

# Tracking Work-Related Fatal Injuries in Louisiana



( 2015-2016 )

Prepared by  
J. Lewis, PhD and M. Lackovic, MPH

*Occupational Health and Injury Surveillance Program  
Section of Environmental Epidemiology and Toxicology  
Office of Public Health  
Louisiana Department of Health*

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## EXECUTIVE SUMMARY

**Purpose:** Louisiana recently had the lowest non-fatal work-related injury rate in the country, yet consistently has a work-related fatality rate almost twice that of the national average. This report characterizes work-related fatal injuries occurring in Louisiana from 2015 through 2016 by summarizing a multisource work-related fatality surveillance system developed by the Louisiana Department of Health. The purpose of this report is to bring awareness to the public of some of the hazards faced by workers in Louisiana's high-risk industries and to provide a breakdown of the ways in which they have died while on the job.

**Methods:** Data are obtained primarily from death certificates and the Occupational Safety and Health Administration's Fatalities and Catastrophes reports, with supplementary data from publically available sources, i.e., news articles, obituaries, police websites. Only civilian fatalities are included in this report. Each fatality was characterized using the Bureau of Labor Statistics' (BLS) categories for Industry and Event/exposure. Categories include: Contact with objects and equipment; Exposure to harmful substances or environments; Falls, slips and trips; Fires and Explosions; Suicide on Jobsite; Transportation incidents; Violence and other injuries by persons or animals. Work-related deaths with no publically available data are included in the overall analyses but are not included in the more detailed incident descriptions.

**Findings:** Although work-related fatalities in Louisiana decreased by 17% from 2008 to 2015, Louisiana experienced minimal rate fluctuations from 2010 to 2015. Most fatalities in 2015 and 2016 in Louisiana occurred among workers age 25 to 54, which is consistent with how employment is spread among the age groups. Workers over the age of 65 accounted for 16% of the fatalities in 2016, although they make up approximately 6% of the employed population. Most notably, males accounted for 93-97% of all fatalities within the two years, despite similar employment rates among males and females. The racial and ethnicity distribution for fatalities generally mirrors employment numbers, with a slight increase in Hispanic fatalities. The greatest number of fatalities occurred in the transportation, construction, and oil and gas industries. The types of event/exposure that resulted in the greatest number of fatalities were transportation, exposure to harmful substances or environments, and contact with objects and equipment.

**Conclusion:** While workers in the United States have experienced a sustained decline in the rate of fatal occupational injury over the past decades, there are marked differences in fatal injury rates and trends among regions, states, and industries. In 2015, Louisiana's rate exceeded the national rate by almost 41%, it was the 6<sup>th</sup> highest rate in the country, and the second highest rate in the southern region of the US. These findings underscore the need for accurate, timely, and informative data on occupational health conditions faced by Louisiana's workers.

## INTRODUCTION

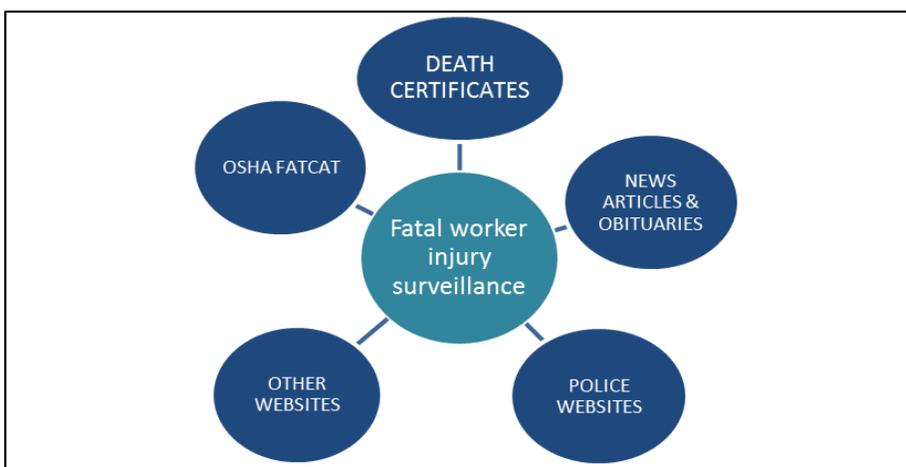
This report characterizes work-related fatal injuries occurring in Louisiana from 2015 through 2016. Louisiana has a work-related fatality rate consistently greater than the national average and ranks among the top 6 states with the highest fatality rate in the United States, according to data from 2015<sup>1</sup>. Timely and relevant information on work-related fatalities is necessary to monitor rates and trends over time, identify state-level priorities, and direct training and education efforts. In response to this need, the Louisiana Department of Health (LDH)/Office of Public Health (OPH)/Section of Environmental Epidemiology and Toxicology's (SEET) Occupational Health and Injury Surveillance Program developed a multisource work-related fatality surveillance system. Findings from this surveillance system are presented in this report. The purpose of this report is to make the general public aware of some of the hazards faced by workers in Louisiana's high-risk industries and to provide a breakdown of the ways in which they have died while on the job.

