

Health Consultation

**ASSESSMENT OF CANCER INCIDENCE IN MOSSVILLE, LOUISIANA AND
CALCASIEU PARISH FROM THE
LOUISIANA TUMOR REGISTRY (1988-2010)**

**CALCASIEU PARISH, LOUISIANA
AND
MOSSVILLE, LOUISIANA**

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Prepared by

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List of Acronyms

BRFSS	Behavioral Risk Factor Surveillance System
CDC	Centers for Disease Control and Prevention
CDDs	Polychlorinated dibenzo-p-dioxins
CDFs	Chlorinated dibenzofurans
CHD	Coronary Heart Disease
EPA	Environmental Protection Agency
LDHH	Louisiana Department of Health and Hospitals
LTR	Louisiana Tumor Registry
OPH	Office of Public Health
PCBs	Polychlorinated biphenyls
SEET	Section of Environmental Epidemiology and Toxicology
USEPA	United States Environmental Protection Agency

Summary and Statement of Issues

INTRODUCTION

As part of the Louisiana Department of Health and Hospitals/Office of Public Health/ Section of Environmental Epidemiology and Toxicology's (LDHH/OPH/SEET) ongoing environmental health investigation in Mossville, Louisiana, this report examines cancer incidence data for Calcasieu Parish and Mossville from 1988- 2010. In a previous review of cancer in Calcasieu Parish, Louisiana 1988-2004, cancers found with elevated incidence included bladder cancer, lung cancer, colon and rectum cancer, melanoma of the skin, cervical cancer, non-Hodgkin lymphoma, and prostate cancer. These excesses occurred among differing race/sex groups, depending on the cancer types. None was identified among all four major race/sex groups.

CONCLUSION

Cancer incidence rates for all cancers combined in Mossville, Louisiana, 1988-2010, were significantly lower than in the state of Louisiana and in Calcasieu Parish. With the exception of elevated lung cancer rates for black women, all incidence rates in Calcasieu Parish were comparable to those for Louisiana.

The results in this cancer review, stratified by race and gender, cannot be linked to an environmental cause. Cancer registry data analyses are not designed to show cause and effect. Because specific information is lacking on risk factors and exposures, it is not possible to confirm that a causal relationship exists.

**BASIS FOR
DECISION**

Concern has been expressed about the health effects of exposure to dioxin in Calcasieu Parish. Since dioxins are linked to an increased risk of some cancers such as lung cancer, lymphomas, soft tissue sarcomas and multiple myelomas, these cancer rates were more closely considered.

In this 1988-2010 cancer review, black females in Calcasieu Parish had statistically significantly higher lung cancer incidence rate than the state of Louisiana rate; there was no significant elevation in lung cancer rates in white females, black males, and white males.

This cancer incidence rate evaluation cannot be used to show cause and effect. There are many risk factors for lung cancer, but cigarette smoking is the primary risk factor. Individual information on personal risk factors, exposures to dioxins and other chemicals, and family history was not available to demonstrate associations. For the remaining cancer incidence rates examined, none differed statistically significantly in Calcasieu Parish or Mossville from those for the entire state.

Cancer Incidence for Calcasieu Parish and Mossville, Louisiana (1988-2010)

NEXT STEPS

The information produced within this health consultation will be made available to the community members and stakeholders in Calcasieu Parish, LA.

FOR MORE INFORMATION

If you have further concerns about the site, you can call SEET at 1-888-293-7020 and ask for information about the Calcasieu Parish site.

I. INTRODUCTION

As part of the Louisiana Department of Health and Hospitals/Office of Public Health's (LDHH/OPH) ongoing environmental health investigation in Mossville, Louisiana, this report examines cancer incidence data for the town of Mossville and Calcasieu Parish from 1988-2010. In a previous review of *Cancer in Calcasieu Parish, Louisiana 1988-2004*, cancers found with elevated incidence included bladder cancer (black males), lung cancer (black and white females), colon and rectum cancer (black females), skin cancer (white males and females), cervical cancer (white females), non-Hodgkin lymphoma (white females), and prostate cancer (black males).¹

II. BACKGROUND

Mossville is a small, unincorporated community in Calcasieu Parish, near Lake Charles, Louisiana. For years, residents have expressed health and quality of life concerns related to industrial activity in the area. According to the United States Census Bureau, the boundaries which define the town of Mossville have changed and the population of Mossville has decreased over time (See Figure B-1). According to Census 2010, the total population of Mossville is 763.

