

**CENSUS OF FATAL OCCUPATIONAL
INJURIES
MICHIGAN 2007**

MIOSHA – Michigan Occupational Safety and Health Administration
Management Information Systems Section
Management & Technical Services Division
Michigan Department of Labor & Economic Growth
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BACKGROUND - 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 Labor & Economic Growth, MIOSHA, Management Information Systems Section in cooperation with the Bureau of Labor Statistics (BLS) of the U.S. Department of Labor.

2007 CENSUS PROFILES

Major findings of the Michigan Census are:

- Transportation accidents led all other fatal events and accounted for 35 fatalities (29 percent) of the 120 fatal occupational injuries in 2007. This was followed by Assaults and Violent Acts and Contact with Objects and Equipment, both reporting 27 fatalities (22 percent). Falls reported 17 fatalities (14 percent). (Table 1)
- Thirty-two percent of the fatally injured Michigan workers were 45-54 years of age. (Table 2)
- Based on gender, 86 percent of Michigan's fatally injured workers were men and 14 percent were women. (Table 2)
- Occupations with the largest number of worker fatalities were Transportation and Material Moving (26) followed by Management (21) and Construction and Extraction occupations (15). (Table 3)
- Industry groups with the largest number of Michigan fatal work injuries in 2007 were Agriculture, Forestry, Fishing and Hunting (16), Construction (16), and Manufacturing (15). (Table 4)

**Table 1. Number and Percent Distribution of Fatal Occupational Injuries
by Event or Exposure, Michigan 2007**

¹ Event or Exposure	<u>Fatalities</u> Number	Percent
Total	120	100
Transportation accidents	35	29
Highway incidents	24	20
Collision between vehicles, mobile equipment	12	10
Noncollision incidents	4	3
Nonhighway incident, except rail, air, water	5	4
Overturned	--	--
Worker struck by vehicle, mobile equipment	6	5
Aircraft accident	--	--
Assaults and violent acts	27	22
Homicides	20	16
Self inflicted injuries	6	5
Contact with objects and equipment	27	22
Struck by object	14	12
Struck by falling object	9	7
Caught in or compressed by equipment or objects	10	8
Caught in running equipment or machinery	6	5
Falls	17	14
Fall to lower level	14	12
Fall from ladder	4	3
Fall from roof	3	2
Fall from scaffold, staging	--	--
Exposure to harmful substances or environments	11	9
Contact with electric current	4	3
Exposure to caustic, noxious, or allergenic substances	6	5
Oxygen deficiency (including drowning)	--	--

Table 1. Number and Percent Distribution of Fatal Occupational Injuries

**by Event or Exposure, Michigan 2007
(Continued)**

¹ Event or Exposure	<u>Fatalities</u>	Number	Percent
Fires and explosions		--	--
Event categories that did not meet publication criteria		3	2

¹ 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 2007 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 2007

Worker Characteristics	Number	<u>Fatalities</u>	Percent
Total	120		100
Employee Status			
Wage and salary workers	91		76
Self-employed	29		24
Sex			
Men	103		86
Women	17		14
Age			
Both sexes:			
Under 16 years	--		--
16 to 17 years	--		--
18 to 19 years	--		--
20 to 24 years	--		--
25 to 34 years	20		17
35 to 44 years	18		15
45 to 54 years	38		32
55 to 64 years	25		21
65 years and over	14		12
Race ¹			
White, non-Hispanic	97		81
Black, non-Hispanic	14		12
Hispanic or Latino	7		6
American Indian, Aleut, Eskimo	--		--
Asian	--		--
Pacific Islander	--		--
Multiple races	--		--
Other or not reported	--		--

¹ 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 2007 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 2007

¹ Occupation	Number	<u>Fatalities</u> Percent
Total	120	100
Transportation and material moving occupations	26	22
Motor vehicle operators	19	16
Driver/sales workers and truck drivers	17	14
Driver/sales workers	4	3
Truck drivers, heavy and tractor-trailer	11	9
Material moving workers	7	6
Industrial truck and tractor operators	3	2
Laborers and material movers, hand	3	2
Management occupations	21	18
Other management occupations	19	16
Agricultural managers	12	10
Farmers and Ranchers	12	10
Construction and extraction occupations	15	12
Construction trades workers	12	10
Sales and related occupations	10	8
Supervisors, sales workers	5	4
First-line supervisors/managers, sales workers	5	4
First-line supervisors/managers of retail sales workers	5	4
Installation, maintenance, and repair occupations	10	8
Other installation, maintenance, and repair occupations	5	4
Industrial machinery installation, repair and maintenance workers	3	2
Production occupations	9	8
Metal workers and plastic workers	4	3
Other production occupations	3	2
Building and grounds cleaning and maintenance occupations	6	5
Grounds maintenance workers	4	3

Table 3. Number and Percent Distribution of Fatal Occupational Injuries by Occupation, Michigan 2007
(Continued)