## METHODS

### Data sources:

As no single data source captures all work-related fatalities, a multi-source surveillance system was established. Data are obtained primarily from death certificates and the Occupational Safety and Health Administration (OSHA) Fatalities and Catastrophes reports (FatCat). Through an established data sharing agreement with the Louisiana State Center for Health Statistics, we conduct monthly review of all death certificates to determine if the deceased was fatally injured at work or while performing work-related tasks. Worker fatalities identified through death certificates reflect the foundation of our surveillance data. We supplement the death certificate data with reports from publically available data sources. OSHA FatCat is a public database of information on work-related fatalities and hospitalizations that are reported to OSHA<sup>2</sup>. Employers are required to report to OSHA if a worker is killed or hospitalized. FatCat reports include: information about the deceased, the employer, the incident, and the OSHA investigation report number, if applicable. OSHA does not investigate the following fatalities: 1) motor vehicle crashes that occur on public highways or streets, with the exception of construction zones; and 2) public transportation, i.e., airplane or bus transit. Additional publically available data sources include news articles, obituaries, police websites, and the Weekly Toll© blog (Figure 1).

**Figure 1. Multisource work-related mortality surveillance**



## **Case description**

Cases are included in our surveillance system if the fatal injury occurred in Louisiana. Louisiana residents who are killed while working in another state are not included in this analysis. Work-related fatal injuries include the civilian workforce only. The year of the report is based on the year in which the injury occurred, not the year of death.

Each fatality was characterized using the Bureau of Labor Statistics' (BLS) categories for Industry and Event/exposure. Industry categories reflect major US Census industry sectors. Event/exposure reflects the circumstance that caused the worker fatality. Categories include: Contact with objects and equipment (e.g., struck by tools or cargo, caught in machinery); Exposure to harmful substances or environments (e.g., drowning, electrocution); Falls, slips and trips; Fires and Explosions; Transportation incidents; Violence and other injuries by persons or animals. Transportation incidents exclude accidents that occurred while commuting to and from work. For this report, an additional category labeled "suicide on jobsite" was added. BLS includes suicides in the "Violence and other injuries by persons or animals" category.

An incident description was created for each case based on details obtained from publically available data sources. If no additional information is publically available, then the details of the work-related death are not published in the report.

## **Census of Fatal Occupational Injuries**

The report also presents summary data from the Census of Fatal Occupational Injuries (CFOI), a Federal/State cooperative program administered by the Bureau of Labor Statistics (BLS), which is charged with annually collecting detailed information on all work-related fatalities occurring in the U.S. The CFOI uses diverse State and Federal data sources to identify, verify, and profile fatal work-related injuries. Information about each workplace fatality is obtained by cross-referencing source documents, such as death certificates, workers' compensation records, medical examiner reports, and police reports as well as news and other non-governmental reports. CFOI is often the primary source used in analyzing and characterizing work-related fatalities, although it has several limitations: there is a lag time of one to two years before CFOI data are made publically available, and data suppression limits the ability to conduct an in-depth review of state-specific work-related fatalities. It is important to note that while our data collection methods are similar to CFOI, there may be differences in numbers and rates as CFOI does not release case-level data to state health departments for case comparison.

## **RESULTS**

The table below compares Louisiana's employment and occupational fatal injury data for years 2015 and 2016. In general, fatalities pattern the employment age distribution, with most fatalities occurring among workers age 25 to 54. The most notable difference is observed among workers over the age of 65 who accounted for 16% of fatalities in 2016, although they make up approximately 6% of the employed population. The starkest contrast is seen among sex distribution, with males accounting for 93-97% of fatalities despite similar employment rates among males and females. The racial and ethnicity distribution for fatalities generally mirrors employment numbers, with a slight increase in Hispanic fatalities.

**Table 1. Demographic Profile: Louisiana Employment & Fatal Occupational Injury Data, 2015-2016**

	2015 Employment data	2015 Mortality data	2016 Employment data	2016 Mortality data
Total #	2,032,000	100	2,000,000	86
<b>Agegroup</b>				
16-24	13%	14%	13%	5%
25-34	24%	18%	23%	24%
35-44	19%	24%	21%	24%
45-54	22%	28%	22%	20%
55-64	16%	11%	16%	10%
65+	5%	5%	6%	16%
<b>Sex</b>				
Male	52%	97%	51%	93%
Female	48%	3%	49%	7%
<b>Race</b>				
African American/Black	28%	22%	29%	24%
Caucasian/White	67%	70%	67%	66%
Other/Unknown	5%	8%	5%	9%
<b>Ethnicity</b>				
Hispanic	5%	8%	5%	12%
Non-Hispanic	95%	92%	95%	88%

Percentages may not add up to 100 due to rounding.

The following two tables summarize the fatal occupational injuries for 2015 and 2016.

**Table 2. List of 100 Fatal Occupational Injuries registered by the Louisiana State Center for Health Statistics; Louisiana, 2015**

Industry Type (# of fatalities)	Incident Description	Event/Exposure Type
Agriculture, Forestry, Fishing & Hunting (7)	18-year-old male drowned in a pond	Exposure to harmful substances or environments
	32-year-old male was killed when his plane crashed	Transportation incidents
	41-year-old male drowned	Exposure to harmful substances or environments
	49-year-old male was killed by a falling tree.	Contact with objects and equipment
	58-year-old male fatally crushed between skitter and log loader.	Contact with objects and equipment
	59-year-old male drowned	Exposure to harmful substances or environments
	Female died at work	Suicide on jobsite
Construction (21)	21-year-old male crushed by falling concrete form	Contact with objects and equipment
	22-year-old male fatally shot while working on a house	Violence and other injuries by persons or animals
	22-year-old male electrocuted by electrical drop cord.	Exposure to harmful substances or environments

