

**CENSUS OF FATAL OCCUPATIONAL  
INJURIES  
MICHIGAN 2009**

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## **PREFACE - CENSUS OF FATAL OCCUPATIONAL INJURIES PROGRAM**

The Census of Fatal Occupational Injuries (CFOI) program, part of the U. S. Department of Labor, Bureau of Labor Statistics (BLS) safety and health statistics program, provides the most complete count of fatal work injuries available. The program uses diverse state and federal data sources to identify, verify and profile fatal work injuries. Information about each workplace fatality, including occupation and other worker characteristics, equipment being used, and circumstances of the event, is obtained by cross-referencing source documents, such as death certificates, workers' compensation records, and reports to federal and state agencies. This method assures counts are as complete and accurate as possible.

The Michigan portion of the Census of Fatal Occupational Injuries is conducted by the Michigan Department of Energy, Labor & Economic Growth, MIOSHA, Management Information Systems Section in cooperation with the Bureau of Labor Statistics (BLS) of the U.S. Department of Labor.

## INTRODUCTION

The Census of Fatal Occupational Injuries (CFOI), administered by the Bureau of Labor Statistics (BLS) in conjunction with participating State agencies, compiles detailed information on all work-related fatalities that occur in the 50 states and the District of Columbia. The program is based upon the 1987 recommendations of the National Academy of Sciences and the Keystone Dialogue Group that emphasized the need for a reliable measure of occupational fatalities. In response to these recommendations, the CFOI program was developed to produce accurate, comprehensive, descriptive, timely, and accessible counts of fatal workplace injuries that occur during a given year.

In an effort to compile counts that are complete as possible, the fatality census uses diverse sources to identify, verify, and profile fatal work injuries. Source documents such as death certificates, workers' compensation reports, and Federal and State agency administrative records are cross-referenced to gather key information about each workplace fatality, such as the particular occupation in which the fatality occurred, worker demographics, equipment or machinery involved, and circumstances of the event. Two or more independent source documents are used to verify the work relationship of each fatal work injury.

The Occupational Injury and Illness Classification (OIIC) manual provides a classification system for use in coding the case characteristics of injuries, illnesses, and fatalities in the CFOI program. The manual contains the rules of selection, code descriptions, code titles, and indices, for the following code structures: Nature of Injury or Illness, Part of Body Affected, Source of Injury or Illness, Event or Exposure, and Secondary Source of Injury or Illness.

The BLS safety and health statistics programs Standard Occupational Classification (SOC) Coding manual is based on the alphabetical index of occupation titles developed by the Bureau of the Census in classifying a respondent's occupation (employee's type of work) as reported in the Census 2000, and other demographic surveys conducted by the Census. The list contains over 30,000 occupation titles in alphabetical order. Each title has been assigned a six-digit Federal SOC code.

Data compiled by the CFOI program are issued annually for the previous calendar year. These data are used by safety and health professionals, policy analysts, and researchers to prevent fatal work injuries in the following six ways:

- Inform workers of life threatening hazards associated with various jobs.
- Promote safer work practices through enhanced job safety training.
- Develop new safety equipment.
- Assess and improve workplace safety standards.
- Identify new areas for safety research.
- Provide data for policy formation.

## **HIGHLIGHTS**

### **Major findings of the Michigan Census are:**

- Transportation accidents led all other fatal events and accounted for 27 fatalities (29 percent) of the 93 fatal occupational injuries in 2009. This was followed by Assaults and Violent Acts with 23 fatalities (24 percent) and Contact with Objects and Equipment with 22 fatalities (23 percent) (Table 1)
- Forty-nine percent of the fatally injured Michigan workers were 35-54 years of age. (Table 2)
- Based on gender, 89 percent of Michigan's fatally injured workers were men. (Table 2)
- Occupations with the largest number of worker fatalities were Construction and Extraction (15), followed by Management occupations (14), Sales and Related occupations (12) and Building and Grounds cleaning and maintenance occupations (12) (Table 3)
- Industry groups with the largest number of Michigan fatal work injuries during 2009 were Construction (16), Manufacturing (12), Administrative Support and Waste Management and Remediation (12) and Agriculture, Forestry, Fishing and Hunting (11) (Table 4)
- Vehicles were identified as the greatest source of injury (31) during 2009. This was followed by Parts and Materials (15) and Other Sources (12) (Table 5)