¹ Occupation	Number	<u>Fatalities</u> Percent
Protective service occupations	6	5
Farming, fishing and forestry occupations	4	3
Personal care and service occupations	3	2
Food preparation and serving related occupations	3	2
Event categories that did not meet publication criteria	8	7

¹ 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 2007 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 2007

1	<u>Fatalities</u>	
Industry	Number	Percent
Total	120	100
Private Industry	111	92
Agriculture, Forestry, Fishing & Hunting	16	13
Crop Production	9	8
Animal Production	5	4
Cattle Ranching and Farming	3	2
Construction	16	13
Specialty Trade Contractors	13	11
Foundation, Structure, and Building Exterior Contractors	6	5
Roofing Contractors	3	2
Building Equipment Contractors	3	2
Building Finishing Contractors	3	2
Manufacturing	15	12
Fabricated Metal Product Manufacturing	3	2
Transportation Equipment Manufacturing	5	4
Motor Vehicle Parts Manufacturing	3	2
Transportation and Warehousing	11	9
Truck Transportation	7	6
General Freight Trucking	5	4
Generalized Freight Trucking, Long-Distance	4	3
Generalized Freight Trucking, Long-Distance, Truckload	4	3
Retail Trade	9	8
Administrative and Support and Waste Management and Remediation Services	9	8
Administrative and Support Services	7	6
Services to Buildings and Dwellings	6	5
Landscaping Services	3	2

Table 4. Number and Percent Distribution of Fatal Occupational Injuries by Industry, Michigan 2007
(Continued)

¹ Industry	Number	<u>Fatalities</u> Percent
Government	9	8
Accommodation and Food Services	7	6
Other Services, Except Public Administration	7	6
Health Care and Social Assistance	5	4
Wholesale Trade	5	4
Merchant Wholesalers, Nondurable Goods	5	4
Information	4	3
Publishing Industries (Except Internet)	3	2
Newspaper, Periodical, Book, and Directory Publishers	3	2
Newspaper Publishers		
Arts, Entertainment, and Recreation	4	3
Industry categories that did not meet publication criteria	3	2

¹Classified 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 2007 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 2007

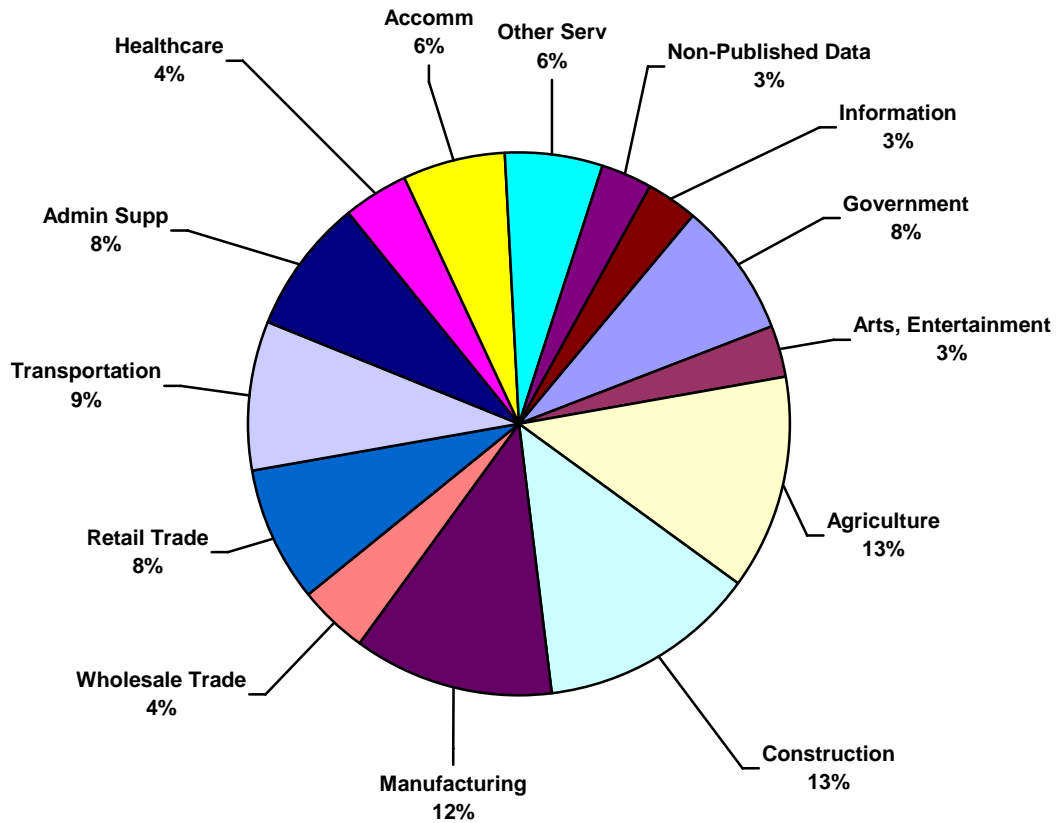
1	Fatalities	
Source of Injury	Number	Percent
Total	120	100
Vehicles	46	38
Highway vehicles	31	26
Automobiles	10	8
Trucks	13	11
Plant and industrial power vehicles, tractors	15	12
Forklifts	4	3
Tractors	9	8
Other	20	17
Bullets and pellets	17	14
Fire, flame, smoke	--	--
Structures and surfaces	19	16
Floors, walkways, ground surfaces	19	16
Tools, instruments and equipment	9	8
Parts and materials	7	6
Machine, tool and electrical parts	--	--
Chemicals and chemical products	6	5
Machinery	6	5
Agriculture and garden machinery	--	--
Construction, logging and mining machinery	--	--
Material handling machinery	--	--
Persons, plants, animals and minerals	6	5
Persons-other than injured worker	--	--
Robber	--	--
Co-worker, former co-worker	--	--
Trees, logs	3	2
Containers	--	--