An exposure investigation of blood dioxin levels in 28 Mossville residents, conducted by the Agency for Toxic Substances & Disease Registry (ATSDR) in 1998, detected elevated dioxin levels in residents in some residents.² An ATSDR Health Consultation, Follow-up Exposure Investigation, Calcasieu Estuary (a.k.a. Mossville), made public by the ATSDR in March 2006, found that blood dioxin concentrations were primarily elevated in older participants, suggesting historical exposures.³ The exposure investigations were not designed to look at cancer cases or predict cancer risk based on blood dioxin levels among Calcasieu Parish Exposure Investigation participants.

Dioxins are a family of compounds commonly referred to as polychlorinated dibenzo-p-dioxins (CDDs). CDDs are known to occur naturally, and are also produced by human activities. They are naturally produced from the incomplete combustion of organic material by forest fires or volcanic activity. They are also unintentionally produced by industrial, municipal, and domestic incineration and combustion processes. Currently, it is believed that CDD emissions associated with waste incineration and combustion activities are the predominant environmental source. CDDs are found in the environment together with other structurally related chlorinated chemicals, such as chlorinated dibenzofurans (CDFs) and polychlorinated biphenyls (PCBs). Therefore, people are generally exposed to mixtures of CDDs and other classes of toxicologically and structurally similar compounds.³

CDDs are found everywhere in the environment, and most people are exposed to very small background levels of CDDs when they breathe air, consume food or milk, or have skin contact with materials contaminated with CDDs. Nursing infants may be exposed through their mother's breast milk. Exposure to dioxins causes skin disease and increases the risk of getting some types of cancer in humans. In animal studies, dioxin exposure has been linked

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to diseases of the skin, liver, reproductive system, and immune system.³

Public concerns about dioxins and other chemical pollutants in the Mossville/Lake Charles area warranted thoughtful public health response. A review of cancer incidence rates was an important component of such a response and was conducted by the Louisiana Department of Health and Hospitals (LDHH) and ATSDR. Previous LDHH actions had included: a residential needs assessment of the Mossville community; creation of a residential steering group; facilitating enrollment of area residents into Medicare, Medicaid, and the Louisiana Children's Health Insurance Program; and educating local physicians on the health effects of dioxins.⁵

The *Cancer in Calcasieu Parish, Louisiana 1988-2004* cancer review compared cancer incidence data of Calcasieu Parish and the state of Louisiana. Age-adjusted rates of all cancers combined and cancers of 22 specific anatomic sites were examined for black and white females. For black and white males, age-adjusted rates of all cancers combined and cancers of 20 specific anatomic sites were examined. Incidence rates for all cancers combined for black and white males and black females in Calcasieu Parish from 1988-2004 did not differ significantly from those for their Louisiana counterparts in Louisiana as a whole. Black and white females in Calcasieu Parish had significantly higher lung cancer incidence rates than in Louisiana, but males did not. For white females, however, the rate for all cancers combined was significantly higher in Calcasieu Parish than in Louisiana. Lung and bronchus cancer, melanoma of the skin, cervical cancer, and non-Hodgkin lymphoma are the main contributors to the statistically higher significance in white females in Calcasieu Parish from 1988-2004.¹

III. METHODOLOGY

This report reviews cancer incidence in Calcasieu Parish and in Mossville and compares it with the entire state of Louisiana. Cancer *incidence* is the number of new cancer cases diagnosed, often expressed as a rate over a specified period of time. In this document, the rate is the average number of new cases diagnosed in a year per 100,000 people.