**Table 1. Number and Percent Distribution of Fatal Occupational Injuries  
by Event or Exposure, Michigan 2009**

<sup>1</sup> Event or Exposure	<u>Fatalities</u>	
	Number	Percent
<b>Total</b>	<b>93</b>	<b>100</b>
<b>Transportation accidents</b>	<b>27</b>	<b>29</b>
Highway accident	15	16
Nonhighway accident, except rail, air, water	4	4
Pedestrian, nonpassenger struck by vehicle, mobile equipment	5	5
<b>Assaults and violent acts</b>	<b>23</b>	<b>25</b>
Assaults and violent acts by person(s)	9	9
Self inflicted injuries	12	12
<b>Contact with objects and equipment</b>	<b>22</b>	<b>24</b>
Struck by object or equipment	12	12
Caught in or compressed by equipment or objects	8	8
<b>Falls</b>	<b>11</b>	<b>12</b>
Fall to lower level	8	8
Fall on same level	3	3
<b>Exposure to harmful substances or environments</b>	<b>9</b>	<b>10</b>
Contact with electric current	5	5
Exposure to caustic, noxious, or allergenic substances	3	3
<b>Event categories that did not meet publication criteria</b>	<b>1</b>	<b>0</b>

<sup>1</sup> Based on 1992 BLS Occupational Injury/Illness Classification Manual.

NOTE: Totals for major categories may include subcategories not shown separately. Due to confidentiality concerns, minimum publication criteria have been established. For this reason, data that does not meet publication criteria are excluded. Data for 2009 are preliminary.

SOURCE: U.S. Dept. of Labor, Bureau of Labor Statistics, in cooperation with State and Federal agencies, Census of Fatal Occupational Injuries.

**Table 2. Number and Percent Distribution of Fatal Occupational Injuries by Selected Characteristics, Michigan 2009**

Worker Characteristics	Number	<u>Fatalities</u>	Percent
<b>Total</b>	<b>93</b>		<b>100</b>
<b>Employee Status</b>			
Wage and salary workers	67		72
Self-employed	26		28
<b>Sex</b>			
Men	83		89
Women	10		11
<b>Age</b>			
Both sexes:			
Under 16 years	--		--
16 to 17 years	--		--
18 to 19 years	--		--
20 to 24 years	5		5
25 to 34 years	10		10
35 to 44 years	23		24
45 to 54 years	23		24
55 to 64 years	15		16
65 years and over	13		13
<b>Race <sup>1</sup></b>			
White, non-Hispanic	84		90
Black, non-Hispanic	5		5
Hispanic or Latino	4		4
American Indian, Aleut, Eskimo	--		--
Asian	--		--
Pacific Islander	--		--
Multiple races	--		--
Other or not reported	--		--

<sup>1</sup> Persons identified as Hispanic or Latino may be of any race. The race categories shown exclude data for Hispanics and Latinos.

NOTE: Totals for major categories may include subcategories not shown separately. Dashes indicate no data reported or data that do not meet publication criteria. Due to confidentiality concerns, minimum publication criteria have been established. For this reason, data that does not meet publication criteria are excluded. Data for 2009 preliminary.

SOURCE: U.S. Dept. of Labor, Bureau of Labor Statistics, in cooperation with State and Federal agencies, Census of Fatal Occupational Injuries.

**Table 3. Number and Percent Distribution of Fatal Occupational Injuries by Occupation, Michigan 2009**

Occupation	Number	<u>Fatalities</u>	Percent
<b>Total</b>	<b>93</b>		<b>100</b>
<b>Construction and extraction occupations</b>	<b>15</b>		<b>16</b>
Supervisors, construction and extraction workers	6		6
Construction trades workers	9		9
<b>Management occupations</b>	<b>14</b>		<b>15</b>
Other management occupations	13		13
<b>Sales and related occupations</b>	<b>12</b>		<b>12</b>
Supervisors, sales workers	7		7
<b>Building and grounds cleaning and maintenance occupations</b>	<b>12</b>		<b>12</b>
Building cleaning and pest control workers	4		4
Grounds maintenance workers	7		7
<b>Transportation and material moving occupations</b>	<b>9</b>		<b>9</b>
Motor vehicle operators	7		7
<b>Production occupations</b>	<b>8</b>		<b>8</b>
Metal workers and plastic workers	5		5
<b>Installation, maintenance, and repair occupations</b>	<b>7</b>		<b>7</b>
Vehicle and mobile equipment mechanics, installers, and repairs	3		3
Other installation, maintenance, and repair occupations	3		3
<b>Protective service occupations</b>	<b>5</b>		<b>5</b>
<b>Farming, fishing and forestry occupations</b>	<b>3</b>		<b>3</b>
<b>Event categories that did not meet publication criteria</b>	<b>9</b>		<b>9</b>

<sup>1</sup> Based on the 2000 Standard Occupational Classification System.