	Two males (ages 22 and 24) were killed when the vehicle was hit by an 18 wheeler	Transportation incidents
	23-year-old male electrocuted by electrical drop cord.	Exposure to harmful substances or environments
	24-year-old male killed when trench collapsed	Contact with objects and equipment
	25-year-old male installing sign struck and killed by crane-arm.	Contact with objects and equipment
	30-year-old male struck and killed by mat that fell from trailer of truck.	Contact with objects and equipment
	38-year-old male drowned in a pond	Exposure to harmful substances or environments
	42-year-old male driver crushed by cargo on the truck's trailer	Contact with objects and equipment
	43-year-old male killed in fall from window	Falls, slips and trips
	45-year-old male died from heat stroke	Exposure to harmful substances or environments
	45-year-old male killed in fall through floor opening.	Falls, slips and trips
	46-year-old male was electrocuted	Exposure to harmful substances or environments
	57-year-old male fell 15 feet from a structure	Falls, slips and trips
	57-year-old male fell	Falls, slips and trips
	70-year-old male driver died when his vehicle went off the road and struck a tree	Transportation incidents
	Male died at work	Suicide on jobsite
	Three males died at different worksites	Exposure to harmful substances or environments
Food Prep & Serving Related (3)	36-year-old male driver fatally shot while delivering food	Violence and other injuries by persons or animals
	43-year-old male fatally shot after an altercation	Violence and other injuries by persons or animals
	Male died at work	Exposure to harmful substances or environments
Installation, Repair & Maintenance (9)	50-year-old male fell and struck his head	Falls, slips and trips
	26-year-old male electrocuted after contacting utility line.	Exposure to harmful substances or environments
	38-year-old male electrocuted after contacting energized wire.	Exposure to harmful substances or environments
	40-year-old male drowned	Exposure to harmful substances or environments
	45-year-old male fell from height	Falls, slips and trips
	49-year-old male killed when his	Transportation incidents

	truck fell from a parking garage	
	49-year-old male suffered oxygen deprivation while cleaning a tank car	Exposure to harmful substances or environments
	50-year-old male killed in fall from manlift.	Falls, slips and trips
	Male died at work	Suicide on jobsite
Manufacturing (5)	18-year-old male passenger in a box truck killed in a collision with an 18 wheeler	Transportation incidents
	29-year-old male fatally crushed by forklift.	Contact with objects and equipment
	42-year-old male killed when lanyard became caught in pump motor.	Contact with objects and equipment
	52-year-old male tractor driver killed in motor vehicle accident	Transportation incidents
	54-year-old male killed by fuel tank that fell from forklift.	Contact with objects and equipment
Oil & Gas Extraction (15)	Two males (ages 21 and 32) were killed in an explosion while working on an oilfield platform.	Fires and explosions
	Three males (ages 23, 24 and 35) were killed when their vehicle collided with a train	Transportation incidents
	30-year-old male died from exposure to argon while retrieving tool from tank.	Exposure to harmful substances or environments
	Four males (ages 36, 37, 40 and 56) were killed when a gas pipeline exploded.	Fires and explosions
	44-year-old male killed in fall from barge.	Falls, slips and trips
	45-year-old male fell from height	Falls, slips and trips
	48-year-old male was struck and killed by a wrench.	Contact with objects and equipment
	55-year-old male was hit by a vehicle that went off the road	Transportation incidents
	Male died at work	Exposure to harmful substances or environments
Professional (3)	27-year-old female killed in a collision with an 18 wheeler	Transportation incidents
	46-year-old male fatally shot at his workplace	Violence and other injuries by persons or animals
	Male died at work	Suicide on jobsite
Sales and Related (3)	Male died at work	Exposure to harmful substances or environments
	Male died at work	Falls, slips and trips
	Male died at work	Transportation incidents
Protective Service (10)	22-year-old male officer killed when his vehicle overturned during a pursuit	Transportation incidents

	27-year-old male officer fatally shot by a fugitive	Violence and other injuries by persons or animals
	29-year-old male officer fatally shot while serving a warrant	Violence and other injuries by persons or animals
	43-year-old male officer fatally shot by another person	Violence and other injuries by persons or animals
	44-year-old male officer fatally shot while assisting a motorist	Violence and other injuries by persons or animals
	45-year-old male officer fatally shot while on patrol	Violence and other injuries by persons or animals
	45-year-old male officer fatally shot by an inmate	Violence and other injuries by persons or animals
	47-year-old male officer struck by a passing vehicle while assisting a motorist	Transportation incidents
	51-year-old male officer fatally shot while responding to a domestic violence call	Violence and other injuries by persons or animals
	56-year-old male officer fatally shot during an armed robbery	Violence and other injuries by persons or animals
Transportation (24)	24-year-old male drowned while working on a boat	Exposure to harmful substances or environments
	26-year-old male truck driver drowned after a vehicle collided with his 18 wheeler	Exposure to harmful substances or environments
	28-year-old male killed in fall.	Falls, slips and trips
	32-year-old male died after falling from a barge	Exposure to harmful substances or environments
	35-year-old male truck driver killed in collision with a train	Transportation incidents
	36-year-old male drowned when workboat capsized	Exposure to harmful substances or environments
	42-year-old male struck and killed by pickup truck.	Transportation incidents
	42-year-old male truck driver killed in motor vehicle collision with other 18 wheelers.	Transportation incidents
	47-year-old male truck driver struck and killed by a passing vehicle while walking	Transportation incidents
	47-year-old male truck driver killed when vehicle went off roadway and crashed	Transportation incidents
	47-year-old male pilot killed when plane crashed	Transportation incidents
	48-year-old male truck driver struck and killed by passing vehicle after a collision	Transportation incidents
	49-year-old male fatally shot by another worker	Violence and other injuries by persons or animals