Because cancer is diagnosed more frequently among the elderly and because some geographic areas have a larger proportion of elderly residents than others, age-adjusted rates are used to allow meaningful comparisons of rates from different areas by removing the effect of varying age distributions. These are weighted averages of age-specific rates, where the weights represent the distribution of a standard population, in this case the U.S. 2000 population.⁶

The Louisiana Tumor Registry (LTR) calculated age-adjusted cancer incidence rates for 22 distinct types of cancer and all cancers combined for Calcasieu Parish for black and white females. For black and white males, age-adjusted rates of all cancers combined and cancers of 20 specific anatomic sites were provided by the LTR. Since cancer rates vary by race and sex,

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parish- state comparisons were made separately for black females, black males, white females, and white males for each type of cancer.⁷

For the town of Mossville, site-specific cancer age-adjusted incidence rates were calculated for all cancers combined and 4 major cancer sites (sites with 10 or more cases) for the time period 1988-2010. Because of the small sample size, Mossville-state comparisons were not made separately by race or gender for all cancers combined, lung and bronchus cancer, or for colon and rectal cancer. Breast cancer rates were evaluated for women only, but not by race. Prostate cancer rates were evaluated for men only, but not by race.

Site-specific comparisons of incidence rates were made by calculating rate ratios with 95% confidence intervals. Rate ratios were calculated by dividing the Calcasieu incidence rate by the Louisiana incidence rate, the Mossville incidence rate by the Louisiana rate, and the Mossville incidence rate by the Calcasieu Parish incidence rate for each individual cancer site.

IV. RESULTS

Tables A-1, A-2, A-3, and A-4 contain average annual age-adjusted (adjusted to the 2000 U.S. standard population) cancer incidence rates per 100,000 for black females, white females, black males, and white males residing in Calcasieu Parish and the state of Louisiana from 1988 through 2010, respectively.^{6,7} Site-specific comparisons of incidence rates for Calcasieu Parish and Louisiana are shown as rate ratios with 95% confidence intervals.

Incidence rates for the specific cancers and for all cancers combined for black and white males and white females in Calcasieu Parish from 1988-2010 did not differ significantly from the state of Louisiana. Black females in Calcasieu Parish had statistically significantly higher lung cancer incidence rates than in Louisiana.

Tables A-5 and A-6 contain average annual age-adjusted cancer incidence rates per 100,000 for all persons (not gender or race specific) residing in Mossville, Calcasieu Parish, and the state of Louisiana from 1988 through 2010. Site-specific comparisons of incidence rates for Mossville, Calcasieu Parish and Louisiana are shown as rate ratios with 95% confidence intervals. When the rate ratio and its 95% confidence intervals were less than 1.0, the parish rate (or Mossville rate) was considered statistically significantly lower than the state rate; when they were greater than 1.0, the parish rate was significantly higher than the state rate. Otherwise, the rates were considered comparable, or not statistically significantly different.

Cancer incidence rates for all cancers combined in Mossville, Louisiana were statistically significantly lower than in both Louisiana and Calcasieu Parish.

V. DISCUSSION

Cancers have both genetic (inherited) and external risk factors. Some individuals have genes that predispose them to cancer, irrespective of environmental influences. Genetic factors alone, however, account for a minority of cancers, an estimated 5 percent.⁸ External factors, acting in concert with genetic factors, cause the majority of cancers. The sources of external exposures are various: diet, smoking, sunlight, household chemicals, alcohol consumption, reproductive behaviors, pollution, radiation, chemicals, infectious agents, etc.

The Behavioral Risk Factor Surveillance System (BRFSS) is a state-based system of health surveys that collects information on health risk behaviors, preventive health practices, and health care access primarily related to chronic disease and injury. This system was established in 1984 by the Centers for Disease Control and Prevention (CDC). States use BRFSS data to identify emerging health problems, establish and track health objectives, and develop and evaluate public health policies and programs. Adults in Calcasieu Parish reported on selected health risks such as health status, obesity, diabetes, current smoking, coronary heart disease (CHD) and asthma in the 2008-2010 BRFSS report. According to this BRFSS report, adults living in Calcasieu Parish reported a high amount of diabetes, asthma, CHD and obesity, compared with overall prevalences reported for Louisiana.⁹ Adults living in Calcasieu Parish reportedly smoked slightly less than residents residing in Louisiana. The roles of these risk factors differ depending on the type of cancer. Excessive exposure to sunlight, for example, is the primary cause of skin cancer, but does not cause cancer at other sites.

