

**CENSUS OF FATAL OCCUPATIONAL
INJURIES
MICHIGAN 2012**

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Department of Licensing and Regulatory Affairs
October 2013

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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 Licensing and Regulatory Affairs, MIOSHA, Wage Hour and Technical Services Division, Management Information Systems Section in cooperation with the BLS of the U.S. Department of Labor.

INTRODUCTION

The Census of Fatal Occupational Injuries (CFOI), administered by the 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 2010 Standard Occupational Classification (SOC) system is used by Federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating, or disseminating data. All workers are classified into one of 840 detailed occupations according to their occupational definition. To facilitate classification, detailed occupations are combined to form 461 broad occupations, 97 minor groups, and 23 major groups. Detailed occupations in the SOC with similar job duties, and in some cases skills, education, and/or training, are grouped together.

Data compiled by the CFOI program are issued annually for the previous calendar year. This data is 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.

OBSERVATION SUMMARY

There were 127 occupational fatalities reported to the Michigan CFOI Program during the year 2012. Various categories related to these fatalities are summarized below.

- Transportation incidents led all fatal events and accounted for 42 (33 percent) of the 127 fatal occupational injuries during 2012. This was followed by Violence and Other Injuries by Persons or Animals with 40 fatalities (32 percent). (Table 1)
- Forty-eight percent of the fatally injured Michigan workers were 35-54 years of age. (Table 2)
- Based on gender, 92 percent of Michigan's fatally injured workers were men. (Table 2)
- Seventy-seven percent of fatalities occurred to persons in the ethnicity category White, non-Hispanic. (Table 2)
- Occupations with the largest number of worker fatalities were Management with 22, followed by Transportation and Material Moving and Construction & Extraction each reporting 20. (Table 3)
- Industries reporting the largest number of Michigan fatal work injuries during 2012 were Construction with 18, Agriculture, Forestry, Fishing and Hunting reporting 16 and Transportation and Warehousing with 14. (Table 4)
- Persons, Plants, Animals & Minerals were identified as the greatest source of injury with 47 reported during 2012. This was followed by Vehicles with 46 and Structures & Surfaces with 13. (Table 5)

**Table 1. Number and Percent Distribution of Fatal Occupational Injuries
by Event or Exposure, Michigan 2012**

Event or Exposure	Fatalities	
	Number	Percent
Total	127	100
Transportation Incident	42	33
Pedestrian vehicular incident	10	8
Roadway incident involving motorized land vehicle	27	21
Nonroadway incident involving motorized land vehicle	5	4
Violence and Other Injuries by Persons or Animals	40	32
Intentional injury by other person	28	22
Self-inflicted injury intentional	10	8
Falls, Slips, Trips	21	17
Fall to lower level	16	13
Contact with Objects and Equipment	17	13
Struck by object or equipment	12	9
Caught in or compressed by equipment or objects	5	4
Exposure to Harmful Substances or Environments	4	3
Exposure to electricity	3	2
Event categories that did not meet publication criteria	3	2

¹ Based on the BLS Occupational Injury/Illness Classification System (OIICS) 2.01.

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 2012 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 2012

Worker Characteristics	Number	<u>Fatalities</u>	Percent
Total	127		100
Employee Status			
Wage and salary workers	84		66
Self-employed	43		34
Sex			
Men	117		92
Women	10		8
Age			
Both sexes:			
Under 16 years	--		--
16 to 17 years	--		--
18 to 19 years	--		--
20 to 24 years	8		6
25 to 34 years	17		13
35 to 44 years	27		21
45 to 54 years	34		27
55 to 64 years	22		17
65 years and over	19		15
Race ¹			
White (non-Hispanic)	98		77
Black or African American (non-Hispanic)	20		16
Hispanic or Latino	3		2
American Indian or Alaska Native (non-Hispanic)	--		--
Asian (non-Hispanic)	4		3
Native Hawaiian or Pacific Islander (non-Hispanic)	--		--