	53-year-old male truck driver killed when his cargo shifted after collision.	Contact with objects and equipment
	57-year-old male truck driver killed when his truck overturned on the highway	Transportation incidents
	58-year-old female crushed by a motor after clothing became stuck	Contact with objects and equipment
	62-year-old male crushed by truck part	Contact with objects and equipment
	70-year-old male truck driver killed in collision with a train	Transportation incidents
	76-year-old male fatally shot by a stranger	Violence and other injuries by persons or animals
	Male died at work	Exposure to harmful substances or environments
	Male died at work	Falls, slips and trips
	Male died at work	Falls, slips and trips
	Male died at work	Suicide on jobsite
	Male died at work	Unknown

**Table 3. List of 86 Fatal Occupational Injuries registered by the Louisiana State Center for Health Statistics; Louisiana, 2016**

Industry Type (# of fatalities)	Incident Description	Event/Exposure Type
Agriculture, Forestry, Fishing & Hunting (10)	27-year-old male fatally crushed when riding lawn mower overturned.	Contact with objects and equipment
	48-year-old male pilot killed in plane crash	Transportation incidents
	53-year-old male clearing debris died after being stung by wasp.	Violence and other injuries by persons or animals
	76-year-old male killed in tractor accident	Contact with objects and equipment
	Male died at work	Contact with objects and equipment
	Male died at work	Contact with objects and equipment
	Male died at work	Contact with objects and equipment
	Male died at work	Contact with objects and equipment
	Male died at work	Transportation incidents
	Male died at work	Violence and other injuries by persons or animals
Building & Grounds Cleaning & Maintenance (1)	Male died at work	Exposure to harmful substances or environments

Construction (14)	25-year-old male killed after trench collapses	Contact with objects and equipment
	36-year-old male struck and killed by lightning	Exposure to harmful substances or environments
	39-year-old male killed in fall from scaffold platform.	Falls, slips and trips
	48-year-old male on construction job site died from heat stress.	Exposure to harmful substances or environments
	48-year-old male fatally crushed by excavator.	Contact with objects and equipment
	54-year-old male fell 18-20 feet from the roof of a house	Falls, slips and trips
	70-year-old male struck and killed by lightning	Exposure to harmful substances or environments
	84-year-old male killed in fall from roof.	Falls, slips and trips
	Male died at work	Exposure to harmful substances or environments
	Male died at work	Exposure to harmful substances or environments
	Male died at work	Falls, slips and trips
	Male died at work	Falls, slips and trips
	Male died at work	Suicide on jobsite
	Male died at work	Violence and other injuries by persons or animals
Food Prep & Serving Related (3)	21-year-old female fatally stabbed	Violence and other injuries by persons or animals
	Female died at work	Suicide on jobsite
	Male died at work	Suicide on jobsite
Installation, Repair, & Maintenance (7)	33-year-old male electrocuted when digger truck made contact with power line.	Exposure to harmful substances or environments
	52-year-old male fatally shot at his shop	Violence and other injuries by persons or animals
	Male died at work	Contact with objects and equipment
	Male died at work	Contact with objects and equipment
	Male died at work	Exposure to harmful substances or environments
	Male died at work	Transportation incidents
	Male died at work	Unknown
Manufacturing (3)	37-year-old male fatally engulfed by grain in elevator.	Exposure to harmful substances or environments
	58-year-old male died after being pulled into rotating parts of industrial washing machine.	Contact with objects and equipment
	Male died at work	Falls, slips and trips

Oil & Gas Extraction (11)	29-year-old male pilot killed in crash	Transportation incidents
	33-year-old male logger killed by a fallen tree	Contact with objects and equipment
	36-year-old male rig driver killed when vehicle overturned	Transportation incidents
	40-year-old male truck driver killed in a motor vehicle accident	Transportation incidents
	43-year-old male died after exposure to argon gas	Exposure to harmful substances or environments
	48-year-old male offshore worker fatally injured on oilfield platform	Contact with objects and equipment
	55-year-old male killed in a refinery accident	Contact with objects and equipment
	Male died at work	Exposure to harmful substances or environments
	Male died at work	Exposure to harmful substances or environments
	Male died at work	Transportation incidents
	Male died at work	Violence and other injuries by persons or animals
Personal Care & Service (4)	30-year-old female killed in a motor vehicle accident	Transportation incidents
	31-year-old male died after falling in attic crawlspace and striking head.	Falls, slips and trips
	Female died at work	Exposure to harmful substances or environments
	Male died at work	Exposure to harmful substances or environments
Professional (3)	44-year-old male fatally crushed when vehicle lift collapsed.	Contact with objects and equipment
	75-year-old male fatally shot	Violence and other injuries by persons or animals
	79-year-old male fatally shot	Violence and other injuries by persons or animals
Protective Service (11)	28-year-old male officer struck and killed by a passing vehicle	Transportation incidents
	32-year-old female officer struck and killed by a passing vehicle	Transportation incidents
	32-year-old male officer fatally shot	Violence and other injuries by persons or animals
	34-year-old male officer killed in a motor vehicle accident	Transportation incidents
	36-year-old male fireman killed when a vehicle collided with his truck	Transportation incidents
	40-year-old male officer struck and killed by a passing vehicle	Transportation incidents
	41-year-old male fireman was electrocuted by a low-hanging power line	Exposure to harmful substances or environments
	41-year-old male officer fatally shot	Violence and other injuries by