Cigarette smoking is the primary risk factor for lung cancer in the United States.⁸ Other documented risk factors include radiation, asbestos, bis-chloromethyl ether, chloromethyl methyl ether, beryllium, mustard "gas", and metal fumes (nickel, arsenic, chromium, lead).⁸ Exposure to multiple carcinogens can have synergistic effects, whereby the combined risk is greater than the sum of the individual risks.

Given available estimates of tobacco use in Calcasieu Parish, cigarette smoking does not seem to account for the elevated lung cancer incidence in black women. The BRFSS reported the current smoking rate in the parish (21.8%) is similar to that of the state (22.1%).⁹ This estimate, however, does not take into account gender-specific data, cigarettes per day, former smokers, or years of tobacco use. Furthermore, the latency between exposure and the development of lung cancer limits the relevance of comparing current tobacco use statistics to current lung cancer incidence.

In epidemiologic studies, dioxin exposure has been associated with increased mortality from cancer at all sites combined, lung cancer, lymphomas, soft tissue sarcomas and multiple myelomas.¹⁰ Based on animal data and on human epidemiology data, dioxins were classified by the World Health Organization's International Agency for Research on Cancer (IARC) and the National Toxicology Program as a "known human carcinogen."¹¹

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The results in this cancer review, stratified by race and gender, cannot be linked to an environmental cause. A community that is concerned about an unusual number of cancers will naturally look for an environmental cause. Cancer registry data analyses are not designed to show cause and effect, but may suggest the need for additional evaluations. Because specific information is lacking on other risk factors and exposures, it is not possible to confirm that a causal relationship exists.

VI. CONCLUSION

This review was expanded to 23 years of cancer incidence data (1988-2010) and therefore encompasses a larger sample size, providing greater statistical power to support the conclusion that no clear pattern indicates that Calcasieu Parish has any consistently higher than expected rates for most cancers. Overall, age-adjusted cancer incidence rates were not statistically different in Calcasieu Parish and Louisiana for the period 1988-2010. Dioxins are associated with an increased risk for developing some cancers such as lung cancer, lymphomas, soft tissue sarcomas and multiple myelomas. With the exception of lung cancer in black females, incidence rates for those specific cancers in Calcasieu Parish were comparable to Louisiana rates. Cancer incidence rates for all cancers combined in Mossville, Louisiana, were significantly lower than in the state of Louisiana and in Calcasieu Parish. This cancer registry data analysis does not allow for the determination of any causal relationships between the occurrence of any type of cancer and exposure to dioxin.

References

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APPENDIX A
TABLES

Cancer Incidence for Calcasieu Parish and Mossville, Louisiana (1988-2010)

Table A-1: Cancer Incidence in Calcasieu Parish and Louisiana, 1988-2010: Black Females (Average Annual per 100,000, *Rate Ratios, and 95% Confidence Intervals)

