and older	1992	65	3.3	1	1.5	2	3.1
Caddo	Under 2 years old	9208	1867	20.3	81	4.3	17	0.9
	3 years and older	14350	894	6.2	72	8.1	14	1.6
Claiborne	Under 2 years old	461	192	41.6	23	12.0	4	2.1
	3 years and older	628	56	8.9	7	12.5	0	0.0
Iberville	Under 2 years old	849	111	13.1	4	3.6	1	0.9
	3 years and older	1760	67	3.8	2	3.0	3	4.5
Jefferson Davis	Under 2 years old	1039	177	17.0	15	8.5	4	2.3
	3 years and older	1757	99	5.6	4	4.0	2	2.0
Lafourche	Under 2 years old	2920	678	23.2	14	2.1	5	0.7
	3 years and older	5544	172	3.1	4	2.3	1	0.6
Orleans	Under 2 years old	11411	3247	28.5	237	7.3	106	3.3
	3 years and older	18487	1323	7.2	131	9.9	40	3.0
Ouachita	Under 2 years old	5522	1113	20.2	42	3.8	13	1.2
	3 years and older	8996	601	6.7	44	7.3	19	3.2
St Martin	Under 2 years old	1798	27	1.5	2	7.4	2	7.4
	3 years and older	4913	1	0.0	0	0.0	0	0.0
St Mary	Under 2 years old	1490	66	4.4	7	10.6	3	4.5
	3 years and older	3282	32	1.0	1	3.1	2	6.3
Tensas	Under 2 years old	145	58	40.0	1	1.7	0	0.0
	3 years and older	290	36	12.4	2	5.6	1	2.8
Terrebonne	Under 2 years old	3939	586	14.9	21	3.6	8	1.4
	3 years and older	6880	71	1.0	0	0.0	1	1.4
Webster	Under 2 years old	1369	207	15.1	7	3.4	3	1.4
	3 years and older	1954	127	6.5	6	4.7	3	2.4
Winn	Under 2 years old	373	146	39.1	8	5.5	8	5.5
	3 years and older	622	67	10.8	8	11.9	2	3.0