		persons or animals
	45-year-old male officer fatally shot	Violence and other injuries by persons or animals
	50-year-old male officer fatally shot	Violence and other injuries by persons or animals
	79-year-old male killed in a motor vehicle accident	Transportation incidents
Sales and Related (2)	29-year-old male fatally shot	Violence and other injuries by persons or animals
	Male died at work	Unknown
Transportation (16)	19-year-old male delivery driver fatally shot	Violence and other injuries by persons or animals
	24-year-old male truck driver killed in collision with another vehicle	Transportation incidents
	25-year-old male killed in collision with a train	Transportation incidents
	35-year-old male drowned after falling from a barge.	Falls, slips and trips
	36-year-old male truck driver killed after truck overturned	Transportation incidents
	41-year-old male struck and killed by cargo load that fell from crane.	Contact with objects and equipment
	45-year-old male truck driver drowned after truck went off the road and into a canal	Exposure to harmful substances or environments
	54-year-old male killed when tire exploded during inflation.	Contact with objects and equipment
	59-year-old male pilot killed in plane crash	Transportation incidents
	66-year-old male drowned after falling into the river	Exposure to harmful substances or environments
	68-year-old male co-pilot killed in plane crash	Transportation incidents
	Male died at work	Contact with objects and equipment
	Male died at work	Contact with objects and equipment
	Male died at work	Exposure to harmful substances or environments
	Male died at work	Falls, slips and trips
	Male died at work	Suicide on jobsite
Unknown (1)	26-year-old female killed in a motor vehicle accident	Transportation incidents

The following table displays the fatality data by industry and event exposure type. The greatest number of fatalities occurred in the transportation, construction, and oil and gas industry. The types of event/exposure that resulted in the greatest number of fatalities were transportation, exposure to harmful substances or environments, and contact with objects and equipment.

**Table 4. Fatal occupational injuries by Industry and Type of event/exposure; Louisiana, 2015 – 2016.**

	Bureau of Labor Statistics (BLS) Event or Exposure Type														Total	
	Contact		Exposure		Falls, slips and trips		Fires and Explosions		Transportation		Violence*		Unknown			
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
<b>Agriculture, Forestry, Fishing &amp; Hunting</b>	8	24%	3	8%	0	0%	0	0%	3	7%	3	8%	0	0%	<b>17</b>	<b>9%</b>
<b>Construction</b>	7	21%	12	30%	9	43%	0	0%	3	7%	4	11%	0	0%	<b>35</b>	<b>19%</b>
<b>Installation, Repair &amp; Maintenance</b>	2	6%	6	15%	3	14%	0	0%	2	5%	2	5%	1	25%	<b>16</b>	<b>9%</b>
<b>Manufacturing</b>	4	12%	1	3%	1	5%	0	0%	2	5%	0	0%	0	0%	<b>8</b>	<b>4%</b>
<b>Oil &amp; Gas Extraction</b>	4	12%	5	13%	2	10%	6	100%	8	18%	1	3%	0	0%	<b>26</b>	<b>14%</b>
<b>Professional</b>	1	3%	0	0%	0	0%	0	0%	2	5%	4	11%	0	0%	<b>7</b>	<b>4%</b>
<b>Sales &amp; Related</b>	0	0%	1	3%	1	5%	0	0%	1	2%	1	3%	1	25%	<b>5</b>	<b>3%</b>
<b>Building &amp; Grounds Cleaning &amp; Maintenance</b>	0	0%	1	3%	0	0%	0	0%	0	0%	0	0%	0	0%	<b>1</b>	<b>1%</b>
<b>Food Prep &amp; Serving Related</b>	0	0%	1	3%	0	0%	0	0%	0	0%	5	13%	0	0%	<b>6</b>	<b>3%</b>
<b>Personal Care &amp; Service</b>	0	0%	2	5%	1	5%	0	0%	1	2%	0	0%	0	0%	<b>4</b>	<b>2%</b>
<b>Protective Service</b>	0	0%	1	3%	0	0%	0	0%	7	16%	12	32%	0	0%	<b>20</b>	<b>11%</b>
<b>Transportation</b>	7	21%	7	18%	4	19%	0	0%	15	34%	6	16%	1	25%	<b>40</b>	<b>22%</b>
<b>Unknown</b>	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	1	25%	<b>1</b>	<b>1%</b>
<b>Total</b>	<b>33</b>	<b>18%</b>	<b>40</b>	<b>22%</b>	<b>21</b>	<b>11%</b>	<b>6</b>	<b>3%</b>	<b>44</b>	<b>24%</b>	<b>38</b>	<b>20%</b>	<b>4</b>	<b>2%</b>	186	100%

\*Note: There were 3 fatalities caused by animals.

### Census of Fatal Occupational Injuries

The following data tables are from the Bureau of Labor Statistics' Census of Fatal Occupational Injuries.