NOTE: Totals for major categories may include subcategories not shown separately. Due to confidentiality concerns, minimum publication criteria have been established. For this reason, data that does not meet publication criteria are excluded. Data for 2009 are preliminary.

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics, in cooperation with State and Federal Agencies, Census of Fatal Occupational Injuries.

**Table 4. Number and Percent Distribution of Fatal Occupational Injuries by Industry, Michigan 2009**

<sup>1</sup> Industry	Number	<u>Fatalities</u> Percent
<b>Total</b>	<b>93</b>	<b>100</b>
<b>Private Industry</b>	<b>85</b>	<b>91</b>
<b>Construction</b>	<b>16</b>	<b>17</b>
Construction of Buildings	5	5
Specialty Trade Contractors	9	9
<b>Manufacturing</b>	<b>12</b>	<b>12</b>
Transportation Equipment Manufacturing	3	3
<b>Administrative and Support and Waste Management and Remediation Services</b>	<b>12</b>	<b>12</b>
Administrative and Support Services	12	12
<b>Agriculture, Forestry, Fishing &amp; Hunting</b>	<b>11</b>	<b>11</b>
Crop Production	5	5
Animal Production	4	5
<b>Retail Trade</b>	<b>9</b>	<b>9</b>
Food and Beverage Stores	3	3
<b>Government</b>	<b>8</b>	<b>8</b>
<b>Transportation and Warehousing</b>	<b>6</b>	<b>6</b>
<b>Accommodation and Food Services</b>	<b>5</b>	<b>5</b>
Food Services and Drinking Places	4	4
<b>Other Services, except Public Administration</b>	<b>3</b>	<b>3</b>
Repair and Maintenance	3	3
<b>Arts, Entertainment, and Recreation</b>	<b>3</b>	<b>3</b>
<b>Industry categories that did not meet publication criteria</b>	<b>15</b>	<b>16</b>

<sup>1</sup>Classified according to the North American Industry Classification System, 2002.

NOTE: Totals for major categories may include subcategories not shown separately. Due to confidentiality concerns, minimum publication criteria have been established. For this reason, data that does not meet publication criteria are excluded. Data for 2009 are preliminary.

SOURCE: U. S. Dept. of Labor, Bureau of Labor Statistics, in cooperation with State and Federal agencies, Census of Fatal Occupational Injuries.