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 2012 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 2012

1 Occupation	Number	<u>Fatalities</u> Percent
Total	127	100
Management Occupations	22	17
Top Executives	3	2
Advertising, marketing, promotions, public relations and sales managers	1	1
Operations and specialties managers	3	2
Other management occupations	15	12
Farmers, Ranchers, and Other Agricultural Managers	9	7
Transportation and Material Moving Occupations	20	16
Motor vehicle operators	18	14
Material moving workers	2	1
Construction and Extraction Occupations	20	16
Supervisors of Construction and Extraction Workers	4	3
Construction Trades Workers	16	13
Installation, Maintenance, and Repair Occupations	12	9
Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	6	5
Other Installation, Maintenance, and Repair Occupations	4	3
Protective Service Occupations	10	8
Law Enforcement Workers	3	2
Other Protective Service Workers	7	6
Security Guards and Gaming Surveillance Officers	6	5
Production Occupations	9	7
Building and Grounds Cleaning and Maintenance Occupations	8	6
Supervisors of Building and Grounds Cleaning and Maintenance Workers	2	1
Grounds Maintenance Workers	5	4
Farming, Fishing and Forestry Occupations	8	6
Fishing and Hunting Workers	1	1
Forest, Conservation and Logging Workers	6	5
Sales and Related Occupations	6	5
Supervisors of Sales Workers	4	3
Retail Sales Workers	1	1

Table 3. Number and Percent Distribution of Fatal Occupational Injuries by Occupation, Michigan 2012 (Continued)

1 Occupation	Number	<u>Fatalities</u>	Percent
Food Preparation and Service Related Occupations	1		1
Personal Care and Service Related Occupations	1		1
Occupation categories that did not meet publication criteria	10		8

¹Occupation data are based on the Standard Occupational Classification System, 2010.

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 2012 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 2012

1 Industry	Fatalities	
	Number	Percent
Total	127	100
Private Industry	117	92
Government Workers	10	8
Agriculture, Forestry, Fishing and Hunting	16	13
Crop Production	9	7
Forestry and Logging	5	4
Construction	18	14
Construction of Buildings	5	4
Heavy and Civil Engineering Construction	1	1
Specialty Trade Contractors	12	9
Manufacturing	12	9
Paper Manufacturing	1	1
Chemical Manufacturing	1	1
Plastics and Rubber Product Manufacturing	1	1
Fabricated Metal Product Manufacturing	1	1
Transportation Equipment Manufacturing	5	4
Furniture and Related Product Manufacturing	1	1
Transportation and Warehousing	14	11
Truck Transportation	10	8
Transit and Ground Passenger Transportation	3	2
Support Activities for Transportation	1	1
Retail Trade	10	8
Motor Vehicle and Parts Dealers	2	1
Gasoline Stations	1	1
Miscellaneous Store Retailers	3	2
Administrative and Waste Services	10	8
Administrative and Support Services	10	8
Investigation and Security Services	4	3
Services to Buildings and Dwellings	6	5
Landscaping Services	6	5

Table 4. Number and Percent Distribution of Fatal Occupational Injuries by Industry, Michigan 2012 (Continued)

Industry ¹	Fatalities	
	Number	Percent
Other Services (except Public Administration)	12	9
Repair and Maintenance	6	5
Personal and Laundry Services	2	1
Religious, Grantmaking, Civil, Professional and Similar Organizations	4	3
Wholesale Trade	5	4
Merchant Wholesalers, Durable Goods	1	1
Merchant Wholesalers, Nondurable Goods	4	3
Health Care and Social Assistance	6	5
Ambulatory Healthcare Services	6	5
Arts, Entertainment and Recreation	4	3
Utilities	1	1
Information	3	2
Publishing Industries	2	1
Telecommunications	1	1
Accommodation and Food Services	3	2
Food Services and Drinking Places	3	2
Real Estate and Rental and Leasing	1	1
Other Services, except Public Administration	12	9