**Table 5. Number of work-related fatalities in Louisiana and the United States, 2008-2015**

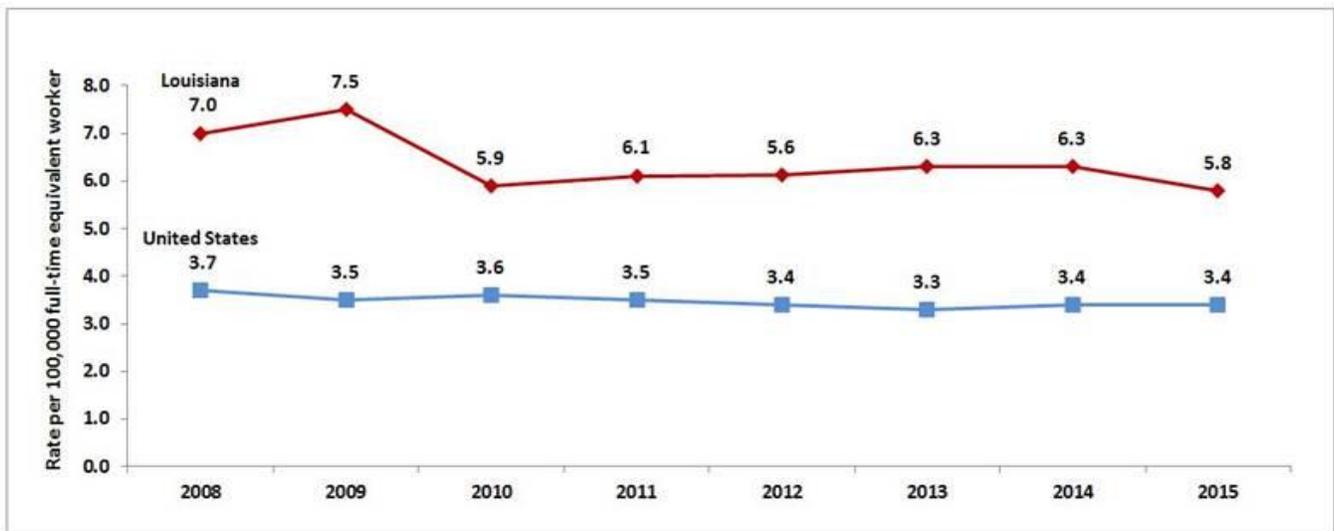
Number of work-related fatalities in Louisiana and United States, 2008-2015								
	Year of Fatal Event							
	2008	2009	2010	2011	2012	2013	2014	2015
Louisiana	135	140	111	111	116	114	120	112
United States	5,214	4,551	4,690	4,693	4,628	4,585	4821	4836

Data source: Bureau of Labor Statistics/CFOI

There was an average annual count of 120 work-related fatalities in Louisiana and 4,752 in the United States from 2008 to 2015. Note that BLS identified 12 more work-related fatalities than are captured by our surveillance system. As BLS does not share their case data with our program, we are unable to include those cases in our surveillance data. Data for 2016 are not available yet from BLS.

Figure 1 displays work-related fatal injury rates in Louisiana and the United States for 2008 through 2015. During this period, Louisiana’s rate decreased 17% from 2008 to 2015 and the United States rate decreased by 8%. The most significant decrease in Louisiana was from 2009 to 2010, when there was a 23% decline in work-related fatality rates.

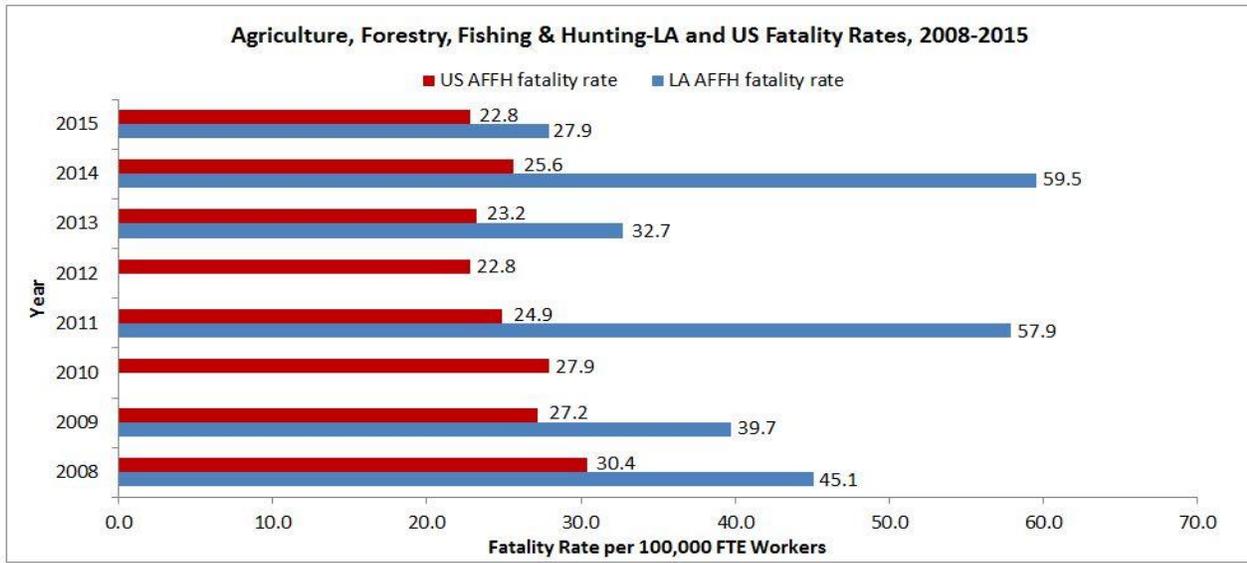
**Figure 1. Rate of work-related fatalities in Louisiana and the United States, 2008-2015**



