

**CENSUS OF FATAL OCCUPATIONAL
INJURIES
MICHIGAN 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, 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 133 occupational fatalities reported to the Michigan CFOI Program during the year 2013. Various categories related to these fatalities are summarized below.

- Transportation incidents led all fatal events and accounted for 42 (32 percent) of the 133 fatal occupational injuries during 2013. This was followed by Violence and Other Injuries by Persons or Animals with 40 fatalities (30 percent). (Table 1)
- All age groups from 25 to 34 years and 65 years and over reported between 21 and 29 fatalities. The age group of 20-24 reported the least amount of fatalities with 11. (Table 2)
- Based on gender, 90 percent of Michigan's fatally injured workers were men. (Table 2)
- Eighty-percent of fatalities occurred to persons in the ethnicity category White, non-Hispanic. (Table 2)
- Occupations with the largest number of worker fatalities were reported in the category of Transportation and Material Moving with 30, Construction and Extraction with 23 and Management reporting 16 fatalities. (Table 3)
- Industries reporting the largest number of Michigan fatal work injuries during 2013 were Transportation and Warehousing with 26, Construction with 18, and Agriculture, Forestry, Fishing and Hunting reporting 16. (Table 4)
- Vehicles were identified as the greatest source of injury with 50 reported during 2013. This was followed by Persons, Plants, Animals & Minerals with 46 and Structures & Surfaces with 14. (Table 5)

**Table 1. Number and Percent Distribution of Fatal Occupational Injuries
by Event or Exposure, Michigan 2013**

Event or Exposure ¹	Fatalities	
	Number	Percent
Total	133	100
Transportation incident	42	32
Pedestrian vehicular incident	9	7
Water vehicular incident	1	1
Roadway incident involving motorized land vehicle	24	18
Nonroadway incident involving motorized land vehicle	6	5
Violence and other injuries by persons or animals	40	30
Intentional injury by other person	36	27
Injury by person—unintentional or intent unknown	4	3
Contact with objects and equipment	25	19
Struck by object or equipment	18	14
Caught in or compressed by equipment or objects	5	4
Struck, caught, or crushed in collapsing structure, equipment, or material	2	1
Falls, slips, trips	16	12
Falls on same level	3	2
Fall to lower level	13	10
Exposure to harmful substances or environments	7	5
Exposure to electricity	2	1
Exposure to other harmful substances	4	3
Fires and explosions	2	1
Explosions	2	1
Event categories that did not meet publication criteria	1	1

¹Based 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 2013 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 2013

Worker Characteristics	Number	<u>Fatalities</u>	Percent
Total	133		100
Employee Status			
Wage and salary workers	95		71
Self-employed	38		29
Sex			
Men	120		90
Women	13		10
Age			
Both sexes:			
Under 16 years	--		--
16 to 17 years	--		--
18 to 19 years	--		--
20 to 24 years	11		8
25 to 34 years	23		17
35 to 44 years	29		22
45 to 54 years	21		16
55 to 64 years	26		20
65 years and over	21		16
Race¹			
White (non-Hispanic)	107		80
Black or African American (non-Hispanic)	19		14
Hispanic or Latino	3		2
American Indian or Alaska Native (non-Hispanic)	1		1
Asian (non-Hispanic)	--		--
Native Hawaiian or Pacific Islander (non-Hispanic)	--		--

¹Persons 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 2013 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 2013

Occupation¹	Number	Fatalities	Percent
Total	133		100
Transportation and material moving occupations	30		23
Motor vehicle operators	20		15
Material moving workers	8		6
Construction and extraction occupations	23		17
Construction trades workers	20		15
Other construction and related workers	1		1
Management occupations	16		12
Advertising, marketing, promotions, public relations and sales managers	1		1
Other management occupations	14		11
Sales and related occupations	11		8
Supervisors of sales workers	4		3
Retail sales workers	3		2
Sales representatives, services	2		1
Installation, maintenance, and repair occupations	7		5
Vehicle and mobile equipment mechanics, installers, and repairers	4		3
Other installation, maintenance, and repair occupations	3		2
Farming, fishing and forestry occupations	7		5
Agricultural workers	2		1
Forest, conservation and logging Workers	5		4
Production occupations	6		5
Metal workers and plastic workers	3		2
Protective service occupations	5		4
Fire fighting and prevention workers	1		1
Law enforcement workers	2		1
Office and administrative support occupations	5		4
Information and record clerks	1		1
Material recording, scheduling, dispatching, and distributing workers	3		2

Table 3. Number and Percent Distribution of Fatal Occupational Injuries by Occupation, Michigan 2013 (Continued)

Occupation ¹	Number	<u>Fatalities</u>	Percent
Building and grounds cleaning and maintenance occupations	4		3
Grounds maintenance workers	3		2
Arts, design, entertainment, sports and media occupations	4		3
Entertainers and performers, sports and related workers	4		3
Business and financial operations occupations	3		2
Financial specialists	2		1
Healthcare practitioners and technical occupations	3		2
Health diagnosing and treating practitioners	--		--
Health technologists and technicians	1		1
Personal care and service related occupations	2		1
Entertainment attendants and related workers	1		1
Other personal care and service workers	1		1
Food preparation and service related occupations	1		1
Food and beverage serving workers	1		1
Legal occupations	1		1
Lawyers, judges, and related workers	1		1
Healthcare support occupations	1		1
Other healthcare support occupations	1		1
Occupation categories that did not meet publication criteria	4		3

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 2013 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 2013

