

**CENSUS OF FATAL OCCUPATIONAL  
INJURIES  
MICHIGAN 2008**

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September 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 43 fatalities (34 percent) of the 123 fatal occupational injuries in 2008. This was followed by Falls reporting 23 fatalities (18 percent). Assaults and Violent Acts followed with 22 fatalities (17 percent). (Table 1)
- Forty-two percent of the fatally injured Michigan workers were 35-54 years of age. (Table 2)
- Based on gender, 91 percent of Michigan's fatally injured workers were men. (Table 2)
- Occupations with the largest number of worker fatalities were Construction and Extraction (25), followed by Transportation and Material Moving (23). These were followed by Management (18) and Sales and Related occupations and Installation, Maintenance and Repair (9). (Table 3)
- Industry groups with the largest number of Michigan fatal work injuries during 2008 were Construction (30), Agriculture, Forestry, Fishing and Hunting (16), and Manufacturing (13). (Table 4)
- Vehicles were identified as the greatest source of injury (46) during 2008. This was followed by Other Sources (24) and Structures and Surfaces (22).

**Table 1. Number and Percent Distribution of Fatal Occupational Injuries  
by Event or Exposure, Michigan 2008**

<sup>1</sup> Event or Exposure	<u>Fatalities</u>	Number	Percent
<b>Total</b>		<b>123</b>	<b>100</b>
<b>Transportation accidents</b>		<b>43</b>	<b>34</b>
Highway accident		18	14
Nonhighway accident, except rail, air, water		11	8
Pedestrian, nonpassenger struck by vehicle, mobile equipment		13	10
<b>Falls</b>		<b>23</b>	<b>18</b>
Fall to lower level		17	13
Fall on same level		4	3
<b>Assaults and violent acts</b>		<b>22</b>	<b>17</b>
Homicides		13	10
Self inflicted injuries		8	6
<b>Contact with objects and equipment</b>		<b>21</b>	<b>17</b>
Struck by object		12	9
Caught in or compressed by equipment or objects		7	5
<b>Exposure to harmful substances or environments</b>		<b>8</b>	<b>6</b>
Contact with electric current		4	3
Exposure to caustic, noxious, or allergenic substances		3	2
<b>Fires and explosions</b>		<b>6</b>	<b>4</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 2008 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 2008**

Worker Characteristics	Number	<u>Fatalities</u>	Percent
<b>Total</b>	<b>123</b>		<b>100</b>
<b>Employee Status</b>			
Wage and salary workers	104		85
Self-employed	19		15
<b>Sex</b>			
Men	112		91
Women	11		9
<b>Age</b>			
Both sexes:			
Under 16 years	--		--
16 to 17 years	--		--
18 to 19 years	4		3
20 to 24 years	7		5
25 to 34 years	15		12
35 to 44 years	24		19
45 to 54 years	28		22
55 to 64 years	19		15
65 years and over	24		19
<b>Race <sup>1</sup></b>			
White, non-Hispanic	97		78
Black, non-Hispanic	15		12
Hispanic or Latino	8		6
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 2008 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 3. Number and Percent Distribution of Fatal Occupational Injuries by Occupation, Michigan 2008**

1 Occupation	Number	<u>Fatalities</u> Percent
<b>Total</b>	<b>123</b>	<b>100</b>
<b>Construction and extraction occupations</b>	<b>25</b>	<b>20</b>
Supervisors, construction and extraction workers	3	2
Construction trades workers	20	16
<b>Transportation and material moving occupations</b>	<b>23</b>	<b>18</b>
Motor vehicle operators	16	13
Material moving workers	7	5
<b>Management occupations</b>	<b>18</b>	<b>14</b>
Other management occupations	15	12
<b>Sales and related occupations</b>	<b>9</b>	<b>7</b>
Supervisors, sales workers	6	4
<b>Installation, maintenance, and repair occupations</b>	<b>9</b>	<b>7</b>
Vehicle and mobile equipment mechanics, Installers, and repairs	<b>3</b>	<b>2</b>
Other installation, maintenance, and repair occupations	5	4
<b>Production occupations</b>	<b>7</b>	<b>5</b>
Supervisors, production workers	3	2
Metal workers and plastic workers	3	2
<b>Protective service occupations</b>	<b>6</b>	<b>4</b>
Law enforcement workers	6	4
<b>Building and grounds cleaning and maintenance occupations</b>	<b>5</b>	<b>4</b>
Building cleaning and pest control workers	3	2

**Table 3. Number and Percent Distribution of Fatal Occupational Injuries by Occupation, Michigan 2008**  
(Continued)

<sup>1</sup> Occupation	Number	<u>Fatalities</u> Percent
<b>Community and social services</b>	<b>4</b>	<b>3</b>
<b>Food preparation and serving related occupations</b>	<b>3</b>	<b>2</b>
<b>Office and administrative support occupations</b>	<b>3</b>	<b>2</b>
<b>Event categories that did not meet publication criteria</b>	<b>8</b>	<b>6</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 2008 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 2008**