Data source: Bureau of Labor Statistics/CFOI

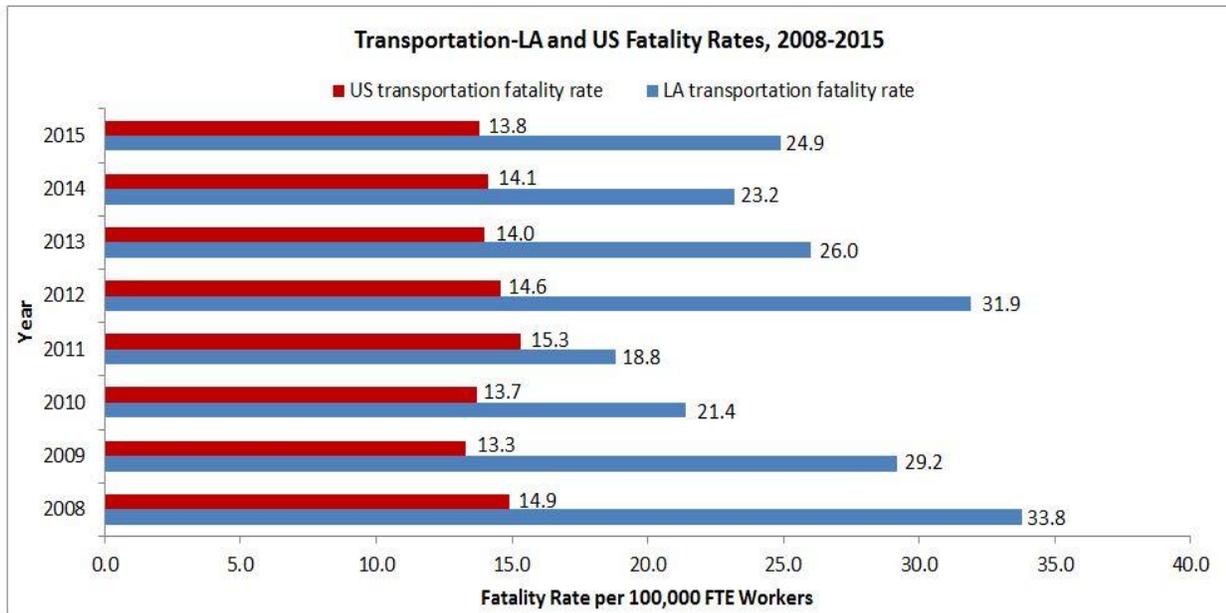
Incidence rates by industry are calculated by BLS using industry specific employment numbers. According to BLS|CFOI data, the top four industries in Louisiana with the highest annual fatality rates are: agriculture, forestry, fishing & hunting; transportation; construction, and oil and gas extraction (Figures 2-5).

**Figure 2. Agriculture, Forestry, Fishing & Hunting-LA and US Fatality Rates, 2008-2015**



Data source: Bureau of Labor Statistics/CFOI

**Figure 3. Transportation-LA and US Fatality Rates, 2008-2015**



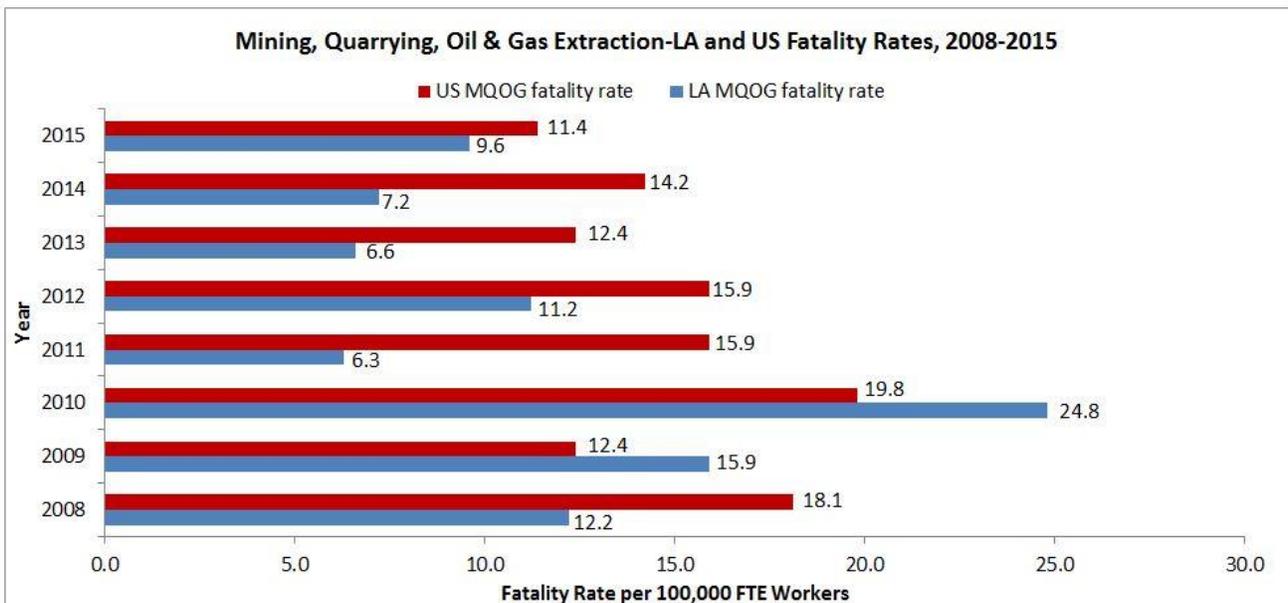
Data source: Bureau of Labor Statistics/CFOI

**Figure 4. Construction-LA and US Fatality Rates, 2008-2015**



Data source: Bureau of Labor Statistics/CFOI

**Figure 5. Oil and Gas Extraction-LA and US Fatality Rates, 2008-2015**



Data source: Bureau of Labor Statistics/CFOI

## DISCUSSION

This report characterizes Louisiana's work-related fatalities for a 2-year period, including additional data from the Bureau of Labor Statistic's Census of Fatal Occupational Injuries (CFOI) on trend rates and comparison values for all US workers. Information on high risk industries and types of events resulting in worker fatality is essential for improving worker safety. While workers in the United States have experienced a sustained decline in the rate of fatal occupational injury over the past decades, there are marked differences in fatal injury rates and trends among regions, states, and industries. Louisiana, similar to other Southern states, has experienced minimal rate fluctuations over the past six years from 2010 to 2015. For 2015, Louisiana's rate exceeded the national rate by almost 41%, it was the 6<sup>th</sup> highest rate in the country, and the second highest rate in the southern region of the US<sup>1</sup>. These findings underscore the need for accurate, timely, and informative data on occupational health conditions faced by Louisiana's workers.