¹ Industry data based on the North American Industry Classification System, 2007

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 2012 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 2012**

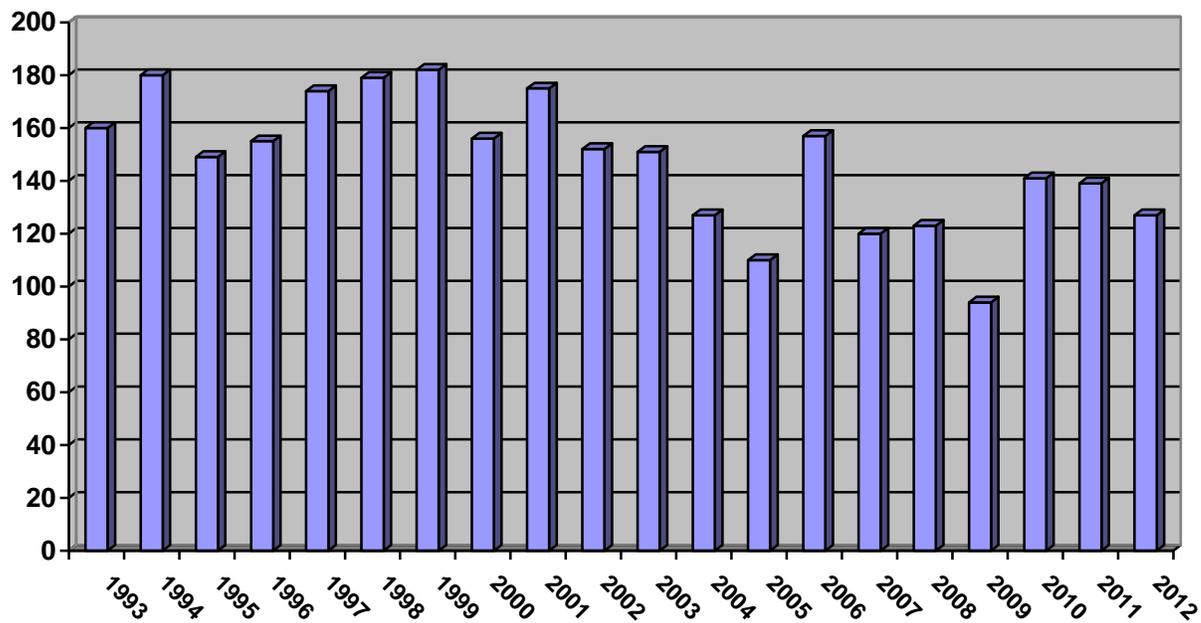
¹ Source of Injury	Number	Percent
Total	127	100
Persons, Plants, Animals and Minerals	47	37
Person-Injured or ill worker	12	9
Person-Other than injured or ill worker	28	22
Plants, trees, vegetation-not processed	7	6
Vehicles	46	36
Highway vehicles, motorized	40	31
Off-road or industrial vehicles, powered	6	5
Structures and Surfaces	13	10
Structures other than buildings	3	2
Other structural elements	4	3
Floors, walkways, ground surfaces	5	4
Machinery	9	7
Agricultural and garden machinery	1	1
Construction, logging, and mining machinery	5	4
Metal, woodworking and special material machinery	2	1
Tools, Instruments, and Equipment	5	4
Ladders	5	4
Parts and Materials	3	2
Machine, tool and electric parts	1	1
Vehicle and Mobile Equipment Parts	2	1
Containers, Furniture and Fixtures	2	1
Containers	2	1
Chemicals and Chemical Products	1	1
Source categories that did not meet publication criteria	1	1

¹ The primary source of a fatal occupational injury is the object, substance, person, bodily motion, or exposure which most directly led to, produced, or inflicted the injury or illness.

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 2012 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

Michigan Historical CFOI Data



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

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 nations' 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.