Sites	Black Females				
	Calcasieu Rates	Louisiana Rates	Rate ratio	Confidence Intervals	Significant Difference
All cancers combined	415.9	396.1	1.05	0.95, 1.15	
Oral cavity	6.3	5.6	1.13	0.50, 2.33	
Esophagus	2.9	3.2	0.91	0.19, 2.26	
Stomach	8.7	11.1	0.78	0.37, 1.42	
Colon & rectum	65.0	54.1	1.20	0.93, 1.53	
Liver & HBD	5.0	3.3	1.52	0.49,3.54	
Pancreas	16.0	14.8	1.08	0.62, 1.76	
Larynx	1.7	2.3	0.74	0.11, 2.42	
Lung and Bronchus	66.3	49.3	1.34	1.05, 1.70	Higher
Melanoma of the Skin	0.8	0.9	0.89	0.03, 4.10	
Breast	115.2	117.5	0.98	0.82, 1.17	
Cervix Uteri	15.4	16.6	0.93	0.55, 1.49	
Uterus	15.5	18.2	0.85	0.50, 1.36	
Ovary	7.9	10.0	0.79	0.35, 1.44	
Urinary Bladder	5.3	6.5	0.82	0.34, 1.80	
Kidney	9.9	11.0	0.90	0.44, 1.55	
Brain and central nervous system	3.9	3.7	1.05	0.29, 2.37	
Thyroid	9.9	6.6	1.5	0.73, 2.59	
Hodgkin lymphoma	2.1	1.9	1.1	0.33, 3.80	
Non-Hodgkin lymphoma	11.5	10.6	1.08	0.58, 1.86	
Myeloma	6.5	9.4	0.69	0.30, 1.39	
Leukemia	9.1	7.9	1.15	0.61, 2.16	
Soft tissue sarcoma	0.6	0.6	1.00	0.04, 6.15	

Cancer Incidence for Calcasieu Parish and Mossville, Louisiana (1988-2010)

***Age adjusted to the 2000 U.S. standard population**

Table A-2: Cancer Incidence in Calcasieu Parish and Louisiana, 1988-2010: White Females (Average Annual per 100,000, *Rate Ratios, and 95% Confidence Intervals)

Sites	White Females				
	Calcasieu Rates	Louisiana Rates	Rate ratio	Confidence Intervals	Significant Difference
All cancers combined	413.7	400.2	1.03	0.94, 1.14	
Oral cavity	6.1	6.6	0.92	0.43, 1.98	
Esophagus	1.7	1.9	0.89	0.13, 2.93	
Stomach	4.0	4.3	0.93	0.25, 2.38	
Colon & rectum	48.0	45.5	1.05	0.78, 1.40	
Liver & HBD	2.6	2.5	1.04	0.25,2.89	
Pancreas	10.6	10.4	1.00	0.53, 1.77	
Larynx	2.3	2.3	1.00	0.27, 3.14	
Lung and Bronchus	61.4	57.5	1.07	0.83, 1.36	
Melanoma of the Skin	16.0	11.0	1.45	0.83, 2.36	
Breast	118.5	120.4	0.98	0.82, 1.17	
Cervix Uteri	11.2	8.8	1.27	0.70, 2.24	
Uterus	18.0	17.1	1.05	0.62, 1.66	
Ovary	10.1	12.4	0.81	0.44, 1.48	
Urinary Bladder	9.1	9.0	1.01	0.53, 1.90	
Kidney	12.5	11.5	1.09	0.60, 1.82	
Brain and central nervous system	4.6	5.6	0.82	0.29, 1.83	
Thyroid	12.2	11.0	1.12	0.63, 1.91	
Hodgkin lymphoma	2.9	2.7	1.07	0.23, 2.68	
Non-Hodgkin lymphoma	19.8	17.0	1.16	0.72, 1.75	
Myeloma	3.7	3.9	0.95	0.28, 2.25	
Leukemia	9.9	9.9	1.00	0.48, 1.73	
Soft tissue sarcoma	0.6	0.4	1.50	0.06, 9.20	

Cancer Incidence for Calcasieu Parish and Mossville, Louisiana (1988-2010)

***Age adjusted to the 2000 U.S. standard population**

Table A-3: Cancer Incidence in Calcasieu Parish and Louisiana, 1988-2010: Black Males (Average Annual per 100,000, *Rate Ratios, and 95% Confidence Intervals)