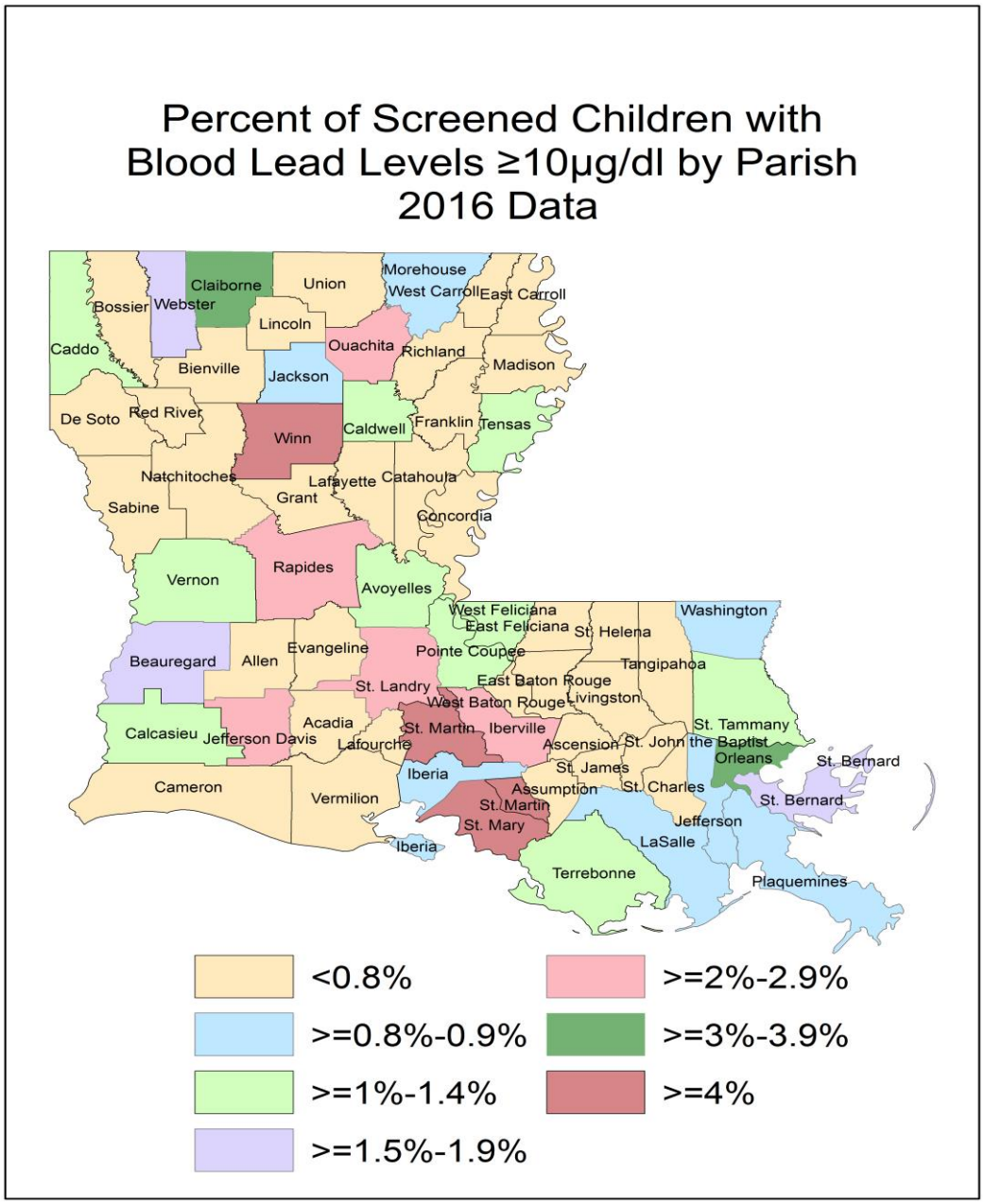
Appendix B


Percent of Children Screened for
Blood Lead Levels by Parish
2016 Data
Claiborne
Union
Morehouse
West Carroll
East Carroll
Bossier
Webster
Lincoln
Caddo
Ouachita
Richland
Madison
Bienville
Jackson
De Soto
Red River
Winn
Caldwell
Franklin
Tensas
Natchitoches
Lafayette
Catahoula
Grant
Sabine
Concordia
Vernon
Rapides
Avoyelles
West Feliciana
East Feliciana
St. Helena
Washington
Beauregard
Allen
Evangeline
Pointe Coupee
Tangipahoa
East Baton Rouge
St. Landry
Livingston
West Baton Rouge
Calcasieu
Jefferson Davis
Acadia
Lafourche
St. Martin
Iberville
Ascension
St. John the Baptist
St. Tammany
Orleans
St. Bernard
St. James
Iberia
Cameron
Vermilion
Assumption
St. Charles
St. Martin
St. Bernard
St. Mary
Jefferson
LaSalle
Iberia
Terrebonne
Plaquemines
<10%
20%-24.9%
10%-14.9%
>=25%
15%-19.9%

Appendix C


Percent of Screened Children with Blood Lead Levels ≥5µg/dl by Parish 2016 Data
Claiborne
Union
Morehouse
West Carroll
East Carroll
Bossier
Webster
Lincoln
Caddo
Ouachita
Richland
Madison
Bienville
Jackson
De Soto
Red River
Caldwell
Franklin
Tensas
Winn
Natchitoches
Lafayette
Catahoula
Grant
Sabine
Concordia
Rapides
Vernon
Avoyelles
West Feliciana
East Feliciana
St. Helena
Washington
Beauregard
Allen
Evangeline
Pointe Coupee
Tangipahoa
St. Landry
East Baton Rouge
Livingston
West Baton Rouge
Acadia
St. Martin
Iberville
St. Tammany
Calcasieu
Jefferson Davis
Lafourche
Ascension
St. John the Baptist
Orleans
St. Bernard
St. James
Iberia
Cameron
Assumption
St. Charles
Vermilion
St. Martin
St. Mary
Jefferson
LaSalle
Iberia
Terrebonne
Plaquemines
<2%
>=5%-5.9%
>=2%-2.9%
>=6%-7.9%
>=3%-3.9%
>=8%-9.9%
>=4%-4.9%
>=10%

Appendix D


Percent of Screened Children with Blood Lead Levels ≥10µg/dl by Parish 2016 Data
Claiborne
Union
Morehouse
West Carroll
East Carroll
Bossier
Webster
Lincoln
Ouachita
Richland
Madison
Caddo
Bienville
Jackson
De Soto
Red River
Caldwell
Franklin
Tensas
Winn
Natchitoches
Lafayette
Catahoula
Grant
Sabine
Concordia
Rapides
Vernon
Avoyelles
West Feliciana
East Feliciana
St. Helena
Washington
Beauregard
Allen
Evangeline
Pointe Coupee
Tangipahoa
St. Landry
East Baton Rouge
West Baton Rouge
Livingston
Acadia
St. Martin
Iberville
St. Tammany
Calcasieu
Jefferson Davis
Lafourche
Ascension
St. John the Baptist
Orleans
St. Bernard
St. James
Iberia
Cameron
Vermilion
Assumption
St. Charles
St. Martin
St. Bernard
St. Mary
Jefferson
LaSalle
Iberia
Terrebonne
Plaquemines
<0.8%
>=2%-2.9%
>=0.8%-0.9%
>=3%-3.9%
>=1%-1.4%
>=4%
>=1.5%-1.9%