**Table 5. Number and Percent Distribution of Fatal Occupational Injuries  
by Source of Injury, Michigan 2009**

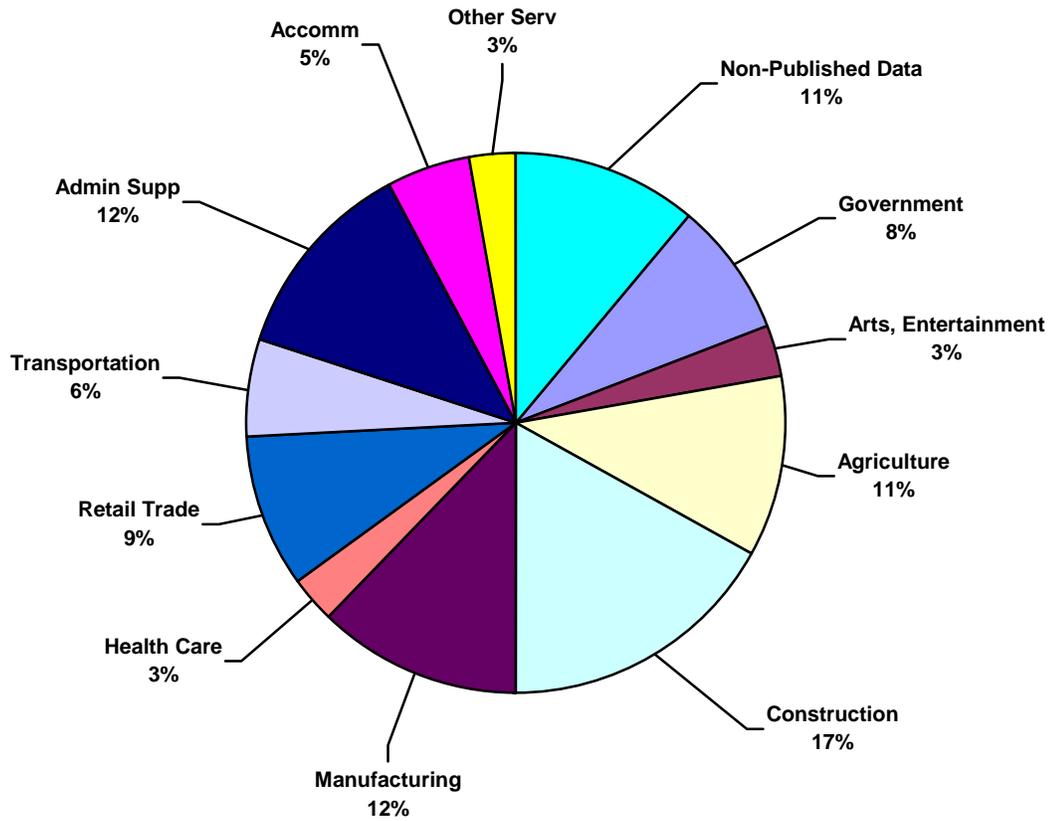
<sup>1</sup> Source of Injury	Number	Percent
<b>Total</b>	<b>93</b>	<b>100</b>
<b>Vehicles</b>	<b>31</b>	<b>33</b>
Highway vehicle, motorized	25	26
Plant and industrial powered vehicles, tractors	4	4
<b>Parts and materials</b>	<b>15</b>	<b>16</b>
Building materials-solid elements	5	5
Fasteners, connectors, ropes, ties	5	5
Machine, tool and electrical parts	4	4
<b>Other sources</b>	<b>12</b>	<b>13</b>
Ammunition	11	11
<b>Structures and surfaces</b>	<b>11</b>	<b>12</b>
Floors, walkways, ground surfaces	11	11
<b>Persons, plants, animals and minerals</b>	<b>8</b>	<b>9</b>
Plants, trees, vegetation-not processed	5	5
<b>Machinery</b>	<b>7</b>	<b>7</b>
Metal, woodworking and special material machinery	3	3
<b>Chemicals and chemical products</b>	<b>3</b>	<b>3</b>
Chemical products-general	3	3
<b>Tools, instruments and equipment</b>	<b>4</b>	<b>4</b>
Handtools-nonpowered	4	4
<b>Source categories that did not meet publication criteria</b>	<b>2</b>	<b>2</b>

<sup>1</sup> The primary source identifies the object, substance or exposure that directly produced or inflicted the injury. For most transportation incidents, the source identifies the vehicle in which the deceased was an occupant. For most falls, the primary source identifies the surface or object contacted.

NOTE: Totals for major categories may include subcategories not shown separately. Due to confidentiality concerns, minimum publication criteria have been established. For this reason, data that does not meet publication criteria are excluded. Data for 2009 are preliminary.

SOURCE: U. S. Department of Labor, Bureau of Labor Statistics, in cooperation with the State and Federal Agencies, Census of Fatal Occupational Injuries

**Chart 1**  
**Fatal Occupational Injuries by Industry Division**  
**Michigan 2009**



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SOURCE: Bureau of Labor Statistics, in cooperation with State and Federal agencies, Census of Fatal Occupational Injuries.

## **TECHNICAL NOTES ON THE CFOI PROGRAM**

### **Identification and verification of work-related fatalities**

#### **Federal/State agency coverage**

The Census of Fatal Occupational Injuries includes data for all fatal work injuries, whether the decedent was working in a job covered by the Occupational Safety and Health Administration (OSHA) or other federal or state agencies or was outside the scope of regulatory coverage. Thus, any comparison between the BLS fatality census counts and those released by other agencies should take into account the different coverage requirements and definitions being used by each agency. Several federal and state agencies have jurisdiction over workplace safety and health. OSHA and affiliated agencies in states with approved safety programs cover the largest portion of the nation's workers. However, injuries and illnesses occurring in certain industries or activities, such as coal, metal, and nonmetal mining, and highway, water, rail, and air transportation, are excluded from OSHA coverage because they are covered by other federal agencies, such as the Mine Safety and Health Administration and various agencies within the Department of Transportation.

#### **Acknowledgements**

Michigan and BLS appreciates the efforts of all federal, state, local, and private sector entities that submitted source documents used to identify fatal work injuries. Among these agencies are the Occupational Safety and Health Administration; the National Transportation Safety Board; the U.S. Coast Guard; the Mine Safety and Health Administration; the Employment Standards Administration (Federal Employees' Compensation and Longshore and Harbor Workers' divisions); the Federal Railroad Administration; the Department of Energy; state vital statistics registrars, coroners, and medical examiners; state departments of health, labor and industries, workers' compensation agencies, state and local police reports; and state farm bureaus.