Sites	Black Males				
	Calcasieu Rates	Louisiana Rates	Rate ratio	Confidence Intervals	Significant Difference
All cancers combined	671.2	687.8	0.98	0.90, 1.05	
Oral cavity	20.2	20.1	1.00	0.65, 1.54	
Esophagus	15.2	13.1	1.16	0.70, 1.89	
Stomach	25.4	22.7	1.12	0.75, 1.63	
Colon & rectum	73.1	74.3	0.98	0.78, 1.24	
Liver & HBD	10.7	11.1	0.96	0.49, 1.66	
Pancreas	21.4	19.0	1.13	0.73, 1.69	
Larynx	12.3	15.2	0.81	0.46, 1.38	
Lung and Bronchus	141.5	139.4	1.02	0.86, 1.19	
Melanoma of the Skin	1.0	1.2	0.83	0.02, 4.64	
Prostate	217.6	234.9	0.93	0.81, 1.06	
Testis	2.0	1.4	1.43	0.17, 5.16	
Urinary Bladder	24.6	19.7	1.25	0.82, 1.81	
Kidney	19.0	20.3	0.94	0.56, 1.46	
Brain and CNS	5.1	4.7	1.09	0.47, 2.48	
Thyroid	0.8	1.7	0.47	0.01, 2.17	
Hodgkin lymphoma	3.8	2.4	1.58	0.45, 3.65	
Non-Hodgkin lymphoma	17.7	15.7	1.13	0.68, 1.73	
Myeloma	11.6	14.9	0.78	0.42, 1.32	
Leukemia	11.2	13.0	0.86	0.48, 1.51	
Soft Tissue sarcoma	0.2	0.7	0.29	0.04, 5.27	

***Age adjusted to the 2000 U.S. standard population**

Cancer Incidence for Calcasieu Parish and Mossville, Louisiana (1988-2010)

Table A-4: Cancer Incidence in Calcasieu Parish and Louisiana, 1988-2010: White Males (Average Annual per 100,000, *Rate Ratios, and 95% Confidence Intervals)

	White Males				
Sites	Calcasieu Rates	Louisiana Rates	Rate Ratio	Confidence Intervals	Significant Difference
All cancers combined	615.3	595.6	1.03	0.95, 1.12	
Oral cavity	18.9	19.8	0.95	0.58, 1.44	
Esophagus	8.2	8.0	1.03	0.51, 1.97	
Stomach	9.1	9.5	0.96	0.50, 1.80	
Colon & rectum	65.1	67.1	0.97	0.76, 1.23	
Liver & HBD	9.3	8.2	1.13	0.58, 2.08	
Pancreas	12.5	14.3	0.87	0.48, 1.47	
Larynx	10.6	9.9	1.07	0.55, 1.86	
Lung and Bronchus	112.8	111.8	1.01	0.83, 1.21	
Melanoma of the Skin	21.9	18.7	1.17	0.74, 1.72	
Prostate	175.5	158.6	1.11	0.95, 1.28	
Testis	6.0	5.5	1.09	0.40, 2.37	
Urinary Bladder	37.7	39.4	0.96	0.68, 1.29	
Kidney	21.6	21.5	1.00	0.64, 1.49	
Brain and CNS	7.1	8.0	0.89	0.43, 1.80	
Thyroid	4.8	4.2	1.14	0.39, 2.44	
Hodgkin lymphoma	3.3	3.4	0.97	0.32, 2.58	
Non-Hodgkin lymphoma	27.8	24.4	1.14	0.76, 1.61	
Myeloma	6.8	6.2	1.10	0.45, 2.11	
Leukemia	16.8	16.7	1.01	0.59, 1.56	
Soft Tissue sarcoma	0.8	0.7	1.14	0.04, 5.27	

*Age adjusted to the 2000 U.S. standard population

Cancer Incidence for Calcasieu Parish and Mossville, Louisiana (1988-2010)

Table A-5: Cancer Incidence in Mossville and Louisiana, 1988-2010 (Average Annual per 100,000, *Rate Ratios, and 95% Confidence Intervals)

Sites	Mossville Rates	Louisiana Rates	Rate Ratio	Confidence Intervals	Significant Difference
All cancers combined	415.5	484.4	0.86	0.79, 0.94	Lower
Lung and Bronchus	77.1	81.4	0.95	0.76, 1.18	
Breast ¹	140.4	119.2	1.18	0.99, 1.39	
Prostate ²	167.2	175.0	0.96	0.82, 1.11	
Colon & rectum	42.8	56.4	0.76	0.55, 1.0	

*Age adjusted to the 2000 U.S. standard population

¹Breast cancer rates were calculated for females only.