<sup>1</sup> Industry	Number	<u>Fatalities</u> Percent
<b>Total</b>	<b>123</b>	<b>100</b>
<b>Private Industry</b>	<b>116</b>	<b>94</b>
<b>Construction</b>	<b>30</b>	<b>24</b>
Construction of Buildings	4	3
Heavy and Civil Engineering Construction	7	5
Specialty Trade Contractors	18	14
<b>Agriculture, Forestry, Fishing &amp; Hunting</b>	<b>16</b>	<b>13</b>
Crop Production	11	8
Animal Production	4	3
<b>Manufacturing</b>	<b>13</b>	<b>10</b>
Primary Metal Manufacturing	3	2
Fabricated Metal Product Manufacturing	3	2
Transportation Equipment Manufacturing	4	3
<b>Retail Trade</b>	<b>10</b>	<b>8</b>
<b>Transportation and Warehousing</b>	<b>9</b>	<b>7</b>
Truck Transportation	6	4
Support Activities for Transportation	3	2
<b>Accommodation and Food Services</b>	<b>7</b>	<b>5</b>
<b>Other Services, except Public Administration</b>	<b>7</b>	<b>5</b>
<b>Government</b>	<b>7</b>	<b>5</b>
<b>Administrative and Support and Waste Management and Remediation Services</b>	<b>6</b>	<b>4</b>

**Table 4. Number and Percent Distribution of Fatal Occupational Injuries by Industry, Michigan 2008**  
(Continued)

<sup>1</sup>	<u>Fatalities</u>	
<b>Industry</b>	<b>Number</b>	<b>Percent</b>
<b>Wholesale Trade</b>	<b>5</b>	<b>4</b>
<b>Arts, Entertainment, and Recreation</b>	<b>4</b>	<b>3</b>
<b>Industry categories that did not meet publication criteria</b>	<b>9</b>	<b>7</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 2008 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 2008**

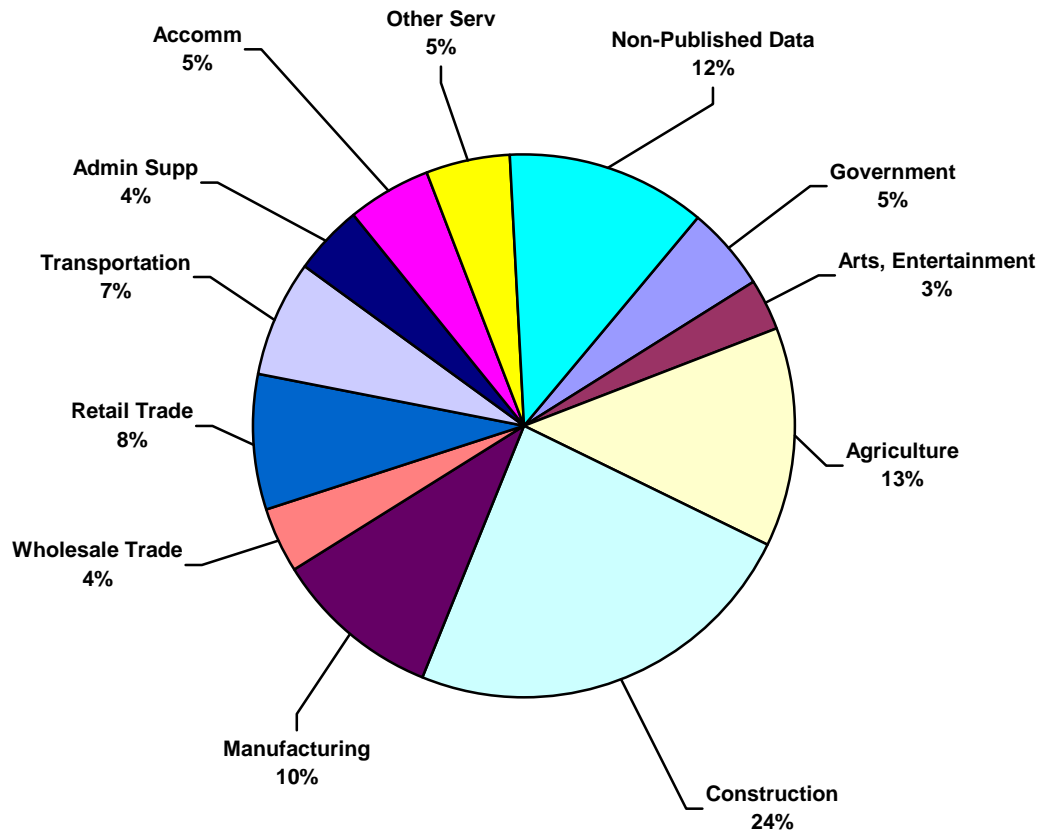
Source of Injury	Number	Percent
<b>Total</b>	<b>123</b>	<b>100</b>
<b>Vehicles</b>	<b>46</b>	<b>37</b>
Highway vehicle, motorized	34	27
Plant and industrial powered vehicles, tractors	8	6
<b>Other sources</b>	<b>24</b>	<b>19</b>
Ammunition	15	12
<b>Structures and surfaces</b>	<b>22</b>	<b>17</b>
Floors, walkways, ground surfaces	19	15
<b>Machinery</b>	<b>10</b>	<b>8</b>
Material handling machinery	4	3
Metal, woodworking and special material machinery	3	2
<b>Parts and materials</b>	<b>9</b>	<b>7</b>
Building materials-solid elements	4	3
Machine, tool and electrical parts	4	3
<b>Chemicals and chemical products</b>	<b>4</b>	<b>3</b>
<b>Persons, plants, animals and minerals</b>	<b>4</b>	<b>3</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 2008 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 2008**



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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.