¹ 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 2007 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 2007



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

Definitions

For a fatality to be included in the census, the decedent must have been employed (that is working for pay, compensation, or profit) at the time of the event, engaged in a legal work activity, or present at the site of the incident as a requirement of his or her job. Fatalities involving volunteer and unpaid family workers who perform the same duties and functions as paid workers are also included in the counts. These criteria are generally broader than those used by Federal and State agencies administering specific laws and regulations. (Fatalities that occur during a person's normal commute to or from work are excluded from the census counts.)

Data presented in this release include deaths occurring in 2007 that resulted from traumatic occupational injuries. An injury is defined as any wound or damage to the body resulting from acute exposure to energy, such as heat, electricity, or impact from a crash or fall, or from the absence of such essentials as heat or oxygen. This injury must have been caused by a specific event or incident within a single workday or shift. Included are open wounds, intracranial and internal injuries, heatstroke, hypothermia, asphyxiation, acute poisonings resulting from short-term exposures limited to the worker's shift, suicides and homicides, and work injuries listed as underlying or contributory causes of death.

Information on work-related fatal illnesses is not reported in the BLS census and is excluded from the attached tables because the lengthy latency period of many occupational illnesses and the difficulty of linking illnesses to work exposures make identification problematic.

Measurement Techniques and Limitations

Data for the Census of Fatal Occupational Injuries (CFOI) are compiled from various federal, state, and local administrative sources including death certificates, workers' compensation reports and claims, reports to various regulatory agencies, medical examiner reports, and police reports as well as news and other non-governmental reports. Diverse sources are used because studies have shown that no single source captures all job-related fatalities. Source documents are matched so that each fatality is counted only once. To ensure that a fatality occurred while the decedent was at work, information is verified from two or more independent source documents or from a source document and a follow-up questionnaire. Approximately 30 data elements are collected, coded, and tabulated, including information about the worker, the fatal incident, and the machinery or equipment involved.

Identification and Verification of Work-Related Fatalities

In 2007, there were 40 cases included for which work relationship could not be independently verified; however, the information on the initiating source document for these cases was sufficient to determine that the incident was likely to be job-related. Data for these fatalities are included in the Census of Fatal Occupational Injuries counts. An additional 31 fatalities submitted by States were not included because the source documents had insufficient information to determine work relationship and could not be verified by either an independent source document or a follow-up questionnaire.

States may identify additional fatal work injuries after data collection closeout for a reference year. In addition, other fatalities excluded from the published count because of insufficient information to determine work relationship may subsequently be verified as work related. States have up to seven months from this release to update their initial published State counts. This procedure ensures that fatality data are disseminated as quickly as possible and that legitimate cases are not excluded from the final counts. Thus, each year's initial release of data should be considered preliminary. Final data are released in the Spring of the following year. Revised counts for 2007 will be available in April 2009.

Over the last 5 years, increases in the published counts based on additional information have averaged approximately 50 fatalities per year or less than 0.9 percent of the revised total. There was a larger-than-normal update last year. The BLS news release issued August 9, 2007 reported a total of 5,703 fatal work injuries for 2006. With the April 2008 release of final data, an additional 137 net fatal work injuries were added, bringing the total for 2006 to 5,840.

Federal/State Agency Coverage

The Census of Fatal Occupational Injuries (CFOI) 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 U. S. Department of Transportation.

Federal/State Agency Coverage (Continued)

Fatalities occurring among several other groups of workers are generally not covered by any federal or state agencies. These groups include self-employed and unpaid family workers, which accounted for about 18 percent of the fatalities; laborers on small farms, accounting for about 1 percent of the fatalities; and state and local government employees in states without OSHA-approved safety programs, which accounted for about 4 percent. (Approximately one-half of the states have approved OSHA safety programs, which cover state and local government employees.)

Acknowledgements

BLS thanks the participating states, New York City, and the District of Columbia for their efforts in collecting accurate, comprehensive, and useful data on fatal work injuries. BLS also appreciates the efforts of all federal, state, local, and private sector agencies 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, and workers' compensation agencies; state and local police departments; and state farm bureaus.