There are multiple factors that influence a state's occupational injury rate, including the state's industry profile, workplace regulations and enforcement, and the state's overall economic and social condition. While a relatively small state, many of Louisiana's approximately 2 million workers are engaged in high-risk work: construction, oil and gas extraction, agriculture and transportation. Together, these industries account for 63% of all fatalities for years 2015 and 2016; each industry has rates consistently greater than the US rates, except for Oil and Gas extraction, which has greater variation in rates. At the parish level, the employment rate in a high risk industry of construction, agriculture, transportation, or oil & gas ranges from 12% to 37% of the employed population.

Each high-risk industry has unique hazards. Falls consistently remain the greatest hazard for construction workers, with most fatal falls occurring to a lower level, such as a fall from a roof, scaffold, or ladder. Forty-three percent of construction fatalities were due to falls. Our data also show that construction workers have more injuries due to exposure to harmful substances or environments than other workers, which is likely due to strenuous work in the outdoor environment. Exposures faced by construction workers during the 2-year period include: hyperthermia, lightning strike, electrocution and drowning. Agriculture workers are more likely to be killed from contact with objects/equipment than other types of events. Contact-related fatalities in our surveillance data include a male fatally crushed when his riding lawn mower overturned, and a 58-year-old male fatally crushed between a skidder and a log loader.

Oil and gas extraction workers face multiple hazards: transportation to and from the worksites including offshore rigs and vessels, exposure to toxic and flammable chemicals, and strenuous outdoor work involving dangerous equipment. These hazards are reflected by the type of fatalities in this industry, which range from: contact with objects; asphyxiation from gases and drowning; pipeline explosions; and vehicle accidents involving helicopters, trains, and motor vehicles. There were three oil and gas incidents that involved multiple fatalities: four workers were killed during an explosion at the Williams pipeline facility; two men were killed in an explosion while working from a boat near an oil production platform; and a motor vehicle crash fatally injured three workers.

The transportation industry accounted for the largest number of fatalities, with 39% of the fatalities due to a vehicle collision, including three incidents involving a train and three involving an airplane. Transportation workers were also fatally injured during the loading and unloading process when struck by objects, such as falling cargo or forklift. Eight of the nine cases due to exposure involved

drowning, including three men who fell off a boat, and two truck drivers who drowned after their 18-wheelers went off the highway into the water.

Addressing workplace fatalities is a multipronged approach. Ensuring that workplace safety standards are in place and enforced is a clear priority. While many employers aim to prevent all injuries and illnesses by engineering processes for safety, practicing administrative controls and providing intensive hazard awareness training of all workers, others do not. States with the lowest non-fatal injury Days Away, Restrictions and Transfers (DART) rates had the highest fatality rates; Louisiana had the lowest adjusted DART injury rate, yet consistently has a work-related fatality rate almost twice that of the national average.<sup>3</sup>

In addition to Louisiana's large concentration of high-risk industries, the state also has great inequity with extreme poverty and low educational levels: Louisiana has the third highest poverty rate in the nation: almost 20% of its population live below the poverty level, and only 29% of adults in Louisiana possess an associates or bachelor's degrees, which ranks 49th in the nation<sup>4,5</sup>. Low-wage workers disproportionately bear the burden of occupational injuries or are more likely to work in a high hazard job.<sup>6</sup> These conditions contribute to social conditions that negatively impact all residents.

Our surveillance data indicate that 25 workers were violently killed on the job (all except one from a firearm). This includes 12 law enforcement officers, and 13 others including a convenience store owner, a pizza delivery driver, and a construction worker. An article evaluating 11-years of work-related homicide data (2005-2015) also found that Louisiana's rate was greater than the US rate for every year analyzed, and that Black men were at a higher risk of a work-related homicide than white men<sup>7</sup>. This high rate of work-related homicides also mirrors the elevated rate of homicides and gun violence in our state. In 2015, the murder rate per 100,000 people was 10.3 in Louisiana compared with the US rate of 4.9.<sup>8</sup>

Similar to violence, motor vehicle safety impacts workers and non-workers. According to data from Louisiana State University's Highway Safety Research Group, in Louisiana from 2010 to 2015, commercial motor vehicles were involved in less than 3% of all crashes, yet accounted for about 14% of fatal vehicle crashes. Of these crashes, the commercial motor vehicle driver was cited for one-third of the crashes.<sup>9</sup> These data illustrate how preventive efforts for commercial vehicle drivers protect everyone on the road. Conversely, careless driving by motorists endangers workers. Examples from our surveillance data include: a police officer who was fatally struck by a vehicle while performing a routine traffic stop, a truck driver who died when he swerved and crashed into a river after a car tried to pass him on the shoulder of the highway, and a sanitation worker struck by a pickup truck.

While OSHA's worksite regulatory authority plays a key role in worker safety, there are many other local, state and federal organizations and agencies that play equally important roles through policy and advocacy work, worker education and training, and research and evaluation. As demonstrated in this report, state health departments are uniquely positioned to identify and track worker injuries and illnesses through statutory authority granting them access to population-based health data such as death certificates and inpatient hospitalization records. Ongoing tracking, evaluation, and dissemination of these data provide important information for occupational safety and health advocates for targeted policy and outreach efforts.

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