²Prostate cancer rates were calculated for males only.

Table A-6: Cancer Incidence in Mossville and Calcasieu Parish, 1988-2010 (Average Annual per 100,000,*Rate Ratios, and 95% Confidence Intervals)

Sites	Mossville Rates	Calcasieu Parish Rates	Rate Ratio	Confidence Intervals	Significant Difference
All cancers combined	415.5	499.7	0.83	0.75, 0.91	Lower
Lung and Bronchus	77.1	85.8	0.90	0.72, 1.12	
Breast ¹	140.4	117.5	1.19	1.00, 1.41	
Prostate ²	167.2	182.4	0.92	0.79, 1.07	
Colon & rectum	42.8	57.5	0.74	0.54, 1.0	

*Age adjusted to the 2000 U.S. standard population

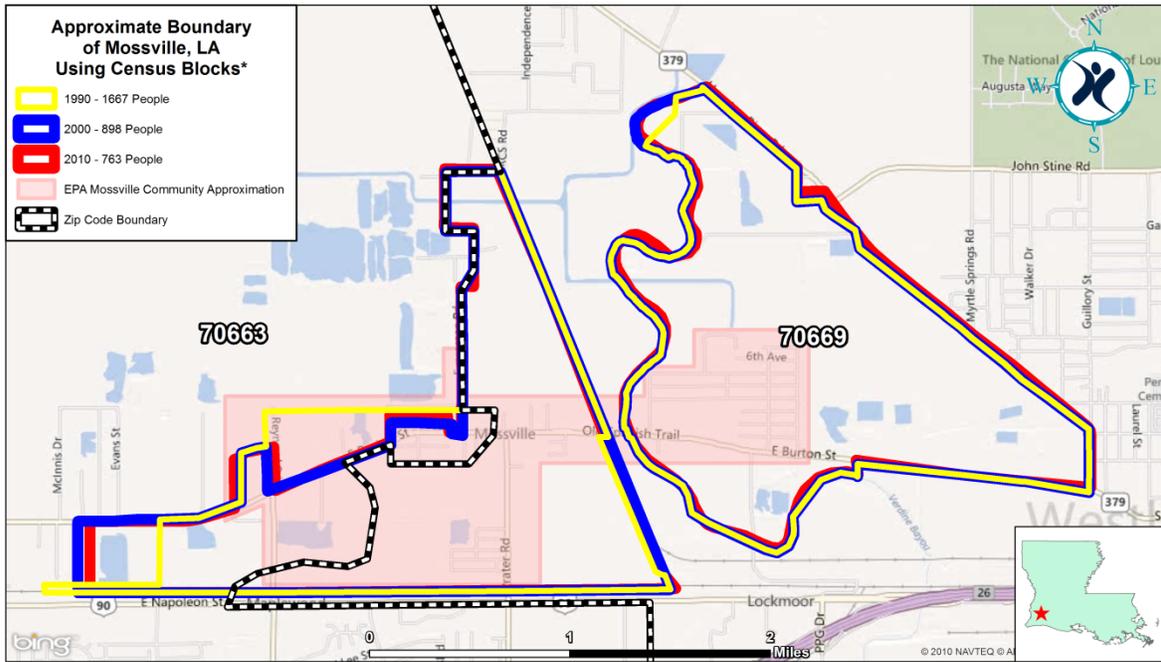
¹Breast cancer rates were calculated for females only.

²Prostate cancer rates were calculated for males only.

APPENDIX B- MAP

Cancer Incidence for Calcasieu Parish and Mossville, Louisiana (1988-2010)

Figure B- 1: Map of Mossville and Overlay of 1990, 2000 and 2010 Census Blocks



Map produced August 20, 2012 by the Louisiana Department of Health and Hospitals / Office of Public Health / Section of Environmental Epidemiology and Toxicology (SEET).
* Shapes of Census Blocks change over time, especially for the 2010 Census as the TIGER Lines used by the Census have become more detailed.

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