Industry ¹	Fatalities	
	Number	Percent
Total	133	100
Private Industry	120	90
Government Workers	13	10
Transportation and warehousing	26	20
Water transportation	1	1
Truck transportation	14	11
Transit and ground passenger transportation	3	2
Support activities for transportation	4	3
Warehousing and storage	3	2
Construction	18	14
Construction of buildings	6	5
Specialty trade contractors	10	8
Agriculture, forestry, fishing and hunting	16	12
Crop production	7	5
Animal production	5	4
Forestry and logging	4	3
Manufacturing	10	8
Food manufacturing	1	1
Paper manufacturing	1	1
Chemical manufacturing	1	1
Plastics and rubber products manufacturing	1	1
Primary metal manufacturing	1	1
Computer and electronic product manufacturing	1	1
Miscellaneous manufacturing	1	1
Retail trade	8	6
Food and beverage stores	2	1
Gasoline stations	1	1
Sporting goods, hobby, book, and music stores	1	1
General merchandise stores	2	1
Miscellaneous store retailers	1	1
Administrative and waste services	7	5
Administrative and support services	5	4
Arts, entertainment and recreation	6	5
Performing arts, spectator sports and related industries	4	3

Table 4. Number and Percent Distribution of Fatal Occupational Injuries by Industry, Michigan 2013 (Continued)

Industry ¹	Fatalities	
	Number	Percent
Professional and technical services	5	4
Professional, scientific and technical services	5	4
Finance and insurance	5	4
Credit intermediation and related activities	1	1
Securities, commodity contracts, and other financial investments and related activities	1	1
Insurance carriers and related activities	3	2
Other services (except public administration)	5	4
Repair and maintenance	4	3
Religious, grantmaking, civil, professional and similar organizations	1	1
Accommodation and food services	4	3
Food services and drinking places	4	3
Health care and social assistance	4	3
Ambulatory health care services	3	2
Social assistance	1	1
Real estate and rental and leasing	3	2
Real estate	3	2
Mining	1	0
Mining, except oil and gas	1	1
Wholesale trade	1	0
Merchant wholesalers, durable goods	1	1
Educational services	1	0

¹Industry 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 2013 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 2013**

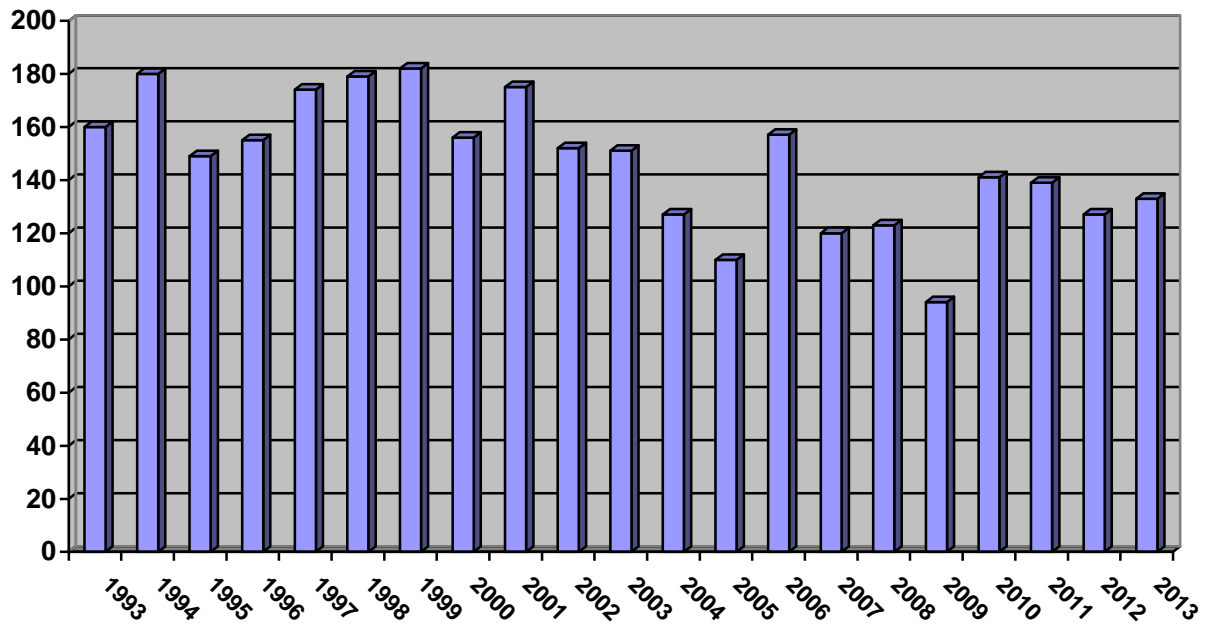
Source of Injury¹	Number	Percent
Total	133	100
Persons, plants, animals and minerals	46	35
Person-injured or ill worker	23	17
Person-other than injured or ill worker	17	13
Plants, trees, vegetation-not processed	6	5
Vehicles	50	38
Rail vehicles	1	1
Water vehicles	1	1
Highway vehicles, motorized	38	29
Off-road or industrial vehicles, powered	8	6
Structures and surfaces	14	11
Confined spaces	1	1
Buildings—office, plant, residential	1	1
Structures other than buildings	1	1
Other structural elements	7	5
Floors, walkways, ground surfaces	4	3
Machinery	7	5
Construction, logging, and mining machinery	5	4
Material and personnel handling machinery	1	1
Metal, woodworking and special material machinery	1	1
Parts and materials	6	5
Fasteners, connectors, ropes, ties	1	1
Machine, tool and electric parts	3	2
Chemicals and chemical products	5	4
Other chemicals	2	1
Chemical products—general	3	2
Other sources	3	2
Source of injury categories that did not meet publication criteria	2	1

¹The 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 2013 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.

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 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.

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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.